



BIENNIAL REPORT 2012-14

Academy of Scientific and Innovative Research (AcSIR)

Started with a unique thought and a novel idea of creating future leaders in Science and Technology, AcSIR has now over 2600 students in various Programs

Organisational Structure of AcSIR



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of the Academy

- To disseminate advanced knowledge in science and technology by providing teaching and research facilities in emerging and futuristic areas of inter-disciplinary and multi-disciplinary science;
- ii. Adopt measures for innovations in teaching and learning process;
- iii. Create an ambience for learning and scholarship in advanced science and technology instead of exclusively focusing on marks or grades;
- iv. To educate and train manpower in scientific and technological fields;
- To establish linkages with industries in India and outside India for the promotion of science and technology;
- vi. To collaborate, in appropriate areas in the field of science and technology, with reputed universities and institutions in India or outside India;
- vii. To promote research in science and technology having an impact on social, economic, cultural, intellectual and academic welfare of the people;
- viii. To organize and undertake extramural studies, training and extension services.



Mission Academy

The mission of the Academy is to create highest quality personnel with cross-disciplinary knowledge, aiming to provide leaders in the field of science and technology.

- Nurture a research-propelled, technology-enabled and industry-linked higher education platform.
- Achieve a seamless integration of intellectual strengths with current market needs.
- Develop niche capability required to bolster research efforts in futuristic science.
- Provide the opportunity to work on the frontier and challenging areas with current relevance.



At a Glance





1. At a Glance

1.1 Introduction

The Academy of Scientific and Innovative Research (AcSIR) was established in 2010 (by a resolution of the Government of India on 17th July, 2010) and formalized by an Act of Parliament; that is the Academy of Scientific and Innovative Research Act, 2011 vide The Gazette of India (dated 7th February, 2012) and notified on 3rd April, 2012 as an Institution of National Importance. AcSIR has adopted the mandate to create and train some of the best of tomorrow's Science & Technology leaders through a combination of innovative and novel curricula, pedagogy and evaluation. Its focus is on imparting instruction and providing research opportunities in such areas that are not routinely taught in regular academic universities in India.

It has been set up based on a 'Hub and Spoke' model where hub (AcSIR Offices) is responsible for centralized administrative functions. The spokes are located in the 37 laboratories and 6 units of CSIR spread along the length and breadth of India, which act as actual campuses for different subjects or areas.

As on 31st Mar, 2014, the Academy has 2729 full time faculty members from CSIR Laboratories, around 2600 students enrolled in various programs. Eighteen staff members are working in AcSIR Offices.

Chairman

Dr. Samir K. Brahmachari, former DG-CSIR, in the absence of formal Chairman of Board of Governors of AcSIR acted as the Chairman, BoG, AcSIR till 7th June, 2012.

Dr. Raghunath A. Mashelkar, National Research Professor was appointed as Chairman, BoG, AcSIR on 8th June, 2012 by Hon'ble Prime Minister of India and President, Council of Scientific and Industrial Research (CSIR).

Vice Chairman, BoG, AcSIR

Dr. S.K. Brahmachari, former Director-General (DG) of Council of Scientific and Industrial Research (CSIR), wasex-officio Vice Chairman, BoG, AcSIR from 8th June, 2012 till his superannuation from CSIR as Director-General on 31st December, 2013.

Dr. T. Ramasami assumed charge of DG-CSIR on Ist Janaury 2014 thus became the ex-officio Vice-Chairman, BoG, AcSIR.

1.2 SIRO Recognition

Scientific and Industrial Research Organization (SIRO)

Department of Scientific and Industrial Research (DSIR), Ministry of Science & Technology, Govt. of India with effect from 25th June, 2012 recognized AcSIR as a SIRO.

1.3 Events

 AcSIR celebrated Ceremony of Third Convocation and felicitation of Academy Professors at Vigyan Auditorium, CSIR Campus, Chennai on 28th March, 2014.

Eighty One students of M.Tech 2011-13 batch and 5 Ph.D (Sciences) students were awarded their degrees by Prof. M.M. Sharma, Chief Guest, Third Convocation and Academy Professor, AcSIR.



 Educative stall at "GENOMEET 2013", an annual fest of CSIR-Integrative Genomics and Integrative Biology, New Delhi by AcSIR on "Vitamin B12 and one carbon metabolism in Health and Diseases" from 8th-10th March, 2013.

1.4 Relocation of AcSIR Offices

a) The AcSIR Headquarters has been relocated to Chennai having the following address:

AcSIR Headquarters

Academy of Scientific and Innovative Research Training & Development Complex, CSIR Campus CSIR Road, Taramani, Chennai – 600 113

b) A Coordination Office is located at Delhi having the following address:

AcSIR Coordination Office Academy of Scientific and Innovatice Research CSIR-Central Road Research Institute CRRI P.O., Delhi-Mathura Road, New Delhi – 110 025.

1.5 Partnerships & Collaborations

a) Memorandum of Understanding with Council of Scientific and Industrial Research (CSIR) on 27th June, 2013

As mandated in Section 5(2) of the AcSIR Act, a Memorandum of Understanding (MoU) has been entered into between AcSIR and CSIR wherein AcSIR will have access to CSIR's research facilities, infrastructure, equipment, instruments, tools, library and computing resources available in 37 National Laboratories and 6 Units of CSIR.

b) Agreement with Public Health Foundation of India (PHFI) on 5th April, 2013

PHFI, established on 28th March, 2006, is a public-private partnership endeavour with an objective of large uniquely designed & sustainable response to the service shortfall of public health professionals in India.

Scope of Agreement: To conceptualize and roll out joint Integrated MSc with PhD programs. In particular, the collaboration will impart education and training in Clinical Research and Health Informatics to start with. Eventually the scope will be widened to include masters and doctoral courses on other relevant topics. Collaborative research of areas of mutual interest will be promoted.

c) Non-Binding Agreement with Royal Melbourne Institute of Technology University (RMIT) on 15th April, 2013

RMIT is a global university of technology and design and is Australia's largest tertiary institution. RMIT is a leader in technology, design, global business, communication, global communities, health solutions and urban sustainable futures.

Aim of Non-binding Agreement: To record an understanding between AcSIR and RMIT by which AcSIR and RMIT may co-operate in establishing closer links that may involve:

- a. Joint Ph.D programs between AcSIR and RMIT University in areas of common interest such as: Aerospace, Bio-nano Technology, Catalysis, Chemical Engineering, Electrical Engineering, Green Chemistry, Sensor Technology, Sustainable Energy.
- b. Staff and research student exchange program.

1.6 Enactment of AcSIR Statutes and Ordinances

The Statutes and Ordinances of AcSIR were enacted on 10th November, 2013 after due approvals. The Statutes provide for all matters considered necessary by the Board for functioning of the Academy within the framework of AcSIR Act, 2011.

And subject to the provisions of AcSIR Act and the Statutes, the Ordinances provide for all matters necessary related to routine activities such as admissions, courses of study and conduct of examinations etc.



1.7 Introduction of New Academic Programs

In addition to current PhD (Sciences), PhD (Engineering) and Integrated M.Tech-PhD programs, following programs were also initiated:

• Integrated M.Sc-PhD program in (i) Clinical Research and (ii) Health Informatics, were initiated from August 2013 session, under Agreement entered with PHFI.

 Diploma in 'Patinformatics' was approved in ninth meeting of the Senate, AcSIR held on 19th December, 2013 to start from August 2014 session at CSIR-Unit for Research & Development of Information Products (URDIP), Pune.

Academic Activities





2. Academic Activities

2.1 Integrated M.Tech.-Ph.D.(IMP) Program

Admissions in IMP 2013-15 batch

The fifth batch (2013-15) of the 2+3 year residential Integrated M.Tech.-Ph.D. Program attracted 11,828 applications from all across India.

In all, 192 candidates were offered admission to the IMP program of 2013. Out of the candidates who were offered admission, 83 candidates were enrolled in the IMP program.

Admissions in IMP 2012-14 batch

The fourth batch (2012-14) of the 2+3 years, residential Integrated M.Tech.-Ph.D. Program, the flagship engineering Program of AcSIR-CSIR, attracted (all GATE qualified candidates) 13,476 applications compared to previous year's 3,940.

In all, 126 successful candidates were offered admissions to the IMP 2012-14 batch. Finally, 119 candidates accepted the offer of admission and registered for AcSIR-CSIR IMP 2012-14 batch.

2.2 Ph.D. Program

Admissions for Ph.D. Program (January 2014 session)

The January 2014 session of the Ph.D. program of AcSIR attracted 2120 candidates, which include 1310 for Ph.D. in Sciences and 810 for Ph.D. in Engineering Applications.

Out of these, 432 candidates were offered admissions among which, as on 31st March, 2014, 350 students

were enrolled in different faculty of studies.

Admissions for Ph.D. Program (August 2013 session)

The August 2013 session of the Ph.D program of AcSIR attracted 3945 candidates, which included 1773 for Ph.D. in Sciences and 2172 for Ph.D. included in Engineering application.

Based on the call for August 2013 session of the Ph.D. Program of AcSIR, 561 candidates were offered admissions among which, as on 31st March, 2014, 427 students were enrolled in different faculty of studies.

Admissions for Ph.D. Program (January 2013 session)

The January 2013 session of the Ph.D. program of AcSIR attracted 2489 candidates, which include 1665 for Ph.D. in Sciences and 493 for Ph.D. in Engineering applications.

Out of these, 494 candidates were offered admission to the program among which, as on 31st March, 2014, 337 students were enrolled in different faculty of studies.

Admissions for Ph.D. Program (August 2012 session)

Based on the call for August 2012 session of the Ph.D. program of AcSIR, 548 candidates were offered admissions among which 493 candidates accepted our offer of admission and enrolled for Ph.D. program. As on 31st March, 2015, 474 candidates are enrolled in different faculty of studies.



Admissions in the Ph.D. Program in various faculties viz. Biological Sciences, Chemical Sciences, Physical Sciences, Engineering Sciences and Mathematical & Information Sciences are summarized in the following graph:







Particulars of Staff





Faculty-wise Staff Particulars:

Faculty	Professors	Associate Professors	Assistant Professors	Total Faculty
Engineering Sciences	255	147	506	908
Biological Sciences	237	149	334	720
Chemical Sciences	209	110	307	626
Physical Sciences	120	58	142	320
Mathematical & Information Sciences	22	12	25	59
Academy Professors				06
Distinguished Professors				02
Outstanding Professors				31
Emeritus Professor				21
Adjunct Faculty				36
TOTAL	843	476	1314	2729



Ethos & Philosophy





4. Ethos & Philosophy of Courses

AcSIR offers students the opportunity to organize subjects from various faculties into personally constructed interdisciplinary programs as a way of an integrated understanding of the area chosen.

Focus on inter-disciplinary & transdisciplinary areas of Sciences

Multiple disciplines of science were created for deeper learning in focused areas but we know that great breakthroughs take place at the intersection of different areas of learning. Trans-disciplinary research has been, therefore, given supreme primacy in AcSIR's scientific and innovative research agenda.

Keeping these questions and objectives in mind; AcSIR seeks to bring about a paradigm shift in the mindset by:

- Teaching at the interfaces of physics, chemistry and life sciences in order to make pathbreaking contribution in the field of Science and Engineering.
- Teaching trans-disciplinary areas by integrating disciplines incorporating components of science, engineering and technology.
- Increasing the basic science component in engineering curriculum
- Catalyzing engineering mindset in students of life sciences/ facilitating translational research in life sciences
- Mimicking life science in machines to create bio inspired devices

Special features of Programs @ AcSIR:

The programs at AcSIR have some distinguishing special features such as:

- Experiential Learning
- Research Focus
- Information Technology Orientation
- Social Sensitivity

Experiential Learning

It is necessary to build higher degree of scientific inquiry and provide the students such an exposure that they will have hands on experience of the stateof-art laboratory facilities of CSIR. The concept of experiential learning helps in inculcating the culture of 'learning by doing'. It enables them to relate classroom teaching to real context.





Research Focus

Research is basically all about harnessing of curiosity, which cannot be effectively taught only in classrooms. Curricula, pedagogy and evaluation methods are directed towards creating personnel with high research quotient.

Information Technology Orientation

Information Technology is playing an ever-increasing role in business and education. Therefore, acquisition and processing of a large volume of diverse information for analyzing and interpreting the data with regard to research problems, through extensive use of computers, has become the order of the day. Efforts are on towards increasing the use of IT and enable participants to attend classes via virtual classrooms.

Social Sensitivity

AcSIR's research will also focus on problems that 'need to be solved' rather than just the problems that 'can be solved'. Therefore, a unique feature of the Ph.D. program at AcSIR is a compulsory course called, **CSIR-800 Societal Program** (it is a CSIR project with primary objective of empowering 800 million Indians through Science & Technology interventions), which strive to expose the participants to the problems faced by people at the Base of Pyramid and making them socially conscious, while embarking on research studies.

The theme of the student project may be chosen from CSIR-800 initiatives and in consultation with Advisor and Doctoral Advisory Committee (DAC).

The concept of credit is used to compute the workload of a course. As a general rule, one credit requires a commitment, from participant, of about I lecture hour per week (minimum 14 contact hours) or 2 laboratory hours per week (minimum 28 contact hours) or combination thereof for the duration of the semester.

Curriculum

Academic input is delivered by three types of courses: (a) core/preparatory courses, (b) major courses and (c) advanced/elective, and are segregated into levels (Level: 100, 200, 300 respectively). In addition, the curriculum also includes another course which includes Review Article, Project Proposal and CSIR-800 Program (Level 400).

Level-100: Core/ Preparatory Courses

Preparatory Courses are those courses having the objective of development of basic understanding for the furtherance of the respective field of study. This provides participants, with the fundamental conceptual knowledge, research skills, contextual understanding and overall perspective that will serve as the bedrock for the program.

Level-200: Major Courses

These are the major courses; these are in line with the candidate's subject of thesis and are chosen in consultation with the Advisor of the Student.

Level-300: Advanced/ Elective Courses

Advanced courses focus on specialization in specific/ advanced areas out of a number of possible courses which cover advanced and emerging areas of study at a breadth. A student can opt any of the courses (satisfying minimum required Credit Criteria) in consultation with his Advisor. The advanced/elective courses, which are offered, will give participants a deeper understanding of, and will enable them to specialize in, areas of their choice.

> Level-400: Review Article, Project Proposal and CSIR-800 Program

These are the compulsory courses. Review Article (2 credits) aims to develop a sense of constructive critique in the participant, as it is said "a work started with clear thought is half done"; Project Proposal (2 credits) gives the clear line of thought and work plan before embarking on research. And, CSIR-800 Program (4 credits) aims to develop social sensitivity towards people of lower strata.



Profile of participating CSIR Laboratories





5. Profile of participating CSIR Laboratories

CSIR-Fourth Paradigm Institute (4PI), Bengaluru About Institute

Activity Scope: The institute undertakes both in-house and collaborative projects, some of which are sponsored. Additionally, the institute also offers specially designed training courses / workshops as well as technical advice and access to its computing resources. A number of activities have now developed into important areas of research and development. Notable amongst these are Climate modelling, Carbon Cycle and Ocean Modelling, Solid Earth Modelling, Network and Cyber Security, Non-linear Dynamical Systems and Industrial Computational Mechanics. CSIR-4PI has made significant enhancement to both the supercomputing and communication infrastructure with the new supercomputer, named ANANTA, with a peak and sustained performance of 362 TFLOPS and 334 TFLOPS respectively. Several CSIR laboratories have been remotely accessing the compute facility to solve challenging computational problems across various scientific disciplines.

Industry focus: Mathematical modelling and computer simulation

Total Number of AcSIR Students (as on 31st March 2014)

Enrolled in Ph.D program: 12

CSIR-Advanced Materials and Processes Research Institute (AMPRI), Bhopal

About Institute

Vision: CSIR-AMPRI, Bhopal is committed to develop innovative, cutting edge, internationally competitive, energy efficient and environment friendly technologies/products in the area of advanced materials for social benefits and to contribute to the economy of the nation.

Objective: Research and development on engineering materials for strategic high performance and societal applications

Materials, processes and technology development for components/products for a variety of engineering materials including metals and alloys, composites, polymers, foams, natural fibres, building materials and materials from waste to wealth

Activity Scope: R&D in the area of advanced materials such as light weight polymer and metal matrix composites, metals and alloys, nano structured materials, shape memory polymers and alloys, functional materials, natural fibres and industrial wastes

Total Number of AcSIR Students (as on 31st March 2014)

Enrolled in Ph.D program=5

Students related activities (2012-14)

I. Participation of all the five PhD students in a workshop/seminar on "Technologies for



Sustainable Rural Development having Potential for Socio-Economic Upliftment" held in July, 2014.

- Participation of one of the PhD scholars, Shri S. Nimanpure in an All India Seminar on "Recent Trends of Nanotechnology Environmental and Biological Applications (RTNEBA-2014) held by The Institution of Engineers (I), Bhopal Chapter at Bhopal during 22nd-23rd November, 2014.
- 3. Mr. Nimanpure also presented a paper entitled "Development of Environment Friendly Electrical Insulation" in the seminar.

CSIR-Central Building Research Institute (CBRI), Roorkee About Institute

Mission: To carry out R&D on all aspects of building and housing and assist the building industry in solving problems of planning, designing, foundations, materials and construction including disaster mitigation in all kinds of buildings with a view to achieve economy, comfort, functional efficiency, speed, productivity in construction, environment preservation and energy conservation.

Objectives: To carry out applied and basic research in all areas of building science to solve problems confronting the country in: Shelter planning, Building materials, Structures and Foundations, Disaster mitigation including Fire Engineering, To develop new technologies for the promotion of building materials and systems, To disseminate the results of results of research far and wide for the good of community, To transfer the developed technologies to the industry for further commercialization.

Industry focus: CSIR-CBRI to work as world class knowledge base for providing solutions to almost all areas of Building / Habitat planning and construction including building materials, construction technology, fire engineering and disaster mitigation.

R&D details: Shelter Planning, New Materials,

Structural & Foundation Engineering, Disaster Mitigation and Process Development.

International linkages; CIB, Netherlands; TWAS, Italy; BRE, U.K.; ASTM, U.S.A.; CSIRO, Australia; RILEM, France; BRS, Canada; UNCHS, Nairobi, Kenya; INDO-UK Project on Nano Engineering; Indo – US Science & Technology Forum (IUSSTF), Michigan State University and Institute for Sustainability and innovation in Structural Engineering, Minho, Portugal.

Total Number of AcSIR Students (as on 31st March 2014)

Enrolled in Ph.D program: 8

Enrolled in M.Tech program: 13

Graduated in M.Tech program: 14

Award or Achievement by Students

On the occasion of 'National Science Day' on 28th February 2014, a poster competition was organised





in CSIR-CBRI for the young Scientists, Students and Project Fellows of the institute. The young researchers presented their novel scientific ideas in the field of building science & disaster mitigation through posters.

The following posters won the I^{st} and 2^{nd} prize, respectively:

- Retractable Petals Building Envelope- Mahesh Sharma (Integrated M.Tech-Ph.D program), Sumeet Kumar and Astha Chowdhury.
- Magnetic Building: Ravi Kumar & Kritya Nand Jha (both of Integrated M.Tech-Ph.D program).

CSIR-Centre for Cellular and Molecular Biology (CCMB), Hyderabad About Institute

Mission: CSIR-CCMB is a premier research organization in the frontier areas of modern biology. The mission is to conduct research in frontier and multidisciplinary areas of modern biology and to seek potential applications of this work, to carry out exploratory work in areas of biology with a view to aid the development of biochemical and biological technology in the country on a sound basis.

Objectives: The objectives of the Centre are to aid the development of biotechnology in India on a sound basis, conduct training courses in advanced areas of biology, promote centralized national facilities for new and modern techniques in the interdisciplinary areas of biology, interact with industry carrying out basic and applied work, and to collect, collate and disseminate information relevant to biological research.

Industry focus: CCMB has taken steps towards research in new areas such as gene therapy and drug delivery system and the human genome using the advanced DNA technologies. The laboratory is abreast of the fast changing R & D scenario, as advances in Biotechnology are bound to have a farreaching impact.

International Linkages: The Imperial Cancer Research Fund (UK), the Volkswagen Foundation (Germany), The India Japan Science Council and the University of Ryukyus, Okinawa (Japan), The National Institutes of Health (USA) and the Centre Nationale de la Recherche Scientifique (CNRS)

Total Number of AcSIR Students (as on 31st March 2014)

Enrolled in Ph.D=09

Students related activities (2012-14)

- I. Mr. Manish Kumar Johri (Ph.D program)
 - a. 3rd Molecular Virology Meeting National Institute of Virology (NIV), Pune. 10th-11th January, 2013
 - Workshop (hands on training in fundamentals of mass spectrometry) by Institute of Bioinformatics (IOB), Bangalore. 6th-8th March, 2014
- 2. V Devi Prasad (PhD program)
 - a. Second author of a poster (presented by the first author from IIT-B) at an international conference "Frontiers in Fungal Systems Biology" from 28th-30th September, 2014, at EMBL Heidelberg, Germany.
 - b. Participated in the workshop "Upstream and downstream of Hox genes" from 14th-17th December, 2014, CCMB.
- 3. Ms. Bhavana Tiwari (Ph.D program)
 - a. Tiwari B, Soory A, Penumarti H, and Raghunand T.R. (2013) TLR-2 mediated immunomodulatory effects of the RD1 associated proteins PE35 and PPE68: Implications in the pathogenesis of Mycobacterium tuberculosis. Platform talk at the National Conference on 'Emerging Trends and Challenges in Basic and Translational research in Biochemistry,



Department of Zoology, Banaras Hindu University (BHU), Varanasi, India.

- 4. Ms. Parna Saha (PhD program)
 - Presented a poster in the Indian Society of Developmental Biologists (InSDB) meet, TIFR Mumbai, 1st-4th December, 2013.
 - b. Presented a poster in the workshop "Upstream and downstream of Hox genes" from 14th-17th December, 2014, at CCMB.
 - c. Presented a poster in International Proteomic Society Meeting, CCMB, Nov. 2014.
 - d. Attended International Conference On Genome Architecture, University of Hyderabad, 1st-4th December, 2014.

CSIR-Central Drug Research Institute (CDRI), Lucknow

About Institute

Vision: CSIR-CDRI is a multidisciplinary research laboratory consisting of scientific personnel of various areas of biomedical sciences. For administrative and scientific purposes the Institute's manpower has been grouped into 17 R & D divisions and few divisions providing technical and scientific support. Two data centres and one field station located outside CDRI are providing operational support.

Mission: To strengthen and advance the field of drug research in India.

Objectives: To development of new drugs and diagnostics, to conduct cellular and molecular studies to understand disease processes and reproductive physiology, development of contraceptive agents and devices, systematic evaluation of medicinal properties of natural products, development of technology for drugs, intermediates and biologicals, dissemination of information in the field of drug research, development and production, consultancy and development of technical manpower.

Industry focus: Research activities are broadly divided into three subgroups. Drug Discovery & Development, regulatory Studies, infrastructural Support Groups.

International Linkages: European Commission, UK, Uniformed Services University of Health Sciences, USA, Volkswagen Foundation, Germany, Walter Reed Army Institute, USA, World Health Organization, Geneva.

Total Number of AcSIR Students (as on 31st March, 2014)

Enrolled in Ph.D: 120

Graduated in Ph.D program: 3

Award or Achievement by Students

- I. Ms. Pooja Jadiya (PhD program)
- a. Lindau fellowship to attend "Meeting of Nobel Laureates & Students at Lindau" Germany during June/July 2014 by Department of Science and Technology (Government of India) and Lindau Council, Germany (2014).
- b. "Dr. JM Khanna Memorial Early Career Achievement Award 2014" for exemplary accomplishments while pursuing Ph.D degree at CSIR-CDRI (2014).
- First Prize for "Best Poster Presentation" at Lucknow Science Congress (LUSCON – 2013) held at BBAU, Central University, Lucknow, India.
- d. International Travel Fellowship by DST, DBT and CICS for attending the 19th International C. elegans meeting held between 26th-30th June, 2013 at the University of California, Los Angeles, USA.

CSIR-Central Electrochemical Research Institute (CECRI), Karaikudi About Institute

Mission: CSIR-CECRI's activities are directed towards development of new and improved



products and processes as well as novel innovations in electrochemical science and technology. CECRI runs several projects in collaboration with laboratories from within and outside India.

Industry focus: The institute works on a gamut of problems covering all facets of electrochemical science and technology: Corrosion Science and Engineering, Electrochemical Materials Science, Functional Materials and Nanoscale Electrochemistry, Electrochemical Power Sources, Electrochemical Pollution Control, Electrochemicals, Electrodics and Electro catalysis, Electrometallurgy, Industrial Metal Finishing, and Computer Networking and Instrumentation. The institute provides a single and unique canopy under which all aspects of electrochemistry and related areas are researched in their dimensions.

Industry Linkages: Aditya Birla Group, Asian Paints, Berger Paints, Bharat Heavy Electricals Limited, Central Research Organization, Myanmar, Defence Research and Development Organization, Hindustan Lever Limited, Indian Oil Corporation, Indian Railways, Indian Space Research Organization, Japan Science and Technology Agency, Neyveli Lignite Corporation, Oil and Natural Gas Commission, Southern Petrochemicals Industries Corporation

Total Number of AcSIR Students (as on 31st March 2014)

Enrolled in Ph.D program: 57

CSIR-Central Electronics Engineering Research Institute (CEERI), Pilani (Rajasthan)

About Institute

Mission: CSIR-CEERI is a constituent laboratory of CSIR and was established in 1953 to carry out advanced research and development (R&D) in the field of electronics. Since its inception, it has been

working for the growth of electronics in the country and has established the required infrastructure for undertaking R&D projects in the field of electronics.

Objectives

- To carry out R&D in electronic devices and systems.
- To assist industry in technology absorption, upgradation and diversification.
- To provide R&D services to industry and users in design, fabrication and testing.
- To provide technical services for specific needs towards electronics-based product development.

Areas of Specialization

- **Electronics System:** Agri-Electronics; Process Control Systems; Embedded Systems; Digital Systems; Robotics; Power Electronics.
- Semiconductor Electronics: MEMS and Micro-sensors; VLSI/IC Design and Circuits; Opto-electronics and Photonics; Semiconductor Devices, Materials and Technology; Nanoelectronics and Nano-devices; Hybrid Microcircuits and LTCC Technology.
- Microwave Tubes and Devices: Magnetrons; Travelling Wave Tubes (TWTs); Klystrons, Gyrotrons; Plasma-based Devices.

The institute has state-of-art equipments, CAD tools, experimental facilities, library resources and infrastructure to support R&D activities in the above areas of specialization.

Total Number of AcSIR Students (as on 31st March, 2014)

Enrolled in Ph.D program: 44

Enrolled in M.Tech programs: 24

Graduated in MTech programs: 40



CSIR-Central Food Technological Research Institute (CFTRI), Mysore About Institute

Mission: CSIR-CFTRI is a complete food research laboratory, with a sharp focus on the development and globalization of processes and products that are commercially attractive, nutritionally superior and safe. Long-term strategic research, supported by advanced infrastructure to meet the global technology challenges emerging in the industry, Speed and innovation.

Activity Scope: Basic Food Systems and Processes, process engineering and Plant Design, food, Biotechnology, analytical Quality Testing, professional Training, technology Options.

Industry focus: Development of new product/ process/concept and value addition, expansion and diversification, Up-scaling of lab-level knowhow, Problem-solving and trouble-shooting, Userbased, time-bound and result-oriented, Exclusive technology rights for the sponsor and evenly shared rights for the collaborator, Total consultancy

International Linkages: Tate & Lyle, Whiteknights, Reading, UK; IGTC, Tokyo; National Science Foundation, USA

Total Number of AcSIR Students (as on 31st March 2014)

Enrolled in Ph.D. program=81

Award or Achievement by Students (2012-14)

I. Mr. Ram Saran Chaurasiya (Ph.D program) Best poster award in 7th International Food Convention (IFCon)

Organized by: Association of Food Scientists and Technologists (India), Mysore

Date: 18th-21st December, 2013

Venue: CSIR-CFTRI Campus, Mysore, Karnataka, India **Poster title:** Efficacy of reverse micellar extracted bromelain in meat tenderization

Authors: Ram Saran Chaurasiya^{1,3}, Sakhare PZ², Bhaskar N²& H Umesh Hebbar^{1,3*}

¹ Department of Food Engineering,

² Meat & Marine Sciences,

Central Food Technological Research Institute, Mysore -570 020,

Council of Scientific & Industrial Research, India

³ Academy of Scientific & Innovative Research, CSIR-CFTRI Campus, Mysore, Karnataka, India

 Mr. Mahesh Mansing Patil (PhD program) Association of Microbiologists of India, International conference (AMI), Rohtak (Haryana) best poster award for the poster entitled "Fermentation studies of Garcinia using isolated strains from traditionally fermented Garcinia." Mahesh M. Patil and Anu Appaiah K. A. (2013).

IFCON-NSURE International conference (AFSTI), Mysore best poster award for the poster entitled "Fatty acid profiling of Garcinia species and fermentation studies of Garcinia xanthochymus using isolates." Mahesh M. Patil, Ali Muhammed M. and Anu Appaiah K. A. (2013).

3. Ms. Anu Bhushani (PhD program)

Best poster award: J. Anu Bhushani, Triroopa Ghosh and C. Anandharamakrishnan "Nanoencapsulation of Green Tea Polyphenols by Electrospraying", at 7th IFCoN, on 18th-21st December, 2013, CFTRI, Mysore

Mr. Shakthi Kumaran (Enrollment No. 10BB11A08002, Program: PhD (Sciences))

First Prize in oral presentation on the paper entitled

"CYTOPROTECTIVE & ANTIOXIDANT



PROPERTIES OF MILLETS AND THEIR UTILIZATION FOR SYNBIOTIC FUNCTIONAL FOODS". During sixth International Conference on "Fermented food, Health Status and Social well-being"

4. Ms. Padma Ishwarya, S (Ph.D program)

Best poster award: Padma Ishwarya, S. & C.Anandharamakrishan.

For poster entitled "Spray Freeze Drying Technique for Soluble Coffee Production". Presented at 7th International Food Convention (IFCON), 2013, held at CSIR-CFTRI, Mysore.

- 5. Mr. Karthik P (PhD program)
 - BEST POSTER AWARD: P. Karthik and **C**. Anandharamakrishnan, "Docosahexaenoic acid (DHA) Nanoemulsions: Comparison of Different Techniques, Lipid Oxidation and Stability", "7th International Food Convention (IFCON)" International conference, 18-21 Dec-2013, Mysore, India.
 - BEST ORAL PRESENTATION: P. Karthik and C. Anandharamakrishnan, "Techniques to Prepare Docosahexaenoic acid (DHA) Nanoemulsions", Association of Microbiology of India (AMI), Research paper competition Mysore chapter, 28th March, 2014, Mysore, India.

CSIR-Central Glass and Ceramic Research Institute (CGCRI), Kolkata About Institute

CSIR-CGCRI, a premier National Laboratory of India under the Council of Scientific and Industrial Research, focuses on developments in the area of traditional as well as advanced glass and ceramics since its inception on 26th August, 1950. The Institute's R&D work aims at serving strategic sectors like defence and atomic energy as well as developing and innovating technologies in the areas of national importance like energy, water, healthcare and communication.

Mission

To provide scientific industrial research and development in the area of glass, ceramics and related materials that maximize the economic, environmental and societal benefit for the people of India.

Scope

- To carry out fundamental and applied research in bioceramics, coatings, nanomaterials, membranes, traditional ceramics, glass, fibre optics, fuel cell, batteries, sensors, actuators, refractories, non-oxide ceramics and allied materials.
- To develop appropriate technologies relevant to the country's defence, economic, industrial and societal needs.
- To undertake R&D with a view to innovating for inclusive growth, helping import substitution and updating imported technologies.
- To undertake projects sponsored by private/ public sector institutions and to provide technical advisory and infrastructural services, testing and evaluation, dissemination of information etc.

International linkages: Hokkaido University, Japan; Institute of Photonic Technology, Germany; Porto University, Portugal; Heriotwatt University, UK; CNR IFAC, Italy; Northwestern University and Michigan State University, USA; University of St Andrews, UK; University of Sfax, Tunasia; City University, London; Multimedia University, Malaysia; Altao University, Finland.

Total Number of AcSIR Students (as on 31st March, 2014)

Enrolled in Ph.D. program=81



CSIR-Central Institute of Medicinal and Aromatic Plants (CIMAP), Lucknow About Institute

Vision: Innovation and empowerment in science and business of medicinal and aromatic plants towards enabling India as the ultimate in green technologies and herbals for life par excellence.

Activity Scope: Conservation & utilization of genetic resources of medicinal & aromatic pants, Bioprospecting & development of technologies for therapeutic, nutraceutical, agrichemical & health care product, Transforming R& D leads into technologies and products, Bio-village approach for mission program on technology dissemination in geranium, patchouli, Artemisia annua, rose, mints, rosemary and Cymbopogon grasses, Development of improved varieties and agro technologies for priority plants.

Industry focus: Plants genomics and biotechnological improvement in Catharanthus, Withania and Mentha species, Plant tissue culture technology for developing high throughput regeneration and secondary metabolite production, Integrated nutrient and pest management strategies leading to near organic farming, Basic research in selected medicinal and aromatic plants for future exploitation.

Other Centres: CRC Bangalore, CRP Gandhinagar, CRC Hyderabad, CRP NEIS, Jorhat, CRC Pantnagar, CRC Purara.

Total Number of AcSIR Students (as on 31st March 2014)

Enrolled in Ph.D program: 37

CSIR-Central Institute of Mining and Fuel Research (CIMFR), Dhanbad About Institute

The newly formed national laboratory, CSIR-CIMFR, Dhanbad, is a constituent laboratory of Council of Scientific & Industrial Research (CSIR) was aimed to provide R&D inputs for the entire coal-energy chain from mining to Consumption through integration of the Core Competencies of the two (CFRI & CMRI) premier Coal institution of the country. It would be the premier organization of the country providing basic research, R & D back up, advisory services and help in technology up-gradation & adaptation to coal and mineral based industries to reach the targeted production with high standards of safety, economy and cleaner environment. As such CIMFR, Dhanbad would have to have its own vision for discharging its national role effectively to help coal, mineral and other associated industries to get their vision translated into reality.

Mission: To become a centre of excellence for scientific research and industrial technologies in mining and fuel and contribute to innovation, economic and societal growth nationally and beyond.

Vision: To be a global leader and path setter in Mining and Fuel Research.

Quality Policy: CSIR-CIMFR commits to provide globally competitive, productive, environment friendly and safe technologies in mining and fuel research in the areas of energy and mineral resources. Customer loyalty, improvement in performance standards and fostering sustainable economic development shall be the prime objectives.

Other Centres: Bilaspur, Roorkee, Nagpur, Digwadhi and Ranchi

Total Number of AcSIR Students (as on 31st March 2014)

Enrolled in Ph.D program: 3

Enrolled in Integrated M.Tech-Ph.D program: 15

Students related activities (2012-14)

All the students of Integrated M.Tech-PhD program have attended

1. Research Methodology and Science Communication for PGRPE-2012 Trainee



Scientists (06th-16th January, 2013) organized by HRDC Gaziabad.

- Also participated in The 10th International Symposium on Rock Fragmentation by Blasting "FRAGBLAST 10" held in New Delhi, during 24th-29th November, 2012. organized by CSIR-CIMFR.
- 3. IMP batch 2012-14 undergone a month's onsite training in underground/ open pit and mine of Uranium Corporation of India Limited (UCIL).
- 4. IMP batch also organized Teachers day on 5th September and Sarasswati Pooja in the Academy.

CSIR-Central Leather Research Institute (CLRI), Chennai About Institute

Mission: CSIR-CLRI works towards generating, developing and extending knowledge products for building knowledge societies. The thrust of the institute is to lead in frontier area of science which has direct impact on the leather sector. The institutes strives to provide S & T innovation for industrial and societal development, thus in the process emerging itself as a global leader is leather related S&T products.

Activity Scope: Institute is on a mission to provide value addition to Indian Leather through appropriate S&T products and tools, thereby enhancing the contribution of Indian Leather to the Make in India program. Institute which provide new technologies also brings in paradigm changes for sustainability. CLRI also develops, trains and retrains the requisite HR for the industry.

Research at CSIR-CLRI: CSIR-CLRI carries out fundamental research in areas of chemistry, biology and engineering. Some of the work currently carried out in this institute includes understanding of metal protein interactions, quantum mechanical calculations to understand the toxicity of nanoparticles, metal ions etc., evolving methods for enhancing the stability of proteins for various biological applications, mechanisms of wound healing, developing polymers and composites for various applications including solar energy tapping, new range of organic molecules as biocides, developing engineering solutions for environmental management and process engineering.

Industry focus: Leather Processing, Leather Chemicals, Shoe Design & Development, Apparels & Accessories Development, Fashion design and Forecasting, Foot care Solutions, By products and Biomaterial Development.

International linkages

Countries: Australia, Bangladesh, Botswana, Canada, CSID, Ethiopia, France; CESECA, Ghana, Italy, Indonesia, Kenya, Malaysia, Nepal, Qatar, Sri Lanka, Saudi Arabia and Vietnam.

International Bodies: UNIDO, SATRA and other country based industrial association.

Total Number of AcSIR Students (as on August 2015)

Enrolled in Ph.D program: 26

CSIR-Central Mechanical Engineering Research Institute (CMERI), Durgapur About Institute

CSIR-CMERI – one of the 37 constituent laboratories under the Council of Scientific & Industrial Research – is a premier and apex R&D institute in mechanical engineering. The fundamental mandate of CSIR-CMERI, Durgapur is centred round the indigenous development of mechanical engineering technology for the industries, which in turn leads self-reliance. Besides conducting frontline research in the varied areas related to mechanical engineering and alied disciplines, the Institute dedicates it R&D efforts towards different mission mode programmes to disseminate appropriate technological solutions for poverty alleviation and societal improvement.



Vision: To be an innovative and focused R&D Institute serving the customers and social needs and to become the best R&D organization in the field of mechanical engineering.

Mission: To ensure satisfaction of customers regarding quality, delivery and cost of technology & services.

Activity: The Institute's main objective is to provide assistance to mechanical engineering industries in the form of feasibility studies, research & Development, training, consultancy, etc. for:

- Product / Process Development / Innovation
- Import substitution and Export Promotion
- Waste Recovery and Utilisation
- Thermal Engineering; Simulation and Modeling; Process Engineering
- System Design; Dynamics and Kinematics, Simulation & Analysis, Immersive Visualization
- Underwater Robotics, Surface Robotics & Mechatronics
- Microsystem Technology, Surface Engineering & Tribology
- Advanced Design and Manufacturing, Foundry and Metallurgy
- Materials, Processes, Chemistry & Bio-mimetics
- Cybernetics, Electronics & Embedded Systems, Drives & Control
- Precision Farm Machinery
- Life Assessment & Quality Control of Products, Process and Materials

Total Number of AcSIR Students (as on 31st March, 2014)

Enrolled in Ph.D program: 33

Enrollment in M.Tech program: 15

Graduated in M.Tech program: 21

Award or Achievement by Students (for 2012-14)

AcSIR students Anand Agarwal, Bijo Sebastian and Michael Lacob Matthew bagged the First Prize of Student Mechanism Design Contest for their design of Dish Cleaning Machine at IIT, Roorkee.

CSIR-Central Road Research Institute (CRRI), New Delhi About Institute

Activity Scope: Research and development projects on design, construction and maintenance of roads and runways, traffic and transportation planning of mega and medium cities, management of roads in different terrains, improvement of marginal materials, utilization of industrial waste in road construction, landslide control, ground improvements environmental pollution, road traffic safety and analysis & design, wind, fatigue, corrosion studies, performance monitoring/evaluation, service life assessment and rehabilitation of highway & railway bridges.

Industry focus: Highway Engineering, Pavement design & maintenance, Traffic & Transport planning, Geotechnical and Bridge Engineering are the major areas.

R&D details: Research level and technical services in roads, traffic, environmental and road safety aspects, airfield pavement, landslide mitigation are executed professionally by the Institute for both public and private sector customers in India and overseas.

Total Number of AcSIR Students (as on 31st March, 2014)

Enrolled in Ph.D program: 10

Enrolled in M.Tech program: 13

Graduated in M.Tech program: 8



Award or Achievement by Students (2012-14)

- Mr. Anil Pradyumna and Mr. Shahbaz Khan, both of Integrated M.Tech-PhD program, won Second prize for poster entitled "Recycling of Pavements - An Approach Suitable for Sustainable Development" Transport Infrastructure Congress and Expo 2013 (TICE 2013) at MNIT, Jaipur, March 2013
- 2. Mr. Anil Pradyumna and Ms. Vasvi Aggarwal, both of Integrated M.Tech-PhD program, received Academic Excellence Award and Medal from Indus-Global Educational Summit

CSIR-Central Scientific Instruments Organisation (CSIO), Chandigarh About Institute

Mission: To be a leader at national level for designing and developing scientific and industrial instrument systems and devices; play a lead role in providing repair, maintenance & calibration and training of instrument technologists and be a custodian of instrumentation activity in the country.

Activity Scope: Research, design and development of scientific and industrial instruments.

Industry focus

- Research, design and development of scientific & industrial instruments, components and systems
- Service, maintenance, testing and calibration of instruments / components
- Human resource development in the area of instrumentation
- Technical assistance to industry CSIO offers the technical know-how for a variety of instruments for commercialization by the industry. The developed instruments find wide applications in industry, medical, educational and R&D institutions

R&D Scope: Strategic and defence applications, Optics & opto-electronics, Geo-scientific instrumentation, Medical instrumentation, Analytical instrumentation, Agri-electronic instrumentation, Energy management, condition monitoring & quality control, Environmental monitoring instrumentation, Micro-electromechanical systems (mems) and sensors, Biomolecular electronics and nanotechnology.

Other Centres: Service & Maintenance Centres at Chennai and Delhi. Indo Swiss Training Centre (ISTC) was established in the year 1963 in collaboration with the Swiss Foundation for Technical Assistance, Switzerland. It is being run under the aegis of CSIO.

Total Number of Students (as on 31st December, 2014)

Enrolled in Ph.D program: 80

Enrolled in M.Tech program: 10

Graduated in M.Tech program: 41

Students related activities (2012-14)

An invited talk "Intellectual Property Rights" by Dr R. Hirwani, Head, CSIR-URDIP, on 20th September, 2013 was meant to sensitize the AcSIR scholars towards patenting.

Award or Achievement by Students

 Ms Rishemjit Kaur, Scientist recruited from Integrated M.Tech-PhD program, has been awarded the prestigious Japanese Government (Monbukagakusho)



Scholarship-2014. It is administered by the Ministry of Education, Culture, Sports, Science, and Technology (MEXT), Govt. of Japan and Department of Higher Education, Ministry of Human Resource Development, Govt. of India.



 Bio-Nutra Award - 2013 to Ms Vasudha Bansal (Ph.D program) during National Conference of "Bioactive Compounds in Health and Disease Management (BFHDM 2013)" held on 15th-16th



2013)" held on 15th-16th November, 2013 at NIFTEM, Kundli, Sonipat.

- Ms Vasudha Bansal (Ph.D program) received Post-Doctoral Fellowship (July 2014) by Hanyang University, Seoul, South Korea.
- Mr Pawan Kumar (PhD program) received Post-Doctoral Fellowship (July 2014) by Hanyang University, Seoul, South Korea.
- A patent titled "Manually Controlled Stair Climbing Aid for Luggage" was filed in India (0789DEL2014) on 18th March, 2014 by Mr. Shashi Poddar (Ph.D program) and Mr. Deewakar Sharma (Ph.D program).
- A patent titled "Manually Controlled Variable Coverage High Range Electrostatic Sprayer" was filed in India (3045DEL2014) on 27th October, 2014 by Mr. Manoj Kumar Patel (Ph.D program), Ghanshyam C and Pawan Kapur.

CSIR-Central Salt & Marine Chemicals Research Institute (CSMCRI), Bhavnagar

About Institute

Mission: To be a highly creative and result oriented laboratory that synergizes internal and external capabilities to:

• Produce high quality salt and allied chemicals from sea, specialty inorganic chemicals, value addition of inorganic waste, catalytic organic transformations, biotechnological intervention for salt-tolerant crops, utilization of coast and wasteland resources and membranes for water purification.

- Popularize the knowledge generated from above activities and seize competency based new opportunities
- Industry focus
- Inorganic chemicals and catalysis
- Membrane Science and Separation technology
- Bio-salinity
- Application of non-conventional energy sources
- Environmental Monitoring

Total Number of AcSIR Students (as on 31st March, 2014)

Enrolled in Ph.D. program: 122

Ph.D. Degree Awarded: 27

Students related activities (2012-14)













Award or Achievement by Students

- Ms. Pushpika Udawat (Enrollment No. 10BB11A16014, Program: Ph.D (Sciences): Young Scientist Award for Best Poster
- Mr. S. Saravanan (Enrollment No. 10CC11J16033, Program: Ph.D (Sciences): CRSI Best Poster Award; Hindustan Platinum Award for the Best Oral Presentation
- Mr. Provas Pal (Enrollment No. 0CC11A16001), Program: Ph.D (Sciences) Best Poster Award in ICRANN-2014

4. Mr. Nitin Trivedi (Enrollment No. 10BB11J16006), Program: Ph.D (Sciences): Young Scientist Award for oral presentation in Bioprocessing

CSIR-Open Source Drug Discovery Unit (OSDD)

About Institute

Open Source Drug Discovery (OSDD) is a CSIR led team India Consortium with global partnership with a vision to provide affordable healthcare to the developing world by providing a global platform where the best minds collaborate & collectively endeavour to solve the complex problems associated with discovering novel therapies for neglected tropical diseases like Tuberculosis, Malaria, Leishmaniasis etc. As of now, OSDD is a community of over 8700 registered members from over 130 countries.

OSDD is currently focused on the discovery of novel drugs for TB and Malaria. OSDD collaboratively aggregates the biological, genetic and chemical information available to scientists in order to use it to hasten the discovery of drugs. The OSDD approach is to conduct early stage research in an open environment in a highly collaborative fashion involving best minds from across the world. In the development stage of the drug it collaborates with partners like contract research organizations in the pharmaceutical sector or public sector institutions with development capability. The conduct of research and development in the countries having disease burden, yet having competencies, will bring in skills at highly affordable scale. OSDD brings in the concept of open source, crowd source, open science, open innovation and product development partnership concepts on the same platform and leaves delivery of drugs to market forces.

Mission: Our mission is to foster innovation on neglected diseases. We aim to bring openness and collaborative spirit in the research and development process with the objective of keeping cost low.

Vision: Open Source Drug Discovery aims to provide affordable healthcare for neglected diseases.



Total Number of Students (as on 31st March, 2014)

Enrolled in Ph.D program: 7

CSIR-Institute of Genomics & Integrative Biology (IGIB), New Delhi About Institute

CSIR-IGIB, formerly known as Center for Biochemical Technology, is a premier institute of CSIR, engaged in research of national importance in the areas of genomics, molecular medicine, bioinformatics, proteomics and environmental biotechnology.

Total Number of AcSIR Students (as on 31st March 2014)

Enrolled in Ph.D program=124

Graduated in Ph.D program=4

Students related activities (2012-14)

We have a rigorous and innovative coursework for the PhD students. We have also integrated the CSIR-800 project of all the students into a select few areas to enhance the impact of the program and ensuring enthusiastic participation of our students.

Award or Achievement by Students

 Best Poster awarded to Mr. Amitesh Anand (Ph.D program) by MedChemComm-Royal Society of Chemistry and



selected by Royal Society of Chemistry (RSC), CSIR-IICT, Hyderabad for a flash presentation in March 2013.

 Best Poster awarded to Ms. Amrita Ramkumar (PhD program) by Advanced Centre for Treatment Research and Education in Cancer,



Tata Memorial Centre during International Symposium on 'Conceptual Advances in Cellular Homeostasis Regulated by Proteases and Chaperons - The Present, The Future and Impact on Human diseases in December 2013.

3. Best poster awarded to Mr. Ajay Bhat (PhD program) in "Indo-US symposium on Mass spectrometry based metabolomics in disease biology" held at Thiruvananthapuram in Jan 2014.



4. N.S. Dhalla award for best Young Investigator awarded to to Mr. Trayambak Basak (PhD program) for a presentation entitled "Identification of novel proteins associated



with myocardial infarction (MI) in different age group" at International Academy of Cardiovascular Sciences- India Section 6th International Conference on Recent Advances in Cardiovascular Sciences held at Delhi in Feb 2014

 Travel fellowship award to Ms. Kiran Narta (Phd program) to present her work at Annual Meeting of the Indian Eye Research Group, held at Hyderabad in July 2014



CSIR-Institute of Himalayan Bioresources Technology (IHBT), Palampur About Institute

CSIR-IHBT, a constituent laboratory of CSIR India, is located at the picturesque town of Palampur perched in the lap of majestic snow clad Dhauladhar range of Himalayas in the state of Himachal Pradesh, India.

Activity Scope: Providing R&D services on economic bioresources in western Himalayan region leading to value added plants, products and processes for industrial, societal & environmental benefit.



Research areas: Plant Biology; Nanotechnology; Biodiversity; Bioinformatics; Microbiology; Food Science and Neutraceuticals; Floriculture; Tea science; Natural Product Chemistry; Biotechnology; Synthetic chemistry.

Brief Research Activity Focus

The Institute has state-of-the art facility for carrying out studies in the areas of proteomics, genomics, metabolomics, nanobiology, bioinformatics and food processing. The facility includes Pac Bio RSII third Generation Sequencing System, Illumina Genome Analyzer II, UPLC, amino acid analyzer, protein spot cutter & digester, LC-MS-MS, MALDI ToF, 2-D electrophoresis system, Confocal microscope, imaging systems, TEM, SEM, AFM, FTIR, Zeta Sizer etc.

Cutting edge research is being carried out to unravel the genes involved in important biosynthetic pathway in plants. Several stress related genes have been isolated, cloned and their expression analyses are underway in target plants. Studies are being carried out in the area of gene silencing, epigenetics, molecular markers, characterization of plant viruses and raising virus free plants, transgenic plants, understanding signaling mechanism and deciphering mechanism of plant adaptation under stress and changing environment/ climate change.

In nanobiology, research focus is to improve efficacy of bioactives, exploring biomolecules for tissue engineering, developing nanocatalysts, and multimodal imaging systems for diagnostics and increasing bioavailability of existing drugs.

Bioinformatics group is focused on to develop novel algorithms and tools for analysis of large and complex plant genomes.

Food Processing unit is equipped with NIR composition analyzer, mixolab, cutting mill, single screw extruder, planetary mixer, deep fryer, vacuum packing machine, lyophilizer, color index meter and water activity meter to lead functional foods and nutraceuticals research for health and nutrition management.

Biodiversity unit has a GIS and Remote Sensing facility with hardwares like plotter, scanner, computer and software like Erdas Image 8.6, ArcGIS 8.3 etc for mapping. A complete IT facility with PCs, Servers and apt software are in place for documentation of ethnic knowledge and database development of plant resources of Western Himalayas. It also has an internationally recognised Herbarium.

Chemistry labs are equipped with 300Mz and 600 Mz NMR, preparatory and analytical HPLC, GC, GC-MS, microwave synthesizer, Super Critical Extraction Unit with head space, spray dryer, industrial scale rotavapour, distillation units of 10Q, 4 Q and 15 Kg capacity for processing of herbals. Research focuses of this unit are on chemical characterization of active constituents from plant sources, total synthesis of biologically active compounds, and molecular modification for value added compounds.

The Regulatory Research Center (RRC) of the Institute is well equipped with facilities for animal breeding and experimentation. The focus is to conduct toxicological safety evaluation of potential compounds.

Other Centres

Centre for High Altitude Biology (CeHAB), Ribling (Dist. Lahul-Spiti)

The work is focused on deciphering adaptive strategies and mechanism of plants at high altitude; conservation and mass propogation of important plants; biopropspection of plants and microbes and HRD.

Total Number of AcSIR Ph.D Students (as on 31st March, 2014): 71

Award or Achievement by Students

 Mr. Amit Sharad (Enrollment No. 10CC11J33024) selected as faculty at NIPER-Ahmedabad, Gujrat (June 2014)




 Ms. Praveen Guleria (Enrollment No. 10BB11J33001) selected as Assistant Professor at DAV University, Jalandhar (August 2014)



 Mr. Kuldip Jayaswall (Enrollment No. 10BB14J33002) selected as ARS Scientist ICAR NAARM (January 2015)



 Mr. Arun Kumar Shil (Enrollment No. 10CC11J33019) in 16th CRSI National Symposium in Chemistry held at IIT Bombay (6-9 Feb, 2014)



 Ms. Himankshi (Enrollment No. 10BB13J33004): Best Poster award in the Poster Session of 35th annual conference of Indian



Association of Biomedical Scientists held at CSKHPKV, Palampur (14-16 Nov, 2014)

 Mr. Munish Kumar (Enrollment No. 10BB13J33007): Best Poster award in National symposium of agronomy at PAU Ludhiana (18-20 Nov, 2014)



7. Ms. Madhu Kumari (Enrollment No. 10BB12A33002): Best Poster award in XXIII Indian Convention of Food



Scientists and Technologists held at NIFTEM Campus, Kundli, Haryana (13-14 Dec, 2014)

CSIR-Indian Institute of Chemical Biology (IICB), Kolkata About Institute

CSIR-IICB is currently organized in seven academic divisions on the basis of strategic research priorities. The research work is centered on infectious diseases like Leishmaniasis, cholera and malaria; metabolic and degenerative diseases like diabetes, cardiac hypertrophy, neurodegenerative diseases and uteroovarian dysfunction; genetics of inherited diseases; genomic and proteomic approaches to cancer; stem cell biology; structural characterizations of macromolecular interactions and small molecules of therapeutic importance; natural product chemistry; drug discovery etc and both fundamental and applied aspects are being investigated.

Research Areas

- Cell biology & Physiology
- Chemistry
- Human and Molecular Genetics
- Infectious diseases and Immunology
- Drug development Diagnostics & Biotechnology
- Structural biology & Bio-informatics

Total Number of Students enrolled in Ph.D program (as on 31st March 2014): 34

CSIR-Indian Institute of Chemical Technology (IICT), Hyderabad

About Institute

Vision

- To become an innovative global R&D organization in the field of chemical sciences and technology with reference to industrial and specialty chemicals
- To be an institution of international excellence in basic research in organic chemistry and adjacent chemical & engineering sciences



• To establish balance between innovation and discovery research

Objectives: To carry out research in the chemical sciences leading to innovative processes for a variety of products necessary for human welfare such as food, health and energy and the conduct of R&D work is fully geared to meet the requirements of technology development, transfer and commercialization.

Activity Scope: Offers globally competitive and environmentally viable technologies for Drugs and Drug Intermediates, Organic and Inorganic Chemicals, Agrochemicals, Catalysts, Polymer Coatings, Adhesives, Oils and many other technologies.

Also offers wide-ranging knowledge based services in Analytical Testing and Characterization, New Molecule and Product development, Process Upgradation and Restandardization, Process Safety studies, Design-Engineering and Project Viability studies

International Linkages

MoU with York University, Canada

MoU with Deakin University, Australia

Total Number of AcSIR Students (as on 31st March, 2014)

Enrolled in Ph.D program: 434

Enrolled in M.Tech program: 5

Award or Achievement by Students (2012-14)

- I. Mr. Ayan Kumar Barui (Ph.D program)
 - Young Scientist Presentation Award in International Conference on Nanotechnology (ICNANO) "Lessons from Nature and Emerging Technologies" organized on 25th-26th July, 2013 at Ansal University, Gurgaon, India

- Best Poster Prize in 3rd International Conference on Advanced Nanomaterials & Nanotechnology (ICANN) held on 1st-3rd December, 2013 at IIT-Guwahati, Assam, India.
- c. Nanoscale Poster Prize in International Conference on Nano Science and Technology (ICONSAT) held on 3rd-5th March, 2014 at Chandigarh. ICONSAT sponsored by the Nano Mission, DST, Govt. of India
- 2. Mr. G.N.Nikhil (PhD program)
 - a. Best drawing and painting award on the occasion of National Safety Day, 5th March, 2012
 - Received young scientist travel grant for attending international conference on "Atmospheric Chemistry in the Anthropocene" at Beijing, China from 17th-21st September, 2012.
 - c. Best paper award at an international conference on "Changing chemistry in changing climate: Monsoon (C4)" organized by Indian Institute of Tropical Meteorology, Pune from 1st-3rd May, 2013.
 - d. Best paper award at the international conference on "Technologies for sustainable waste management in developing countries" organized by Vignan University, Guntur from 23rd-24th August, 2013.







- 3. Ms. Pavani Vadthya (Integrated M.Tech-Ph.D program)
 - Best Paper Award on "Separation of NaOH from aqueous crude glycerol by Electrodialysis" at Membrane Separations for Fuel Cycle Applications 2013, Bhabha Atomic Research Centre, Mumbai
 - b. Best Poster Award, "Integration of Pervaporation Membrane Technique with Distillation for Recovery of Acetonitrile Solvent in Bulk Drug Industry" at Innovations in Chemical Engineering Conference, 2013, BITS Pilani, Hyderabad Campus.
- 4. Mr. Reddi Kamesh (Integrated M.Tech-Ph.D program): Best poster presentation award in Indus Cop, Workshop on Intensification and Up-scaling of Continuous Processes, CSIR-NCL-Pune, India
- Mr. Vineet Kumar Aniya (Integrated M.Tech-Ph.D program): Best poster in Chemical Process Industry a CHEMCOM- 2013 held at Institute of Chemical Technology, Mumbai

CSIR-Indian Institute of Integrative Medicine (IIIM), Jammu About Institute

CSIR-IIIM Jammu established in 1957, is a multidisciplinary research institute, engaged

essentially in the R & D of Drug Discovery from Natural Products (Microbes & Plants), Medicinal Chemistry, Plant & Molecular Biotechnology, Enzyme Biotransformation, Plant Biodiversity, Medicinal & Aromatic plants, Genetic Resources and Agro– technology standardization, general Pharmacology including Anti-cancer, Anti-microbial, Anti-diabetic and Anti-Inflammation research.

IIIM provides expertise in the areas of its core competence, facility for testing, analysis, quality control and CMC, bench to laboratory scale chemical and fermentation processes development, standardization, cGMP extraction and formulation for botanical drugs, takes R&D and extension projects on consultancy, collaborative, sponsored or under Public Private Partnership mode. With the help of IIIM, many private companies have launched their products in the market such as Liv I, Lesoris, EumePose, RestoHop, Biopotash, Orgozinc, Glowmin, Risorine etc.

IIIM has signed collaborative agreements / MoUs with more than 10 national universities, two agriculture universities, two renowned medical colleges, National Cancer Institute USA and Oncotest GmbH, Germany.

The important clients include Colgate Palmolive, USA; Procter & Gamble, USA & Japan; Holista Biotech, Malaysia; Tropical Botanics, Malaysia; Piramal Life Sciences, Mumbai; Medley Pharmaceuticals, Mumbai; Ochoa Laboratories, New Delhi; Prathistha Industries, Secunderabad; Bharat Biotech, Hyderabad; Genova Biotechniques, Hyderabad; Cadila Pharmaceuticals, Ahmadabad; Ranbaxy Laboratories, Hyderabad

Total Number of AcSIR Students (as on 31st March, 2014)

Enrolled in Ph.D program: 116

Award or Achievement by Students

I. Ms. Rashmi Sharma (PhD student) was awarded



Best Poster award at International Conference on Drugs for the Future: Infectious Diseases (DFID), 2014 at NIPER HYDERABAD.

 Ms. Richa Sharma (Ph.D student) was awarded Best Poster award at International conference on Food Technology: Impact on nutrition and health (ICFIN-2013) held at JNU, New Delhi during 23rd-24th December, 2013

CSIR-Indian Institute of Petroleum (IIP), Dehradun

About Institute

Vision

CSIR-IIP aims to become

• A model organization for Scientific and Industrial research and a path setter R&D in Petroleum Refining, Petro-chemicals, Specialty Chemicals and Petroleum Products

Application Areas

- A national platform providing R&D and high quality science based technical services to the hydrocarbon industry.
- A think tank of knowledge for providing solutions to the problems of Hydrocarbon industry.
- A training centre for personnel from Refining, Chemicals & Automotive Industry.
- A national centre for characterizing and performance evaluation of petroleum products.
- A data centre for providing information and assistance to the Government and industry for policy decisions in petroleum refining, chemical and gas industry.

Activity Scope

Research and development in the down stream sector of hydrocarbon and related industry

Total Number of Students (as on 31st March, 2014)

Enrolled in Ph.D program: 31

Enrolled in M.Tech program: 14 Graduated in M.Tech program: 6

Students related activities (2012-14)

This PG research programme aims to provide in-depth exposure to the engineering concepts, scientific principles, research methodology and hands-on experience on advanced real life R&D projects. IIP being a constituent laboratory of Council of Scientific and Industrial Research (CSIR) is involved, in Research & Technology development in the hydrocarbon sector for more than four decades.

IIP is conducting Integrated M.Tech-PhD programs entitled **Advanced Automotive Technology** (AAT) and Advanced Petroleum Science and Technology (APST). The Programs were launched in Sep 2012 and 2009, respectively.

The first semester of the programs focus on the core courses. The second semester offer the specialized courses in fields of automotive technologies like IC Engines, Automotive Engine Lubricants, Alternative Fuels, Fuel Quality and Emissions etc. for IMP program in AAT and Petroleum Refining technologies like Catalysis, Conversion Processes, Separation Processes and Renewable Energy Conversion Technologies for IMP program in APST. The third and fourth semesters give the opportunity to the candidates to effectively utilize the knowledge acquired through the courses towards advanced R&D project work and dissertation in specialized areas. The third semester is also aimed at providing advanced self-study courses which will prepare them in specialized areas like alternate fuels, process integration, green fuels and many more under the guidance of IIP scientists. The medium of instruction and evaluation is English. The admissions will be offered on the basis of academic performance at Undergraduate level and performance in the interview. Candidates with valid NET Engineering scores are eligible to apply.

Award or Achievement by Students

4 students awarded M. Tech Degree in 2011

- 4 students awarded M. Tech Degree in 2012
- 6 students awarded M.Tech Degree in 2014



CSIR-Indian Institute of Toxicological Research (IITR), Lucknow About Institute

Vision

Safety to Environment and Health and Service to industry

Objectives

- To identify occupational health hazards due to exposure to chemicals in industries, mines, agricultural fields and general environment by undertaking health and environmental surveys
- To determine the mode of action of toxic chemicals/pollutants
- To develop simple/rapid diagnostic tests for disorders caused by industrial and environmental chemicals
- To conduct safety evaluation of chemicals used in industry, agriculture and everyday life
- To generate knowledge useful in bioremediation of environmental contaminants
- To collect, store and disseminate information on toxic chemicals
- To develop human resource for dealing with industrial and environmental problems

Activity Scope: Conducts research in niche areas of toxicology such as Systems Toxicology & Health Risk Assessment, Food, Drug & Chemical Toxicology, Regulatory Toxicology, Environmental Toxicology and Nanotherapeutics & Nanomaterial Toxicology

Safety evaluation of chemicals/products by conducting studies under NABL/GLP certification

Total Number of AcSIR Students (as on 31st March, 2014)

Enrolled in AcSIR-IITR Ph.D. program: 81

Graduated from AcSIR-IITR Ph.D. program: 01

Courses Offered (2012-2014)

BIOLOGICAL **SCIENCES:** Biostatistics. Computation/ Bioinformatics, Basic Chemistry, Research Methodology, Communication/ethics/ safety, Biotechniques and Instrumentation, Biology of Inheritance, Xenobiotic Interaction and response, Cell Signalling, Stem cells, Regeneration and Aging, System Immunology, Seminar, Model systems in Toxicological Research, Food & Chemical Toxicology, Target Organ Toxicity, Nanomaterial Toxicology, Neurotoxicology, Genes and Environmental Diseases

CHEMICAL SCIENCES: Research Methodology, Analytical Tools and Instrumentation, Advanced Organic Chemistry, Advanced Analytical Chemistry, Advanced Photochemistry, Thermodynamics and Statistical Mechanics, Organic Spectroscopy Applications, Biodegradable polymers, Mass spectrometry applications

Students' related activities (2012-14) (As on 31st March, 2014)

- Ms. Gulshan Singh was awarded Ph.D. degree.
- Ph.D. Thesis was submitted by Mr. Alok Kumar Verma.
- As part of CSIR-800 programme, 12 students visited various rural areas for disseminating information and creating awareness on diverse problems prevalent in our society like deteriorating water quality, excessive usage of plastics, improper handling of pesticides, allergic diseases, food adulteration, contamination of vegetation due to exposure to industrial chemicals etc.

Awards or Achievements by Students (2012-14)

 Mr. Sandeep Mittal: Best Poster Award during 6th International Conference on Nanotoxicology (Nanotoxicology 2012)





organized by NCNST, Beijing, China, held on 4th-7th September, 2012.

 Ms. Gulshan Singh: Best Poster Presentation Award during the XXXII Annual meeting of Society of Toxicology, India (STOX) held on 5th-7th December, 2012.



- Mr. Shankar Suman: Best Poster Presentation Award during the XXXII Annual meeting of Society of Toxicology, India (STOX) held on 5th-7th December, 2012
- Ms. Fatima Rizvi: Young Scientist Award during the International Conference on Advances in Free Radicals, Redox Signaling and Translational Antioxidant



Research held on 30th January-1st February, 2013.

CSIR-Institute of Minerals & Materials Technology (IMMT), Bhubaneswar About Institute

CSIR-IMMT was setup in 1964 as Regional Research Laboratory, Bhubaneswar in the eastern part of India under CSIR, New Delhi. Renaming of IMMT was done in 2007 with a renewed research focus and growth strategy to be the global leader in the areas of minerals engineering and materials technology. The institute has expertise in conducting basic research and technology oriented programs in a wide range of subjects to ensure a sustainable growth of the mining, mineral and metals industries. For the last one decade, main thrust of R&D at CSIR-IMMT has been to empower the Indian industries to meet the challenges of globalization by providing advanced and zero waste process know-how and consultancy services for commercial exploitation of natural resources through the public-private-partnership (PPP) approach. Today, CSIR-IMMT is the first choice for many mineral based industries; while it is trying to develop a niche in some of the advanced materials for greater value addition.

Activity Scope: Specializes in providing R&D support for process and product development with special emphasis on conservation and sustainable utilization of natural resources.

Industry focus: Mineral engineering, Material science and engineering, Societal technology

Total Number of AcSIR Students (as on 31st March, 2014)

Enrolled in Ph.D program: 91

Graduated in M.Tech program: 24

CSIR-Institute of Microbial Technology (IMTECH), Chandigarh About Institute

CSIR-IMTECH is the youngest among the National Laboratories of Council of Scientific & Industrial Research and the first International Depository Authority (IDA) in India. It is a multidisciplinary institute with excellent research facilities, Students' hostel (Boys and Girls) and state of the art computational / library facilities, and faculty with interests in different areas of modern biological sciences and microberelated biotechnology with special emphasis on research that is intellectually challenging and with application-oriented potential. The institute has recently built up a GN Ramachandran Protein Science Centre with world class facilities for basic as well as translational research in the area of Protein Science & Engineering and Bioinformatics. It also houses three National facilities, namely Microbial Type Culture Collection (MTCC), Bioinformatic Centre (BIC), Biochemical Engineering Research & Process Development Centre (BERPDC).

(For details please see http://www.imtech.res.in)

Activity/Scope

CSIR-IMTECH is committed to examine and study microbial diversity in the environment, working ofmicrobes at the molecular level and their relevance in human health and disease, and the industrial exploitation of microorganisms, both as whole life forms and as factories for the fermentative production of recombinant proteins and other valuable biomolecules of medical or industrial importance.

Research areas

- Protein Science & Engineering, and Bioinformatics
- Molecular biology of infectious Diseases
- Cell biology and Immunology including Vaccine
 Research
- Microbial Informatics & Systems Biology
- Microbial diversity & Taxonomy
- Fermentation based process development
- Yeast Biology
- Nanotechnology, diagnostics and Biosensors

International linkages

This institute collaborates with both academic and industrial organizations. We have research collaborations on different projects with many countries spanning throughout the world.

CSIR-National Aerospace Laboratories (NAL), Bangalore About Institute

CSIR-NAL, established in 1959-60, a constituent Laboratory of CSIR is India's premier R&D establishment n aeronautics and allied disciplines.

Mission

- Development of national strengths in aerospace science & technology
- Advanced technology solutions to national aerospace programmes

 Design and development of a small and medium sized aircraft

Activity Scope

Multidisciplinary activities in the aerospace and related industries

Some of the recent programs include:

- Design, development and fabrication of multirole light transport aircraft
- Development of India's first all-composite trainer aircraft
- Hardware and software initiatives in parallel processing technologies
- Design and fabrication of advanced composite structures
- Failure analysis and accident investigations
- Design, development and fabrication of MAVs
- Qualification and Certification of flying aircrafts

Divisions

Advanced composites; Aerospace, Electronics & Systems; Acoustic test facility;

Computational & theoretical fluid dynamics division; Experimental aerodynamics; Flight mechanics and control division; Flosolver division; Materials Science division; National trisonic aerodynamics facilities, propulsion division; Structural technologies division; Surface engineering division;

Other Centers

- Centre for Civil aircraft design and development
- Centre for Societal Missions and Special Technologies
- Centre for Electromagnetics

Total Number of AcSIR Students (as on 31st March 2014)

Enrolled in Ph.D program: 5



CSIR-National Botanical Research Institute (NBRI), Lucknow

About Institute

CSIR-NBRI is a premium plant institute under the umbrella of CSIR devoted to basic and advanced research in area of plant sciences. NBRI's major research thrust includes plant diversity characterization and documentation, molecular analysis of genetic diversity, botanical informatics, plant diversity prospecting, plant microbial interaction, floriculture, biotechnological approaches including 'omics' and transgenics for improvement of plants, plant environment interaction including phytoremediation, biomass and eco-auditing phytochemistry, herbal drugs and ethanopharmacology. The research at NBRI is well supported by the state of art central instrumentation facilities in the area of genomics, proteomics, metabolomics and plant physiology. The NBRI has excellent IT support and bioinformatics team supporting R&D activities. NBRI's immediate and future emphasis is on following research theme:

- I. Root Biology for exploring interaction of microbes and plants for plant health.
- 2. Plant Diversity assessment and systematic including digitized plant databases and herbarium.
- 3. Developing new flower varieties for future.
- 4. Plant environment interaction for understanding effect of climate change and several stress conditions on plant health and ecosystem.
- 5. Biotechnological approaches along with state of art 'omics' and transgenics approaches for improvement of important traits in cotton, tomato, rice, chickpea, banana and other floricultural plants.
- 6. Metabolomics and pathway engineering in important medicinal plants of interest.

Total Number of AcSIR Students (as on 31st March, 2014)

Enrolled in Ph.D program=75

CSIR-National Chemical Laboratory (NCL), Pune About Institute

Vision

- To be a globally recognized and respected R&D organization in the area of chemical sciences and engineering
- To become an organization that will contribute significantly towards assisting the Indian chemical and related industries in transforming themselves into globally competitive organizations
- To become an organization that will generate opportunities for wealth creation for the nation and thereby, enhance the quality of life for its people

Activity Scope: Exploratory research & science, Applied research & technology, Consultancy & scientific services, Building & maintaining national resource centres, Education, training, dissemination & popularization, Contributions to scientific profession

Research areas: Catalysis, Biochemical sciences, Organic chemistry, Polymer science & engineering, Physical & materials chemistry, Chemical engineering science

International Linkages

- University of Science & Technology, Lille; National Institute for Applied Sciences, Lyon; National Institute of Food & agro industries, Massy, all from France
- Ohio State University Research Foundation, Ohio; University of Kansas – USA
- National Institute for Materials Science (NIMS), Tsukuba – Japan
- Gwangju Institute of Science & Technology Korea
- RMIT University, Melbourne Australia



• University of Applied Sciences, Germany

Total Number of Students (as on 31st March, 2014)

Enrolled in Ph.D program=407

Graduated in M.Tech program = 7+9 = 16

Graduated in Ph.D program=2

Students related activities (2012-14)

Science Day was celebrated during February 2012, 2013 and 2014 by presenting posters by the students and also students received awards for best poster, high-impact factor publications and best student under various disciplines.

Award or Achievement by Students (2012-14)

- Munmun Ghosh (Enrollment No. 10CC11J26021) received best poster prize in MTIC 2013 held in Roorkie IIT during 12th-17th December, 2013
- Ashish A. Chinchansure (Enrollment No. 10CC12A26017) received best poster award in International conference and exhibition on Pharmacognosy, Phytochemistry and Natural Products held during 21st-23rd October, 2013 at Radisson Blue Plaza Hotel, Hyderabad
- The Poster presented by Ruchira Mukherji (Enrollment No. 10BB11J26125) "Imaging quorum sensing receptors in bacteria using fluorescent Au Nanocluster probes surface functionalized with signal molecules" in Second Conference on Nano-Bio-Med-2013, held in ICTP (Trieste, ITALY) from 14th-18th October, 2013 won best poster award.
- Kishor Laxman Handore (Enrollment No. 10CC12J26001) received best poster award for Poster "Total Syntheses of Potent Cell Adhesion Inhibitor Peribysin E and Analogues" presented in International symposium on "Nature Inspired Initiatives in Chemical Trends' at CSIR-IICT, Hyderabad between 2nd-5th March, 2014

Sreekuttan M. Unni (Enrollment No. 10CC11J26003) received Raman Charpak Fellowship-2013 (by Indo-French Centre for the Promotion of Advanced Research, India) and carried a six month research activities at University of Poitiers, France from 1st December 2013 to 31st May, 2014 under the guidance of Prof. Nicolas Alonso Vante.

CSIR-National Environmental Engineering Research Institute (NEERI), Nagpur

About Institute

Vision: Leadership in Environmental Science and Engineering for sustainable development

Activity Scope

- R&D thrust areas environmental monitoring, environmental modelling, environmental biotechnology & genomics, environmental system design & optimization, environmental impact & risk assessment, environmental policy
- Advisory Industries, Central Govt. Ministries/ Boards, State Govt. Ministries/Boards, Judiciary

Total Number of Students (as on 31st March, 2014)

Enrolled in Ph.D program: 23

Enrolled in M.Tech program: 3

Graduated in M.Tech program: 8

Patent Filed

Title: Microalgae comprising increased lipid contents by oxidative stress and process for preparing the same.

Date of Registration: 17th March, 2014

Patent Number: 10-2014-0031184

Inventors-Kim, HeeSik; **Shekh, Ajam Yakub;** Kim, ByungHyuk; Cho ,Dae Hyun



Awards and Honors

Shekh, AjamYakub won Indo-Korea Research Internship Fellowship jointly sponsored by DST, India and NRF, South Korea for the period of one year (March 2013- March 2014)

CSIR-North East Institute of Science & Technology (NEIST), Jorhat About Institute

CSIR-NEIST, formerly (RRL), Jorhat was established in the year 1961 as one of the multidisciplinary laboratories of CSIR under its Chemical Science Group of laboratories. Its major thrust of R&D activities has been to develop indigenous technologies by utilizing the immense natural wealth of India. The North Eastern Region of the country being bestowed with an abundance of material resources like Petroleum, Natural Gas, Minerals, Tea as well as Aromatic and Medicinal plants and hence the laboratory was targeted to undertake research for development of Know-How for a wide a range of industries and extension works. Over the years, the laboratory has generated more than 100 technologies in the areas of Agrotechnology, Biological and Oil Field Chemicals of which about 40% were of commercial success culminating in setting up of various industries throughout the country.

Industry focus is on Analytical Chemistry, Applied Civil Engineering, Biotechnology, Cellulose Pulp & Paper, Chemical Engineering, Instrumentation, Coal, Geo Sciences, General Engineering, Material Science, Medicinal Aromatic & Economic Plants, Medicinal Chemistry, Natural Product Chemistry, Petroleum & Natural Gas, and Synthetic Organic Chemistry.

Total Number of AcSIR Students (as on 31st March, 2014)

Enrolled in Ph.D program: 15

CSIR-National Geophysical Research Institute (NGRI), Hyderabad About Institute

Activity Scope: Multidisciplinary R&D programs in

Earth Science - Geophysical surveys, archaeological investigations, Seismology, geophysical and geochemical exploration studies.

Industry focus

- Hydrocarbons
- Minerals
- Groundwater
- Earthquake hazard
- Lithosphere
- Environmental geophysics

Achievement

The scientific contributions of the Institute have been recognized both at national and International levels. NGRI scientists have received many Fellowships of Academies and national awards like the Padma Shri, Bhatnagar Prize, National Mineral Award, FAPCCI Award, FICCI Award, Young Scientist Awards of INSA/CSIR/AP Academy of Sciences, Krishnan Medal of the Indian Geophysical Union, and several others from other scientific organizations. Scientists of the Institute have also received international awards such as the Kharazmi Award of the Government of Iran, as well as the "Lorenz Award Lecture," instituted by the American Geophysical Union (AGU), which was delivered at the AGU Fall Meeting in San Francisco in December 2007.

Total Number of AcSIR Students (as on 31st March, 2014)

Enrolled in Ph.D program=29

NGRI-AcSIR student involvement in the activities:

 With the help of SEG-SPG-Students chapter of NGRI, NGRI-AcSIR students organized a week long (Dec-Ist week) interactive study program to help the CSIR-NET & GATE exam aspirants of the laboratory followed by a Geo-Quiz to strategically prepare for the same.



- Few of AcSIR students (Anand, Nilesh, Khelan) have completed "13th Satellite based Distance Learning Program on "Basics of RS, GIS & GNSS" conducted during 4th August – 14th November, 2014".
- 3. AcSIR students presented scientific studies in the student convention organized by SEG-SPG-Students Chapter in June-2014.
- 4. In April-2014, AcSIR students have won all the leading prizes (Quiz, Speech & Essay) during the celebration of Earth-Day in NGRI.







- 5. In March-2014, Anand Kumar Pandey was elected as secretary in the core group of student chapter of NGRI.
- 6. Three students of AcSIR-NGRI, represented NGRI in the Zonal outdoor game tournament held at IMMT-Bhuvaneshwar in Nov-2013.
- 7. Qualified CSIR-NET exam of June-2013 with AIR-22

Awards & Achievement by Students:

- I. Mr. Shib Sankar Ganguli (PhD program)
 - Conferred with ONGC Best Poster (1st prize) in 50th Annual International Convention organized by Indian Geophysical Union (IGU) in Jan, 2014.
 - The article entitled "Interpretation of gravity data using eigen image with Indian case study: A SVD approach" by Ganguli, S.S. and Dimri, V.P., (Journ. of App. Geophy., 95, 23-35) ranked 8th on Science Direct's Top 25 hottest papers.
- 2. Mr. Rajesh Rekapalli (PhD program)
 - IGU-ONGC best poster award in Jan 2014
 - Research Council best poster award in Oct 2012

CSIR-National Institute for Interdisciplinary Science & Technology (NIIST), Thiruvananthapuram

About Institute

CSIR-NIIST, Thiruvananthapuram, previously known as Regional Research Laboratory (RRL) is actively engaged in both basic and applied research in a number of areas of fundamental importance to the country. CSIR-NIIST is dedicated to carrying out multidisciplinary R&D in frontier areas of research aimed at creating scientific knowledge for effective utilization of the resources towards national development. NIIST has five main areas of research which include Agroprocessing & Natural Products,



Biotechnology, Chemical Sciences & Technology, Materials and Minerals Technology as well as Process Engineering & Environmental Technology.

Vision: To emerge the first choice of the users of its outputs of Research and Development, be it technology, product service or knowledge emanating from its collective endeavour.

Industry focus: Agro processing and Natural products, Biotechnology, Chemical Sciences and Technology, Materials and Minerals Technology, Process Engineering and Environmental technology.

Other Centres: Academic programme committee, Business Development cell, Laboratory safety.

Total Number of AcSIR Students (as on 31st March, 2014)

Enrolled in Ph.D program: 97

Students related activities (2012-14)

 Nature India Photo contest-2014 : The theme for our inaugural photo competition was 'Science & Technology in India'.Winner
 Rahul Dev Mukhopadhyay (PhD program) from Trivandrum, Kerala, India for weaving a compelling historical account into his picture 'Let there be light'. (http://blogs.nature.com/ indigenus/2014/09/announcing-winners-ofnature-india-photo-contest.html)

Award or Achievement by Students

- "Novel Functional Dielectrics for Microwave Applications" D.R. Lekshmi, I.J. Induja, G. Subodh, M.T. Sebastian and K.P. Surendran: Best Poster award in 2nd International Conference on Advanced Functional Materials (ICAFM-2014), held in Thiruvananthapuram during 19th-21st February, 2014
- "Highly Dispersed Layered Double Hydroxides/ Polymer Nanocomposites: Preparation and Characterization" Baku Nagendra and E. Bhoje

Gowd: Best Poster award in National Conference FPAM-2014 held at Kerala University during Nov 5-7.

- 3. "Preparation of Highly Dispersed Nanocomposites using Surfactant Free and Organomodified Layered Double Hydroxides/ Polymer: Structure, Morphology and Flame Retardant Properties" Baku Nagendra and E. Bhoje Gowd: Best Poster award in 2nd International Conference on Advanced Functional Materials (ICAFM-2014), held in Thiruvananthapuram during 19th-21st February, 2014
- "A Fluorescent Probe for the Selective Sensing of Serum Albumin Protein" Anees P, Ajaya Ghosh: Best Poster award in 8th Asian Photochemistry conference 'APC-2014', 10th-13th November, 2014 at Trivandrum, Kerala, India
- "Fluorescent Probe for Sensing of Thiol Containing Biomolecules" Anees P, Ajaya Ghosh: Best Poster award in Indian Society of Analytical Scientists (ISAS). 15th-17th August, 2013 at Goa, India.
- "A Reversible Chemodosimeter for the Detection and Imaging of Aminothiols" Anees P, Ajaya Ghosh: Best Poster award in Indian Society of Analytical Scientists (ISAS). 27th-28th January, 2012 at Kanyakumari, Tamilnadu, India.
- "Synthesis of Isoquinolone Fused Azabicycles via Rhodium(III) Catalyzed C-H Activation of N-Pivaloyloxy Amides" Greeshma Gopalan, Praveen Prakash, E. Jijy, P. S. Aparna, and K. V. Radhakrishnan: Best Poster award in Transcending Frontiers in Organic Chemistry (TFOC -2014), at CSIR-NIIST, Trivandrum.
- "Chemotaxonomy of Alpinia Galanga & Alpinia Calcarata and comparison of their antioxidant activities" Dhanya, S. R, P. S. Hema, Suchithra, M. V and Mangalam S. Nair: Best Paper award in National Seminar on Frontiers in Chemistry



(NSFC-2012), held at Department of Chemistry, University of Kerala, Trivandrum on 25th-27th April, 2012.

 "Spectroscopic and Microscopic Investigation of Au Nanostar Formation" Sajitha M J, Yoosaf K: Best Poster award in 8th Asian Photochemistry conference 'APC-2014', 10th-13th November, 2014 at Trivandrum, Kerala, India.

CSIR-National Institute of Oceanography (NIO), Goa About Institute

CSIR-NIO with its head quarters at Dona Paula, Goa, and regional centres at Kochi, Mumbai and Visakhapatnam, is one of the laboratories of the Council of Scientific & Industrial Research (CSIR), New Delhi. NIO was established on 1st January 1966. The institute has about in total 390 staff which include scientists, technical staff and administrative and support staff. The major research areas include the four traditional branches of oceanography-biological, chemical, geological/geophysical, and physical besides ocean engineering, marine instrumentation and archaeology.

Mission: To continuously improve our understanding of the seas around us and to translate this knowledge to benefit all.

Objectives

- To develop knowledge on physical, chemical, biological, geological, geophysical, engineering and pollution aspects of the waters around India
- To provide support to various industries, government and non-government organizations through consultancy and contract research
- To disseminate knowledge on the waters around India

Total Number of Students (as on 31st March, 2014)

Enrolled in Ph.D program=35

Students related activities (2012-14)

For their entire academic students undergo with different types of activities such as listed below:

- In two semesters i.e. SEM-I & II examinations are conducted which include viva, written test, practical exam, seminars, presentations, etc.
- And for rest years they undergo activities related to their research topic which include field work, cruise, laboratory work, assessments, examinations such as DAC, CEC and rest depends on individual supervisor or research guide.

CSIR-National Institute of Science Communication and Information Resources (NISCAIR), New Delhi About Institute

Mission: To become the prime custodian of all information resources on current and traditional knowledge systmes in science and technology in the country, and to promote communication in science to diverse consituents at all levels, using the most appropriate technologies.

Activity Scope: To provide formal linkages of communication among the scientific community in the form of research journals in different areas of S&T.

- To disseminate S&T information to general public, particularly school students, to inculcate interest in science among them.
- To collect, collate and disseminate information on plant, animal and mineral wealth of the country.
- To harness information technology applications in information management with particular reference to science communication and modernizing libraries.



- To act as a facilitator in furthering the economic, social, industrial, scientific and commercial development by providing timely access to relevant and accurate information.
- To develop human resources in science communication, library, documentation and information science and S&T information management systems and services.
- To collaborate with international institutions and organizations having objectives and goals similar to those of NISCAIR.

International Collaborations: NISCAIR exchanges publications with over 150 institutions in 44 countries in the world.

Total Number of AcSIR Students (as on 31st March, 2014)

Enrolled in Ph.D program: 6

CSIR-National Institute of Science, Technology and Development Studies (NISTADS), New Delhi

About Institute

Vision: To undertake research on policy, policy advisory and provide research support to advocacy and advice, and to serve CSIR and other national S&T agencies on science, technology, society and innovation challenges

Activity Scope: Science & technology policy research; Concern & problems of developing countries

Research Areas

- IPR: IPR & development studies
- ITBT: Information technology and biotechnology: Policy matters and ethical concerns
- InnP: Innovation policy

- INKS: Innovation & knowledge society
- TIARA: Technology & integrated assistance to rural artisans
- SD: Sustainable development
- STEVS: Science-technology-education valuation studies
- HPS: History & philosophy of science / Public awareness of science

Total Number of AcSIR Students (as on 31st March, 2014)

Enrolled in Ph.D program=7

Students related activities (2012-14)

- I. Mr. Ankit Tripathi (PhD program)
 - Participated in Good Governance Day Conference" "at New Delhi organised by DeitY, Govt. of India on 25th December, 2014.
 - b. Participated in two days 18th National Conference on e-Governance at Gandhinagar, Gujarat organised by Department of Administrative Reforms and Public Grievances (DARPG) along with DeitY, Govt. of India between 30th to 31st January, 2015. The theme of this year Conference was "Digital governance-New frontier".
 - c. Participated in three days Training Programme on "Leveraging ICT for Smart Sustainable Cities (SSC)" from 24th-26th March, 2015 at India Habitat Centre, Lodhi Road, New Delhi. This training was aimed to build skills on the required framework for SSC from an ICT perspective, the underlying components and the role of various ICT stakeholders in development of Smart Sustainable Cities.



- 2. Ms. Shilpa (Ph.D program)
 - Received the Title of 'Young Information Scientist' for year 2014 by Society for Information Science.
 - b. Received the International Travel Support from Science and Engineering Research Board, Department of Science and Technology, New Delhi. This support was provided to present a paper in '10th International Conference in Webometrics, Infometrics and Scientometrics'. This conference was held in Technical University of Ilmenau, Germany from 3rd-5th September 2014.
 - c. Associated with Journal of Scientometric Research as Research Fellow from January 2013.Journal of Scientometric Research (J. Sci. Res.) is an internationally targeted official publication of SciBiolMed. Org.(http://www. jscires.org/).
 - Contributed in development of a course for Ministry of Human Resources Development

 'Unit I I - Science Indicators'. Published by INFLIBNET for e-PG Pathashala Learning Management System.
 - e. Working on a Project 'Indian Science Technology and Innovation Policy' as Senior Project Fellow.
 - f. Contributed in Report: Bhattacharya, S., Sharma, P., Shilpa, Kaul, A., Noklenyangla, Sheikh, F. A. (2013) 'CEFIPRA 25 Years - Strengthen Scientific Competence and Enable Industrial Competetiveness'. Prepared by CSIR-National Institute of Science Technology and Development Studies for Indo-French Centre for the Promotion of Advanced Research (IFCPAR/ CEFIPRA).
 - g. Contributed in Bulletin: Bhattacharya, S., Shilpa, Kaul, A. (2014). 'Scientific Research

in India: Drawing Insights from Bibliometric Indicators'. ISTIP Policy Bulletin No. 3. CSIR-National Institute of Science Technology and Development Studies.

- h. Two Papers Accepted for Publication in Peer Reviewed Journal in 2014.
- Ms. PRIYAMVADH KINTH (PhD program): Received Rajiv Gandhi National Fellowship for PhD Students given by University Grants Commission; in February 2015

CSIR-National Metallurgical Laboratory (NML), Jamshedpur About Institute

Under the banner of AcSIR, CSIR-NML has initiated Ph.D. / Integrated M.Tech-Ph.D programs in the emerging and trans-disciplinary areas of Materials and Metallurgical Engineering, broadly involving mineral processing, primary and secondary extraction processes from ores, secondary resources and wastes, Energy efficient and environmentally friendly processes, advanced materials for functional applications, structural materials and alloys, automotive, nuclear, power, energy efficient materials and coatings, waste utilization, nondestructive evaluation, mechanical behavior of materials, surface engineering of various advanced alloys and materials, corrosion and prevention, metalforming, thermomechanical behavior, grain boundary engineering, iron and steel making, energy & environment in metallurgical industries etc. Direct Ph.D. course at CSIR-NML has started from January 2012 session while Integrated M.Tech-Ph.D course was initiated from August 2012 session with total student strength of nine. In 2012-13 four students were admitted for Ph D degree, while five for int. M. Tech-PhD. In 2013-14 seven students have been admitted to Int. M. Tech-Ph D while nine for Ph D degree including six industries sponsored students. All the Ph D students admitted during 2012-13 have completed their required course work including CSIR 800 project, also all of them have successfully defended their comprehensive examination.





Registration of AcSIR-NML 2013



Basant Mahotsav celebrated by AcSIR



Director CSIR-NML addressing students students

Besides the class room teaching and regular laboratory exercise, AcSIR–NML's students have been provided the opportunity to visit ferrous and non-ferrous metallurgical industries in and around Jamshedpur to enable them to appreciate the industrial and technological real life experiences, excitements and challenges, that needs to be solved using an "out –of -box" approach.

AcSIR-NML-Students Club

Creating an academic institute like ambience and to develop the quality of leadership, team-work among the AcSIR-NML students as well as keep them connected with social issues of pertaining to values and traditions, AcSIR-NML-Students Club has been created associating two CSIR-NML's scientists as faculty advisors. Students could evolve a system



Joy-Rush 2014 by AcSIR-NML's students



Group photograph of AcSIR-NML 2013-14 batch



CSIR-National Physical Laboratory (NPL), New Delhi About Institute

CSIR-NPL is the National Metrology Institute of India and Premier Research Laboratory in the field of Physical Sciences. NPL was conceptualized with a view to pave way for using science and technology as a means for industrial growth and development, as well as to give fillip to the fledgling Indian industry.

The main aim of the Laboratory is to strengthen and advance physics-based research and overall development of science and technology in the country. In particular, its objectives are:

- To establish, maintain and improve continuously by research, for the benefit of the nation, the National Standards of Measurements and to realize the Units, based on the International System
- To identify and conduct, after due consideration, research in areas of physics which are most appropriate to the needs of the nation and for advancement of the field
- To assist industries, national and other agencies in their development tasks by precision measurements, calibration, development of devices, processes and other allied problems related to physics

Activity Scope

- Physics of Energy Harvesting
- Materials Physics & Engineering
- Radio and Atmospheric Sciences
- Time Frequency & Electrical Standards
- Apex Level Standards & Industrial Metrology
- Quantum Phenomena & Applications

Total Number of AcSIR Students (as on 31st March, 2014)

Enrolled in Ph.D program: 91 Enrolled in M.Tech program: 16

Graduated in M.Tech program: 7

CSIR-Structural Engineering Research Centre (SERC), Chennai About Institute

CSIR-Structural Engineering Research Centre (CSIR-SERC), Chennai, India is one of the national laboratories under the Council of Scientific & Industrial Research (CSIR), India. CSIR-SERC has built-up excellent facilities and expertise for the analysis, design and testing of structures and structural components. Services of CSIR-SERC are being extensively used by the Central and State Governments and public and private sector undertakings. Scientists of CSIR-SERC serve on many national and international committees and the Centre is recognized at the national and international levels as a leading research institution in the field of structural engineering. CSIR-SERC has been certified as ISO 9001:2008 quality institution.

Activity Scope

- SERC acts as a clearing house for the latest available knowledge and develops know-how on design and construction of all types of structures.
- It undertakes application-oriented research in all aspects of structural engineering – both design and construction, including rehabilitation of structures.
- It provides design consultancy services, including proof checking, to organizations in the public and private sectors for developing a variety of structural designs.
- SERC also organizes specialized courses on structural engineering for the benefit of practicing engineers to familiarize them with the latest developments in analysis, design and construction.
- SERC also has several dedicated facilities for research in Renewable energy technologies.
- The department also work in collaboration with companies in providing various technology transfer.



R&D areas

- Structural health monitoring, NDT, retrofitting & rehabilitation of Structures
- Wind engineering and field experimentation
- Structural dynamics and earthquake engineering
- Fatigue and fracture, experimental mechanics, shock and vibration
- Steel structures, transmission line towers
- Computer-aided analysis and design of structures
- Construction engineering and pre-stressed concrete structures
- Solar Energy technologies: Solar photovoltaics, solar thermal, concentrated solar thermal and concentrated photovoltaic-thermal.
- Wind blade and small scale wind turbine design.

Total Number of AcSIR Students (as on 31st March, 2014)

Engineering of Structures:

Enrolled in Ph.D program: 19

Enrolled in M.Tech program: 30

Graduated in M.Tech program: 13

Renewable Energy:

Enrolled in Ph.D program: 4

Enrolled in M.Tech program: 17

Graduated in M.Tech program: 8

CSIR-Unit for Research and Development of Information Products (URDIP), Pune

About Institute

CSIR-URDIP, a specialized service unit, is involved in pre-research and pre-development phase of research programs by providing intellectual property and techno-commercial information services. URDIP's research output is used as input by R&D, legal, new business development and multifunctional teams for Research and Business Planning. URDIP has about 10 years of experience in informatics activities which includes extracting and analyzing technical/scientific knowledge in published patents, patent applications, literature references such as scientific journals, Internet and other publicly available information sources as well as subscribed patent database; including obtaining and analyzing commercial information that is publicly available. In addition, URDIP is involved in the creation of subject specific databases as per needs of stakeholders. The core activities of URDIP include: Patinformatics, Chembioinformatics, Phytoinformatics, Toxinformatics and Web-based services.

URDIP does research in the areas of Research, Technology, Knowledge and Intellectual Property Management. URDIP is recognized by University of Pune as a research center for PhD research in Intellectual Property and Knowledge Management.

Total Number of AcSIR Students (as on 31st March, 2014)

Enrolled in Ph.D program=2

Students related activities (2012-14)

- Institutional Seminars were presented by the student Ms. Saritha Kiran on (a) Role of patents in evergreening; (b) Data exclusivities and evergreening; and (c) Pay for delay and evergreening.
- Ms. Saritha Kiran Attended 3rd annual Pharma Legal and Compliance Summit 2014 Conference, held at Mumbai on 19th September 2014.
- Ms. Manisha Nighute presented a paper in the 2nd International Conference on Management of Intellectual Property Rights and Strategy [MIPS] 30th January - 2nd February, 2014 at Shailesh J. Mehta School of Management, IIT, Mumbai.

Award or Achievement by Students

Ms. Saritha Kiran (Ph.D student): Received award for best poster for her study on "Evergreening in pharmaceutical Industry, myth or reality?" during SIS-URDIP conference on "Patinformatics for Corporate Planning and Business Development" held at NCL from 9th-12th December, 2013.

Meetings





6. Meetings

6.1. Meetings of Board of Governors (BoG) of AcSIR

6.1.1 4th meeting of BoG held on 5th December 2013

The fourth meeting of Board of Governors of AcSIR was held on 5th December, 2013, under the Chairmanship of Dr. R.A. Mashelkar, Chairman, AcSIR.

The Chairman welcomed the members. The members were informed of initiation of the recruitment process for senior level officials (Director and Associate Directors) of the Academy.

The Board took note of the results of three Ph.D. (Science) students and 81 M.Tech students of the 2011-13 batch.

The members took note of (i) the signing of MoU between AcSIR and CSIR; (ii) enactment of the Statutes and Ordinances of AcSIR, as approved by the Chairmen, with effect from 10th November, 2013; (iii) Appointments of Prof. Kunal Ray as Associate Director (Adhoc), AcSIR and Prof. Nagesh R. Iyer as Acting Director, AcSIR.

Following recommendations were made by BoG

- Passed a resolution to rename the nomenclatures of Registrar and Assistant Registrar Grade I and II to Assistant Director (Admn. & Fin.), Senior Manager and Manager respectively.
- Approved creation of the position of Executive Assistants to assist AcSIR Coordinators and for AcSIR Hqrs.

- Approved Recruitment Rules and the Compensation package for the posts of Senior Manager and the Manager.
- Approved the Guidelines for induction of Adjunct and Visiting Faculty with specific emphasis on the need to have high profile Adjunct Faculty from aboard.
- Approved institution of the position of Distinguished Emeritus Professor and noted appointment of Prof. Pawan Kapoor Ex-Director, CSIR-CSIO as the first Distinguish Emeritus Professor.
- Approved Annual Audited Accounts of AcSIR for FY 2012-13 and Budgets for FY 2013-14, 2014-15.
- Approved institution of MS by Research Program of 3 years duration in Science and Engineering.
- Approved relocation of AcSIR Hqrs from Delhi to Chennai.

On account of imminent superannuation of Prof. S. K. Brahmachari as DG-CSIR and concomitantly end of his tenure as Vice-Chairman, BoG AcSIR, this was his last meeting. In that context, the Chairman, alongwith members of BoG, expressed deep appreciation for his immense contribution in formation and steering AcSIR during its formative period.

6.1.2 5th meeting of BoG held on 24th March 2014

The fifth meeting of the Board of Governors was held on 24th March, 2014, under the Chairmanship of Dr. R.A. Mashelkar.

The Chairman welcomed the members.



The members applauded the AcSIR students in organizing the Science Exhibition. The members also congratulated Prof. Mashelkar on his being awarded as Padma Vibhushan by Govt. of India.

The Board ratified the award of Ph.D. degree to 16 students.

The BoG made the following recommandations:

- Approved introduction of a course 'Diploma in Patinformatics' at CSIR-URDIP.
- In principle approval of fellowships from Ministry of New and Renewable Energy with a suggestion to explore possibility in increase of number of fellowships.
- Approved engagement of Prof. Samir K. Brahmachari as the Chief Mentor of AcSIR, and the terms and conditions attached to the appointment.
- Approved appointment of a Vigilance Officer, normally having a tenure of three years, this will be an additional responsibility for a person so appointed.
- Approved amendment of Statute 17.1.2 and Ordinances 9.3 and 9.4.
- Approved redesignation of a position "Executive Consultant" as "Accounts Officer".
- To achieve higher level of enrollment of students, the members stressed the need to ensure quality of faculty, induction of foreign faculty of high caliber to enhance the overall quality of output of AcSIR, the Chairman proposed: (i) intake of faculty in terms of quality; (ii) to invite faculty from within and outside country; and (iii) evaluation of existing faculty of AcSIR.

6.2 Meetings of Senate of AcSIR

6.2.1 5th Senate Meeting held on 12th September, 2012

The fifth meeting of the Senate was held on 12^{th} September, 2012, under the Chairmanship of the

Acting Director, AcSIR and Director, CSIR-CMERI, Prof. Gautam Biswas. He shared with the members that the substantive Academy was being handed over to the formal Board of Governors, andDr. R.A. Mashelkar as its Chairman. Subsequently, the Senate was also reconstituted and notified.

The Senate recommended the following:

- The Senate Committee was formed, comprising, Prof. Nagesh R. Iyer, Prof. S.K. Bhattacharyya and Dr. Vinod Scaria, to formulate guidelines for induction and involvement of Visiting and Adjunct faculty.
- Endorsement of M.Tech (PGRPE 2010-12) results for award of M.Tech degree to 71 graduating students on Second Annual Convocation on 26th September, 2012.
- Mode of operation of CSIR-800 (4 credit) project
- Endorsement of Prof. C.N.R. Rao, FRS, Prof. M.M. Sharma, FRS and Prof. Roddam Narasimha, FRS, for the conferment of Academy Professorship for their outstanding contribution to science.
- The approval for awarding of the Adjunct and Visiting Faculty status to proposals from CSIR-CMMACS and CSIR-NCL, respectively.

6.2.2 6th Senate Meeting held on 3rd December, 2012

Sixth meeting of the Senate was held on 3rd December, 2012, under the Chairmanship of Acting Director, AcSIR and Director, CSIR-CMERI, Prof. Gautam Biswas.

During the meeting, the Senate adopted the Credit Transfer Policy.

The Senate recommended the following:

 Adoption of new Student Enrollment Number



- Finalization of Fee structure for Sponsored Candidates by Finance Committee
- Finalization of Guidelines for AcSIR post graduate programs in engineering
- A sub-committee was formed, comprising Prof. S.K. Bhattacharya, Prof. Ashish Lele, Dr. Shantanu Sengupta and Dr. Vinod Scaria, to prepare a proposal for M.S. (Research) program.

6.2.3 7th Senate Meeting held on 5th April 2013

The seventh meeting of the Senate was held on 5th April, 2013 under the Chairmanship of Acting Director, AcSIR, Prof. Gautam Biswas.

Prof. Biswas introduced and welcomed Prof. Kunal Ray who joined as Associate Director (Ad-hoc) of the Academy. He also informed members about Dr. Shantanu Sengupta taking over charge as an Associate Dean of Biological Sciences in place of Dr. Mitali Mukherjee.

Members were informed of the Reports on the Modalities of induction of Sponsored Candidates in the M.Tech and Ph.D Program of AcSIR and Proposal for MS by Research for Engg and Science labs.

The Senate ratified the following

- Laboratory wise detailed information of selected Candidates in the Ph.D Programs in Science and Engineering. For the August 2012 and January, 2013.
- Introduction of new courses of CSIR-CLRI in Biological Sciences, CSIR-CIMFR and CSIR-NIIST in Chemical Sciences and CSIR-NIIST in Physical Sciences.
- Redistribution of Credits on the M.Tech Program on Transportation Engineering offered by CSIR-CRRI;
- Selection and placement of 11 faculty members from AICTE approved Engineering Colleges.

The Senate approved the following:

- Academic requirement and fee structure for sponsored Candidates for M.Tech and Ph.D. Program.
- Involvement of non-CSIR Scientists as Co-Guide of an AcSIR student in research along with an AcSIR faculty
- Award of Adjunct Faculty status to 18 Scientists of repute
- Proposal for introduction of two Integrated M.Sc-Ph.D Program in 'Clinical Research and Health Informatics' to be conducted jointly by PHFI and AcSIR.
- Report formulated by a Senate Committee (as recommended at 6th Senate meeting) for introduction of MS Research Program which inter-alia included required qualification, Course structures, duration of the program and financial aspects.

Members were informed about introduction of (i) Integrated M.Tech-Ph.D program for 2013 session; (ii) Integrated Ph.D (Direct Ph.D) program from August, 2013 session.

The members were informed of the request of the highly reputed Hyderabad Eye Research Foundation of LV Prasad Eye Institute with AcSIR. The members in principle approved the proposal subject to its taking up from the initial level and evolvement of some guidelines.

6.2.4 8th Senate Meeting held on 2nd August, 2013

The eighth meeting of the Senate was held on 2nd August, 2013, under the Chairmanship of the Acting Director, AcSIR Prof. Gautam Biswas.

He informed the Senate of signing of the MoU between AcSIR and CSIR, which was welcomed by the members.



Members had detailed discussion on formation of Board of Studies (BOS), quality of the courses being offered, maintenance of the course file for each of the courses being taught by CSIR labs to maintain the standard.

The Senate ratified following

- Selection of 496 candidates for Ph.D Program in Science and Engineering; selection of 13 students under AICTE-INAE scheme for Engg teacher for Doctoral Research and 27 students under AcSIR-PHFI joint program on Integrated Ph.D in Health Informatics and Clinical Research;
- Selection of 129 students in the 17 programs being offered for the Integrated M.Tech-Ph.D Program of AcSIR;
- Results of 81 students of M.Tech (2011 batch) Degree in 2013; and
- New courses for Ph.D (Sciences) of 6 CSIR labs, Integrated M.Sc.-Ph.D (PHFI) and modification of course for Ph.D (Sc.) of CSIR-IHBT and CSIR-NBRI.

The Senate recommended the following:

- Proposal for induction of (i) Prof. Indranil I.
 Manna as Adjunct Professor; (ii) Prof. Pawan Kapoor as Distinguished Emeritus Professor; and (iii) Recognisation of Prof. Michael Graetzel as Academy Professor respectively of AcSIR.
- Reconstitution of the Course Committee under the Chairmanship of Prof. Amitabha Chattopadhyay to review a basket of online courses for each of the faculty and shortlist 5 courses each.
- Reviewing of the proposalsfor inclusion of GRE and GMAT as criteria, by the Admission committee of AcSIR under the Chairmanship of Prof. Ajayaghosh.
- Authorized the Chairman, AcSIR Senate to make modification in both the documents, Statues and Ordinances – approve on behalf of Senate and

forward to the Board of Governors for approval;

- Constitution of a Sub-Committee under the Chairmanship of Prof. Kunal Ray to review the Faculty Guidelines in details and submit a report;
- Formation of a Senate Committee for the evaluation and recommendations received on the merit of each case for inclusion of

Non-CSIR academicians as faculty of AcSIR, and forwarding its recommendation to the Senate; consequent upon relinquishing the charge of Acting Director, AcSIR, the Vice Chairman and members of the Senate applauded and acknowledged Prof. Gautam Biswas contributions to the Academy.

6.2.5 9th Senate Meeting held on 19th December, 2013

Ninth meeting of the Senate was held on 19th December, 2013, under the Chairmanship of Acting Director, AcSIR Prof. Nagesh R lyer.

Prof. Iyer informed the member of formal approval of the Statutes and the Ordinances of the Academy, by the Board of Governors of AcSIR, effective from 10th November, 2013.

The members stressed on the need for formation of Board of Studies of AcSIR to have strict monitoring of the academic programs, maintenance of quality and standard of the course offered. The members took note on (i) the financial impact on visiting professors on AcSIR; (ii) Ph.D admission by students under INAE-AICTE program; (iii) the updated status of the joint AcSIR-PHFI program on Integrated M.Sc-Ph.D in Clinical Research and Health Informatics; and (iv) the efforts put in by Prof. Amitabha Chattopadhyay and Prof. Raj Singh in identifying portals including COURSERA for conducting online courses.

The members ratified (i) Ph.D admission in CSIR-CCMB, CSIR-IMMT, CSIR-IGIB and CSIR-CEERI; (ii) New Courses, Modification of courses; and renaming of IMP Program at CSIR-NML.



The Senate discussed in detail the process of thesis submission and suggested certain guidelines to be followed.

The members put on record the contributions made by Prof. Nagesh R Iyer, Prof. Kunal Ray and the team; and on the critical comments by Prof. Mashelkar, Chairman BoG.

The broad recommendations of the meeting were:

- Introduction of new program 'Diploma on Patinformatics' at CSIR-URDIP subject to approval of the Dean, Senate and the BOG;
- Formation of a sub-committee under the chairmanship of Prof. Kunal Ray for formulation of guidelines for Direct Ph.D Program in Science;
- Approval for awarding of Adjunct and Emeritus Professorships to proposals received from CSIR-CBRI, CSIR-NML, Prof. S.V. Eswarn as

Emeritus Professor and Prof. J.B. Joshi as Adjunct Professor;

- Roles and Responsibilities of Deans and Associate Deans of AcSIR;
- Annual Calender of Meetings of AcSIR Senate.

The members put on record the immense contributions of Prof. Samir K. Brahmachari in bringing AcSIR to the present status.

6.3 Meetings of Finance Committee of AcSIR

SI. No.	Date of Meeting
١.	25 th September, 2012
2.	18 th October, 2012
3.	17 th December, 2012
4.	18 th October, 2013

Convocation & Felicitation Ceremony for Academy Professors





7. Convocation & Felicitation Ceremony for Academy Professors

7.1 Third Convocation- 2014

The Third Annual Convocation of the AcSIR was held on 28th March, 2014 at Vigyan Auditorium, CSIR Campus, Chennai. The Convocation was webcasted live across India. Eighty one participants of M.Tech 2011-13 batch received their M.Tech. degree and Five doctoral students completing the requirements of their program were awarded Ph.D degree. The function was held in conjunction with the felicitation ceremony of Academy Professors.

A Science Exhibition was organized as a preconvocation function, where M.Tech students at CSIR-SERC presented project on display for dignatories and students.

The ceremony was presided over by the Chairman and Chancellor, AcSIR Dr. R.A. Mashelkar, FRS, Chief Guest Prof. M.M. Sharma, FRS, Former Director, Institute of Chemical Technology, Mumbai (formerly, University Department of Technology, University of



Prof. N.R. Iyer, Prof. S.K. Brahmachari, Prof. M.M. Sharma, Dr. R.A. Mashelkar and Prof. Kunal Ray (from left to right), on the dais on the occasion of Third Convocation of AcSIR



Pre-Convocation Science Exhibition

Mumbai) and the Ex-Vice-Chairman, BoG, AcSIR and DG-CSIR, Prof Samir K. Brahmachari.

Prof. Nagesh R. Iyer, Director, AcSIR welcomed all the dignitaries, students & the family members, faculty members of AcSIR, staff of CSIR-SERC and viewers watching the live webcast across India among others. He mentioned that 81 M.Tech 2011-13 will be awarded their M.Tech degree and emphasized that PhD in Science degree of AcSIR is being awarded for the first time to 5 doctoral students.





Prof. Nagesh R. Iyer, Director, AcSIR

Prof. Iyer and Prof. Kunal Ray, Associate Director, AcSIR admitted the graduating M.Tech and PhD students to their respective degrees.

Excerpts of the Address by Prof. M.M. Sharma, Chief Guest

Prof. Man Mohan Sharma expressed his delight at being present at the momentous occasion of third Convocation. He said that the creation of AcSIR was a true landmark in the glorious history of CSIR. CSIR has made many valuable contributions to the industry and society at large and has assisted in an all-inclusive growth of the nation. He mentioned that CSIR Labs have had a long and meaningful association with Universities and also ushered undergraduate and Post Graduate courses along with the local and other Universities. In view of the extensive and intensive work done by the CSIR Labs over an impressive and



Prof. M.M. Sharma, Chief Guest and Academy Professor, AcSIR

very wide range of subjects, it was prudent to usher in an academic institution like AcSIR.

In his address to the graduating students he said that "innovations cannot be scheduled as research itself is inspirational and oftensporadic, and the results can seldom be predicted in advance. Research is a very different kind of activity and unless you are doing repetitive things, research is an endeavor by itself". He further said that "quantum jump occurs through discontinuities and not through a linear path. Scientists/ technologists in AcSIR ought to work in this way and change fundamentals of business in their respective areas". He encouraged students to work with a sharp focus in applied sciences since the application enhances the rigors of fundamental work. He emphasized that it was essential to have publication in the best of learned journals and simultaneously demonstrate the utility of the study in the market place.

He suggested that AcSIR students can make unique contributions of great scientific and practical value using the strength of diverse sectors in which CSIR laboratories have core competence. Some of the research topics could be a model for water harvesting and distribution, valorization of coal ash, upgradation of rejects of coal washeries, valorization red mud from almuina plants, valorization of rare earths including cerium, lanthanum pigments replacing toxic Cadmium and lead pigments, energy sector may also need major technological inputs, exploration of natural gas hydrates and coal gasification of unmineable coal at depths of more than a kilometer etc. are challenging areas.

He suggested that the Academy should start a course on technology-based economic forecasting because, he argued, at least 50% of economic growth is dependent on technology.

He concluded his address by wishing the graduating MTechs and Ph.Ds a very bright future and hoped that they would contribute in different ways to their alma mater in future as they rise in their own profession.





Dr. R.A. Mashelkar, Chancellor, AcSIR

Dr. R.A. Mashelkar, Chairman and Chancellor, AcSIR addressing the gathering mentioned that Prof. MM Sharma, the Chief Guest of the Convocation has been his guru, guide, friend and mentor. He mentioned that Prof. Sharma single handedly championed CSIR all through his life. He asked the graduating students to draw inspiration from the life and work of Prof. Sharma. He also applauded presence of Prof. Brahmachari (ex-DG-CSIR), the main architect of AcSIR, and described him as a great visionary and a great thinker.

Drawing from the values taught by his mentor Prof. M.M. Sharma, he told the students that power of ideas was far greater than the power of the budget. He said that he did not believe that a scientist could not conduct an impactful research to even win a Nobel Prize because of lack of funds. He cited the example of the research on graphene that led to a Nobel Prize. This material has remarkable physical properties and potential applications. A simple but innovative technique using a scotch tape and a piece of graphite created graphene. He said, a piece of graphite and scotch tape would probably cost Rs 20 only. He said that the 'l' in India should stand for innovation and not imitation or inhibition. "Your research should aim at being first in the world, not first in India. AcSIR students should crack the toughest problems. They should not think of incremental research but disruptive research. People should not say 'so what' when a research paper is published by an AcSIR research student. It should be gamechanging said Dr. Mashelkar. He asked the students to stay committed to their work, focus on innovation and have a high level of ethics.

Finally, he reemphasized that we need to do cutting edge, leading edge research and we must do science and engineering that leads and not follows. He reminded the audience that there is no limit to human imagination and achievement, excepting the limit that we put on ourselves.



Prof. S.K. Brahmachari, Academy Professor, AcSIR

Dr. S.K. Brahmachari, former Director General, CSIR addressed the gathering mentioning specifically to the young graduating students that they have the right to dream and Academy is there to nurture their dreams. He reminded Swami Vivekananda's saying that education is the manifestation of perfection already existing in man. We need to nurture it. Towards the goal of reaching perfection he urged the graduating student to dedicate a guarter of 'awakeful' time for others for betterment of lives of these people with limited capacity and means. AcSIR's goal is to develop sensitivity in the students and urged the students to be different in their outlook from others. He emphasized that students should work on disruptive projects/work and not incremental works. He also recommended consider developing a corpus with donation from the AcSIR graduates with the intent to help subsidize the education of children of people associated with this Academy who have limited means to support their family.

The Convocation Ceremony concluded with vote of thanks by Prof. Kunal Ray, Associate Director, AcSIR.





Prof. Kunal Ray, Associate Director (Academics) and graduating students during the Oath taking Ceremony





M.Tech 2011-13 Graduating Batch and Students awarded with Ph.D Degree



7.2 Conferment of Academy Professorship

On 28th March, 2014, Third Annual Convocation of the AcSIR was followed by Conferment of Academy Professorship. Citations to Prof. M.M. Sharma, FRS and Prof. S.K. Brahmachari, FNA by Dr. R.A. Mashelkar, FRS, Chancellor, AcSIR.

The Academy Professorships were also conferred on Prof. C.N.R. Rao, FRS and Prof. Roddam Narasimha, FRS in absentia.



Prof. M.M. Sharma, FRS being conferred Academy Professorship of AcSIR by Dr. R.A. Mashelkar, FRS

Prof. M.M. Sharma, Prof. S.K. Brahmachari, and Dr. R.A. Mashelkar had half-hour interaction with the graduating Ph.D and M.Tech students.

7.3 Educative stall at CSIR-IGIB, New Delhi

AcSIR put up a stall for information dissemination on various academic programs of AcSIR at CSIR-Institute of Genomics and Intergrative Biology, New Delhi during their Annual Fest "GENOMEET 2013".





Prof. S.K. Brahmachari, FNA being conferred Academy Professorship of AcSIR by Dr. R.A. Mashelkar, FRS

Board of Governors, AcSIR





8. Board of Governors, AcSIR



CHAIRMAN			
Dr. Raghunath Anant Mashelkar			
National Research Professor			
VICE-CHAIRMAN			
Dr. T. Ramasami			
Director General, CSIR (w.e.f. 1st January 2014)			
Prof. Samir K. Brahmachari			
Director General, CSIR (upto 31st December, 2013)			
MEMBERS			
Prof. Raghavendra Gadagkar (w.e.f. Jan 2014)	Dr. K. Radhakrishnan		
Dr. Krishan Lal (unto Dec 2013)	Chairman, Space Commission, Department of		
President, Indian National Science Academy (INSA).	Space, Bangalore, Karnataka		
New Delhi			
Dr. R.K. Sinha	Prof. Ved Prakash		
Chairman of Atomic Energy Commission & Secretary	Chairman, University Grants Commission (UGC),		
to Govt. of India, DAE, Mumbai, Maharashtra	New Delhi		



Shri Sumit Bose	Prof. Mustansir Barma		
(w.e.f. Dec 2013)	Director, Tata Institute of Fundamental Research,		
Shri R.S. Gujral (upto Nov 2013)	Mumbai, Maharashtra		
Finance Secretary, Ministry of Finance, New Delhi			
Prof. Surabhi Banerjee	Prof. N. Sathyamurthy		
Vice Chancellor, Central University, Orissa,	Director, Indian Institute of Science Education and		
Bhubaneswar, Orissa	Research (IISER), Mohali, Chandigarh		
Prof. George M. Whitesides	Prof. Mriganka Sur		
Professor, Department of Chemistry and Chemical	Head, Department of Brain and Cognitive Sciences,		
Biology, Harvard University, USA	MIT, USA		
Prof. Asis Datta	Prof. A. K. Sood		
Professor of Eminence, National Institute of Plant	Department of Physics, Indian Institute of Science,		
Genome Research, New Delhi	Bangalore, Karnataka		
Dr. Purnendu Chatterjee	Dr. Rajendra S. Pawar		
Chairman, The Chatterjee Group, USA	Chairman, NIIT and Chancellor, NIIT University,		
	New Delhi		
Mr. Hari S. Bhartia	Prof. Chandra Shekhar		
Co-Chairman & Managing Director, Jubilant Life	Director, CSIR-Central Electronics Engineering		
Sciences Limited, Noida, Uttar Pradesh	Research Institute (CEERI), Pilani, Rajasthan		
Prof. Sourav Pal	Prof. S. R. Wate		
Director, CSIR-National Chemical Laboratory	(w.e.f. 5 th December, 2013)		
(NCL), Pune	Director, CSIR-National Environmental Engineering		
	Research Institute, Nehru Marg, Nagpur		
Prof. Gautam Biswas			
(upto 30 th August, 2013)			
Director, CSIR-Central Mechanical Engineering Research Institute, Durgapur			
Prof. Kunal Ray (w.e.f. 5 th September, 2013)			
Prof. Nagesh R. Iyer (upto 1st September, 2013)			
Associate Director			
(Admin.& Finance), AcSIR			





Senate, AcSIR





9. Senate, AcSIR



NOTE:

(1) DS: Distinguished Scientist of CSIR Lab/ Institute

(2) OS: Outstanding Scientist of CSIR Lab/ Institute

CHAIRMAN

Prof. Nagesh R. Iyer

Acting Director, AcSIR and Director, CSIR-SERC, Chennai (w.e.f. 2nd September, 2013)

Prof. Gautam Biswas

Acting Director, AcSIR and Director, CSIR-CMERI, Durgapur (upto 30th August, 2013)

MEMBERS

Prof. Kunal Ray	Prof. Amitabha Chattopadhyay
(w.e.f. 5 th September 2013)	CSIR-Centre for Cellular & Molecular Biology,
Associate Director (Academics and Administration &	Hyderabad, Andhra Pradesh
Finance), AcSIR, Coordination Office, New Delhi	
Prof. Nagesh R. Iyer (upto 1 st September, 2013) Acting Associate Director (Admin. & Finance), AcSIR	


Prof. A. Ajayaghosh	Dr. P. Seshu
CSIR-National Institute for Interdisciplinary Science	CSIR-Fourth Paradigm Institute, Bangalore.
& Technology, Thiruvananthuapuram, Kerala	
Prof. B.D. Kulkarni	Prof. K.S. Krishna
CSIR-National Chemical Laboratory, Pune,	CSIR-National Institute of Oceanogarphy, Goa
Maharashtra	
Prof. Vivek Ranade	Prof. Javed N. Agrewala
CSIR-National Chemical Laboratory (NCL), Pune,	CSIR-Institute of Microbial Technology (IMT),
Maharashtra	Chandigarh
Prof. Vijaya Mohanan K Pillai	Prof. (Mrs) Asha A. Juwarkar
CSIR-Central Electrochemical Research Insitute	CSIR-National Environment Engineering Research
(CECRI), Karaikudi, Tamil Nadu	Institute (NEERI), Nagpur, Maharashtra
Prof. (Mrs) Lakshmi Kantam	Prof. Pijush Pal Roy
Head, Inorganic & Physical Chemistry, CSIR-	Head of Blasting, CSIR-Central Institute of Mining
Indian Institute of Chemical Technology (IICT),	and Fuel Research (CIMFR), Dhanbad, West
Hyderabad, Andhra Pradesh	Bengal
Prof. S.K. Bhattacharyya	Prof. S. Srikanth
Director, CSIR-Central Building Research Institute,	(w.e.f. 18 th December, 2012)
Roorkee, Uttrakhand	Director, CSIR-National Metallurgical Laboratory,
	Jamshedpur, Jharkhand
	Prof. Indranil Manna
	(upto 31 st October, 2012)
	CSIR-Central Glass & Ceramic Research Institute,
	Kolkata
Prof. Partha Banerjee	Prof. Shyam Sundar Rai
Acting Director, CSIR-National Institute of Science,	Scientist, CSIR-National Geophysical Research
Technology and Development Studies (NISTADS),	Institute (NGRI), Hyderabad, Andhra Pradesh
New Delhi	
Prof. Rajan Sankaranarayanan	Dr. Shankar Doraiswamy
(w.e.f. 28 th August, 2012)	(w.e.f. 28 th August, 2012)
CSIR-Centre for Cellular & Molecular Biology	CSIR-National Institute of Oceanography (NIO),
(CCMB), Hyderabad	Goa
Dr. Ashish Lele	Dr. Mitali Mukherji
(upto 27 th August, 2012)	(upto 27 th August, 2012)
CSIR-National Chemical Laboratory, Pune	CSIR-Institute of Genomics and Integrative
	Biology, New Delhi
Dr. Vinod Scaria	Dr. Poonam Arora
CSIR-Institute of Genomics and Integrative Biology	CSIR-National Physical Laboratory (NPL),
(IGIB), New Delhi	New Delhi



Prof. B.K. Mishra	Prof. Amitava Sengupta			
Director, CSIR-Institute of Minerals and Materials	CSIR-National Physical Laboratory (NPL), New			
Technology (IMMT), Bhubaneshwar, Orissa	Delhi			
Prof. Ram Rajsekharan	Prof. Prem Krishna			
CSIR-Central Institute of Medical & Aromatic	Vice President, INAE (Engineering sciences),			
Plants (CIMAP), Lucknow, Uttar Pradesh	New Delhi			
Prof. Dinesh Singh Vice Chancellor, Delhi University, New Delhi	Dr. Pronob Sen Principal adviser, Planning Commission (Social Sciences), New Delhi			
Dr. Shantanu Sengupta (w.e.f. 4 th March, 2013) CSIR-Institute of Genomics and Integrative Biology, New Delhi	Prof. R. K. Baruah CSIR-North-East Institute of Science and Technology, Jorhat, Assam			
Prof. Rakesh Mohan Jha	Prof. (Mrs.) Suman Kumari Mishra			
CSIR-National Aerospace Laboratory,	CSIR-National Metallurgical Laboratory,			
Bangalore, Karnataka	Jamshedpur, Jharkhand			
Prof. (Mrs.) Santa Chawla CSIR-National Physical Laboratory, New Delhi				



Finance Committee, AcSIR





10. Finance Committee, AcSIR

CHAIRMAN			
Prof. Nagesh R. Iyer Acting Director, AcSIR and Director, CSIR-SERC, Chennai (w.e.f. 2 nd September, 2013)			
Prof. Gautam Biswas Acting Director, AcSIR and Director, CSIR-CMERI, Durgapur (up to 30 th August, 2013)			
MEM	BERS		
Prof. Kunal Ray (w.e.f. 5 th September, 2013) Associate Director (Academics and Administration & Finance), AcSIR, Coordination Office, New Delhi	Dr. Sudeep Kumar Head, Performance & Planning Division, CSIR-Council of Scientific & Industrial Research, Anusandhan Bhawan, 2 Rafi Marg, New Delhi		
Prof. Nagesh R. Iyer (upto 1 st September, 2013) Acting Associate Director (Admin. & Finance), AcSIR			

List of Administrative Heads





11. List of Administrative Heads

Designation	Name
Acting Director	Prof. Nagesh R. Iyer (w.e.f. 2 nd September, 2013) Prof. Gautam Biswas (upto 30 th August, 2013)
Associate Director (Academics and Administration & Finance)	Prof. Kunal Ray (w.e.f. 5 th September, 2013) Prof. Nagesh R. Iyer (upto 1 st September, 2013)
Deans	
Engineering Sciences	Prof. B.D. Kulkarni
Biological Sciences	Prof. Amitabha Chattopadhyay
Chemical Sciences	Prof. A. Ajayaghosh
Physical Sciences	Prof. K.S. Krishna
Mathematical & Information Sciences	Prof. P. Seshu (w.e.f. 27 th August, 2012) Prof. P. Goswami (upto October, 2012)
Associate Deans	
Engineering Sciences	Prof. (Ms.) Suman Kumari Mishra
Biological Sciences	Dr. Shantanu Sengupta (w.e.f. 4 th March, 2013)
	Dr. Mitali Mukherji (August 2012 to March 2013) Prof. Kunal Ray (upto July, 2012)
Chemical Sciences	Prof. R.K. Baruah (w.e.f. 27 th August, 2012) Prof. Neelima Saikia (upto August, 2012)
Physical Sciences	Prof. (Mrs.) Santa Chawla
Mathematical & Information Sciences	Prof. Rakesh Mohan Jha



Lab Coordinators	
CSIR-AMPRI	Prof. B.K. Prasad (w.e.f. April, 2013) Dr. Navin Chand (upto March, 2013)
CSIR-CBRI	Dr. S.R. Karade (w.e.f. 13 th August, 2014) Dr. Amitava Ghosh (upto 12 th August, 2014)
CSIR-CCMB	Prof. Rakesh K. Mishra
CSIR-CDRI	Prof. S.K. Rath (w.e.f. July 2013) Prof. Bijoy Kundu (upto July, 2013)
CSIR-CECRI	Dr. P. Subramanium (upto 31 st December, 2014)
CSIR-CEERI	Prof. Raj Singh
CSIR-CFTRI	Dr. C. Anandharamakrishnan (w.e.f. 4 th October, 2012) Dr. M.C. Varadraj (upto September 2012)
CSIR-CGCRI	Prof. Amarnath Sen
CSIR-CIMAP	Dr. Laiq-ur-Rahman
CSIR-CIMFR	Prof. Ishtiaque Ahmad (w.e.f. 31st October, 2012)) Dr. Bijay Kumar (upto October, 2012)
CSIR-CLRI	Prof. J. G. Raghava Rao, Dr. V. Subramanian
CSIR-CMERI	Prof. S.N. Shome
CSIR-CMMACS	Dr. Imtiaz A. Parvez
CSIR-CRRI	Prof. P.K. Jain
CSIR-CSIO	Prof. H.K. Sardana
CSIR-CSMCRI	Dr. (Ms.) Rukhsana I. Kureshy (w.e.f 19 th July, 2013) Prof. Bhavnath Jha (upto 11 th July, 2012)
CSIR-HQ/ OSDD	Dr. (Ms.) Anshu Bhardwaj
CSIR-IGIB	Dr. Arjit Mukhopadhyay (w.e.f. 4 th March, 2013) Dr. Shantanu Sengupta (upto 4 th March, 2013)
CSIR-IHBT	Prof. Sudesh Kumar (w.e.f. 1st January, 2015) Prof. Arvind Gulati (up to 31st December, 2014)



CSIR-IICB	Prof. (Ms.) Rukhsana Chowdhury
CSIR-IICT	Prof. N.V. Satyanarayana
CSIR-IIIM	Mr. Abdul Rahim (w.e.f. September, 2013) Dr. A.K. Saxena (up to August, 2013)
CSIR-IIP	Dr. Sudip K. Ganguly
CSIR-IITR	Prof. D. Kar Chowdhuri
CSIR-IMMT	Prof. Santosh K. Mishra, Dr. B.S. Jena
CSIR-IMTECH	Prof. Pradip Kumar Chakraborti
CSIR-NAL	Prof. M. Manjuprasad (w.e.f June, 2013) Dr. V. Mudkavi (upto May, 2013)
CSIR-NBRI	Dr. Samir V. Sawant
CSIR-NCL	Prof. C.G. Suresh, Dr. Ashish Orpe
CSIR-NEERI	Dr. R.A. Sohony
CSIR-NEIST	Mr. J.J. Mahanta (w.e.f. 1 st October, 2014) Dr. L Nath (up to 30 th September, 2014)
CSIR-NGRI	Prof. R.K. Tiwari
CSIR-NIIST	Prof. Mangalam Nair
CSIR-NIO	Prof. M.R. Ramesh Kumar (w.e.f. June, 2013) Prof V.K. Banakar (up to May, 2013)
CSIR-NISCAIR	Dr. Tarakanta Jana
CSIR-NISTADS	Dr. Neelam Kumar (w.e.f. 10 th December, 2013) Dr. Mohammad Rais (w.e.f. 13 th May, 2013 to 9 th December, 2013) Prof. Satpal Sangwan (upto 12 th May, 2013)
CSIR-NML	Prof. Arvind Sinha (w.e.f 10 th January, 2013) Dr. Sandip Ghosh Chowdhury (upto January, 2013)
CSIR-NPL	Prof. Ajay Dhar
CSIR-SERC	Prof. A. Rammohan Rao, Dr. Bala Pesala
CSIR-URDIP	Prof. Raj Hirwani

Audited Accounts





12. Audited Accounts

ACADEMY OF SCIENTIFIC AND INNOVATIVE RESEARCH ANUSANDHAN BHAWAN 2 RAFI MARG, NEW DELHI Statement of Financial Position As at 31st March 2013.

31.03.2012		31.03.2013
Amount(Rs)	Sources of Funds:	Amount(Rs)
2,500,000	CSIR SEED Money	2,500,000
9,438,066	Accumulated Surplus	24,726,326
36,382	Capital Asset Fund	14,553
11,974,448	Total	27,240,879
	Application of Funds:	
36,382	Apparatus & Equipments	14,553
11,938,066	Bank Balance Savings Account with State Bank of India	27,226,326
11,974,448	Total	27,240,879

For RAGHUNATHAN & ANANTHARAMAN Chartered Accountants (Firm No : 003348S)



Partner - (M.No 019485)

Place: Chennai Date: 26.09.2013 Finance & Accounts Officer

दी. पीनियम रापमन D. Srinivasa Raghavan वित्र एवं लेखा वर्षिमणी Finance and Accounts Cifficer

गे. 301, रेडानेफ सह परीक्ष मार्थिक वार्य Accounts Califor मे. 301, रेडानेफ सह परीक्ष ब्युपंचन अपर्परी (एसीस्ट्रान्ट्रेजा) 6. 301, Academy of Scientific and Innovative Research (ACSIR (रेडानेफ प्रथम बार्यप्रेनिफ व्युपंचन परिष्ठ Council of Scientific & Industrial Research) बायुपंचन प्रथम Anusandhan Bhavan, , परी पार्न Rall Marg, पई सिम्मी New Deihi - 110 001

AcSIR

Associate Director (FINANCE AND ADMN.)

AcSIR RE-FRETION | Associate Director RE-FRETION | Associate Director Restrict after atting associate Research (ASSIR) Acsdemy of Scientific & Innovative Research (ASSIR) 2, roh mrl. aft (creft-110001 2, Raft Marg. New Delmi-110001 2, Raft Marg. New Delmi-110001

Auditors



ACADEMY OF SCIENTIFIC AND INNOVATIVE RESEARCH ANUSANDHAN BHAWAN 2 RAFI MARG, NEW DELHI

Statement of Income & Expenditure Account for the Year ended 31st March 2013

31.03.2012 Amount(Rs)	Expenditure	31.03.2013 Amount(Rs)	31.03.2012 Amount(Rs)	Income	31.03.2013 Amount(Rs)
	Advertisement Charges	566,811	111,922	Bank Interest	527,086
4,349	Bank Charges	1,980	11,174,889	CISR Tuition Fees	18,512,569
-	BoG & Senate Meeting Expens	185,040	90,000	Misc. Receipt	5,000
191,206	Contingencies	259,713			
84,496	Honorarium	70,600			
	Misc. Expenses	199,537			
30,090	Printing & Stationery	250,374			
	Professional Charges	18,978			
23,713	Refreshment Charges	3,544			
501,897	Salary	1,637,404			
1,169,828	Travelling Expenses	562,414			
15,593	Apparatus	36,382			
9,355,639	Excess Income Over Expenditure	15,251,878			
11,376,811	Total	19,044,655	11,376,811	Total	19,044,655

Income Appropriation Statement for the Year ended 31st March 2013

Surplus C/f to Balance Sheet	24,726,326	Opening Surplus B/F	94,74,448
		Excess of Income for the year	15,251,878
Total	24,726,326	Total	24,726,326

EOF RAGHUNATHAN & ANANTHARAMAN Chartered Accountants (Firm No : 003348S) Ann CHARTERED Tantan Finance & Accounts Officer Partner (M.No 019485) AcSIR Place: Chennai Date: 26.09.2013

R. Alfrana sugar D. Srinivasa Raghavan विश्व एवं लेखा अधिकारी Finance and Accounts (inver मं. 301, देवानिक तथा नटीवृत्त अनुसंधान अकारचे (एसीएर. ' - -) 301, Academy of Scientific and Innovative Research (AcSIR (**b**.

(FINANCE AND ADMN) ACSIR TRE-Pateron I Associate Director RE-IRENI 1A550CIALE DIRECTOT anne an religio statica anno (centrantan) demy ol Scientific à innovative Research (Ad ol Scientific & innovative Research (2. रकी मार्ग, नई दिल्की-110001 2. Rafi Marg, New Dethi-110001

क रामा अधिमिक अनुसंधान परिषद Council of Scientific & Industrial Research) anything your Anusandhan Bhavan, 2, with wort Radi Marg, wit flowit New Delta - 110 001

Auditors



ACADEMY OF SCIENTIFIC AND INNOVATIVE RESEARCH ANUSANDHAN BHAWAN 2 RAFI MARG, NEW DELHI

Receipts & Payments For the Period 1st April 2012 to 31st March 2013

Receipts	Amount(Rs)	Payments	Amount(Rs)
Opening Balance Bank Balance with State Bank of India Bank Interest CSIO CSIR CCMB CSIR CCMB CSIR CCRI Tution Fees CSIR CECRI Tution Fees CSIR CFTRI Tution Fees CSIR CFTRI Tution Fees CSIR CIMAP Tution Fees CSIR CIMAP Tution Fees CSIR CIMAP Tution Fees CSIR CRMACS Tution Fees CSIR CMMACS Tution Fees CSIR CMMACS Tution Fees CSIR CRM Tution Fees CSIR CSMCRI Tution Fees CSIR CSMCRI Tution Fees CSIR IIBT Tution Fees CSIR IIBT Tution Fees CSIR IIIT Tution Fees CSIR IIIT Tution Fees CSIR NAL Tution Fees CSIR NAL Tution Fees CSIR NERI Tution Fees CSIR NERI Tution Fees CSIR NERI Tution Fees CSIR NIC Tution Fees CSIR SERC TUTION Fees CSIR NIC TUTION Fees CSIR SERC TUTION Fees	11,938,066 527,086 2,280,000 21,016 571,000 372,285 932,543 286,000 197,000 77,000 1,582,458 51,067 425,000 851,000 608,400 675,000 735,000 735,000 509,000 116,000 537,000 7,000 484,000 3,382,000 987,000 198,000 279,000 283,600 433,000 1,171,200 42,000 5,000	Advertisement Charges Bank Charges BoG & Senate Meeting Expenses Contingencies Honorarium Misc. Expenses Printing & Stationery Professional Charges Refreahment Charges Salary Travelling Expenses Closing Balance Bank Balance with State Bank of India	566,811 1,980 185,040 259,713 70,600 199,537 250,374 18,978 3,544 1,637,404 562,414 27,226,326
Total	30,982,721	Total	30,982,721
For Rection of ANANTHARAMAN Conserver attendings (Firm No 003348S) Rechtlichten Place Chengen Date: 26.09.2013	दी. वीतिप्राय पाळणण विच एवं तेथा व्यक्तिणी मं. 301, दवनिण का पर्य Ho. 301, Academy of Scien (देवालिक काम व	Pinance & Accounts Officer AcSIR D. Svinthesse Repherent Finance and Accounts Officer re egiter annel (riferentian) Sis and innovative Research (ACSR) Academy	Associate Director (PINANCE AND ADMN.) AcSIR artificial stratting stratting stratting stratting stratting stratting of Scientific & Innovative Research (Act of Scientific & Innovative Research (Act 2, with strif, and Research (Act 3, with strif) and Research (Act

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Auditors



ACADEMY OF SCIENTIC AND INNOVATIVE RESEARCH ANUSANDHAN BHAWAN 2, RAFI MARG, NEW DELHI

Receipts and Paymnets for the period 1st April 2013 to 31st March 2014

Receipts		Amount(Rs)	Payments	Amount(Rs)
Opening Balance				
Bank Balance with State Bank of India		27,226,326	Advertisement Charges	2 457 248
Bank Interest		1.288.855	Bank Charges	101 248
Students Tution Fees:		-,,	Meeting Expenses	174 222
(Received through CSIR Centres at)			Contingencies	126 705
CSIO	123.000		Honorarium	1 303 129
CSIR CCMB	72,098		Misc. Expenses	10 143
CSIR CDRI	719.000		Printing & Stationery	196 964
CSIR CECRI	433,100		Professional Charges	49 515
SIR CEERI	3,935,000		Salary	1 952 500
CSIR CETRI	365,000		Travelling Excenses	453 040
CSIR CIMAP	360,000		Transportation Charges	33,045
SIR CLRI	196,000		Telephone expenses	333,736
SIR CMERI	300 500		Staff Welfare	\$ 122
SIR CMMACS	50 194		Southing & Stamor	3,133
SIR CRRI	2,000		Cuert Lecturer	11,150
SIR CSMCRI	1 238 000		Guest cecturer	250,500
SIR IGIR	1,230,000		Convocation expenses	113,568
SIR IHBT	881.000		Durchase of Apparatus	2,404,667
SIR IICT	2017.000		Purchase of Apparatus	154,400
SIR IIIM	2,017,000		Advance to shaff	50,326
	249,000	I I	Advance to staff	33,642
	352,000		Closing Balance	
LSIR IIIR	1,107,020		Balance with State Bank of India	
CSIR NAL	11,000		Savings Account Balance	16,173,930
CSIR NBRI	821,000		Fixed Deposit	12,400,000
LSIR NCL	5,476,000		Fixed Deposit with Vijaya Bank	20,000,000
LSIK NEEKI	316,000			
CSIR NEIST	62,000		1 1	
CSIR NGRI	362,000		1 1	
CSIR NIO	521,000		1 1	
CSIR NML	792,000		1 1	
CSIR NPL	24,900		1 1	
CSIR SERC	1,407,000		1 1	
CSIR AMPRI	6,000		1 1	
CSIR CBRI	644,000		1 1	
CSIR CIMFR	1,229,000		1 1	
CSIR IICB	473,000		1 1	
CSIR IMMT	2,795,047		1 1	
CSIR NIIST	1,191,000			
CSIR NISTADS	15,000			
CSIR OSDD HQ	96,000			
SIR CGCRI	4,000	30,122,859	1	
Misc. Receipt		22,130		
IRA Recovery		20,000		
Total		59 690 170	Tatal	F0 (00 134
Total As per our report of even date		58,680,170	Total	58,680,170
or RAGHUNATHAN & ANANTHARAMAN				1
hartered Accountants (Firm No : 0033485)				()
A . Is .	9	1001		
Rashunathan	Einance & Arrow	VVV	Associate Director	19.
artner - (M No 019485)	ACSIP	ond onicer	CINANCE AND ADAM	and the second
arther - (M.NO 019485)	ACSIR		(FINANCE AND ADMN.) Prof. Kuna	al Ray, Ph.D.
uce: chennai	ACourse and a	Balatana	ACSIR Associa	ate Director
Alte:	and and and a	. Srinivasa I	Academy of Scientific &	Innovative Research
SN & ATTAL			Coordination Office:	CSIR-CRRI, CRRI F
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Auditors



ACADEMY OF SCIENTIFIC AND INNOVATIVE RESEARCH ANUSANDHAN BHAWAN 2, RAFIMARG, NEW DELHI

Statement of Income & Expenditure Account for the Year ended 31st March 2014

31.03.2013 Amount(Rs)	Expenditure	31.03.2014 Amount(Rs)	31.03.2013 Amount(Rs)	Income	31.03.2014 Amount(Rs)
566,811	Advertisement Charges	2,457,248	527,086	Bank Interest	1,288,855
1,980	Bank Charges	101,248	18,512,569	Tuition Fees	30,122,979
185,040	Meeting Expenses	174,222	5,000	Misc. Receipt	22.010
259,713	Contingencies	126,705			
70,600	Honorarium	1,303,129			
199,537	Misc. Expenses	10,143			
250,374	Printing & Stationery	196,964			
18,978	Professional Charges	48,515	_		
3,544	Refreshment Charges				
1,637,404	Salary	1,852,500			
562,414	Travelling Expenses	453,049			
	Transportation Charges	335,738			
	Telephone expenses	23,394			
	Staff Welfare	5,133			
	postage & Stamps	11,150			
	Guest Lecturer	250,500			
	Convocation expenses	113,568			
	Consultant fees	2,404,667			
36,382	Apparatus & Furniture	219,279			
15,251,878	Excess Income Over Expenditure	21,346,693			
19,044,655	Total	31,433,844	19,044,655	Total	31,433,844

Income Appropriation Statement for the Year ended 31st March 2014

	Surplus C/f to Balance Sheet	46,087,572	Opening Surplus B/F	24,740,879	
			Excess of Income for the year	21,346,693	
Total		46,087,572	Total	46,087,572	

As per our report of even date

for RAGHUNATHAN & ANANTHARAMAN

Chartered Accountants (Firm No: 003348S)

INation

S. Raghunathan Partner M.No. 019485 Finance & Accounts Officer

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D .

ACSIR

Associate Director

(FINANCE AND ADMN.) ACISTR. Kunal Ray, Ph.D. Associate Director

y of Scientific & Innovative Research (AcSIR) ordination Office: CSIR-CRRI, CRRI P. O. elhi-Mathura Road, New Delhi-110 025





Auditors



ACADEMY OF SCIENTIFIC AND INNOVATIVE RESEARCH ANUSANDHAN BHAWAN 2 RAFI MARG, NEW DELHI

Statement of Financial Position As At March 31, 2014

31.03.2013		31.03.2014
Amount	Sources of Funds:	Amount
Rs		Rs
2,500,000	CSIR SEED Money	2,500,000
24,726,326	Accumulated Surplus	46,087,572
14,553	Capital Asset Fund	112,874
	Current Liabilities	20,000
27,240,879	Total	48,720,446
	Application of Funds:	
14,553	Apparatus & Equipments	67,581
-	Furniture & Fixture	45,293
	Staff Advance	33,642
	Bank Balance	
27,226,326	Savings Account with State Bank of India	16,173,930
	Fixed Deposits with Scheduled Banks	32,400,000
27,240,879	Total	48,720,446

As per our report of even date for RAGHUNATHAN & ANANTHARAMAN Chartered Accountants (Firm No : 0033485)

INatro S. Raghunathan Partner M.No. 019485

Place: Chennai Date:

Fiance & Accounts Officer

ACSIR D. Srinivasa Raghavan

No confirm our allithe angline street (confirm our allithe angline street Confirmed Aussindhan browan, 2, with wet Kall Marg, wij Reet New Delhi - 110 001

Associate Director

(FINANCE AND ADMN.)

Prof. Kunal Ra^(C), ¹/₁h.D. Associate Director ademy of Scientific & Innovative Research (AcSIR) Coordination Office: CSIR-CRRI, CRRI P. O. Delhi-Mathura Road, New Delhi-110 025

Auditors



ACADEMY OF SCIENTIFIC AND INNOVATIVE RESEARCH ANUSANDHAN BHAWAN 2 RAFI MARG, NEW DELHI TRIAL BALANCE for the Year 2013 - 2014

Particulars	Closing 8	alance
Particulars	Debit	Credit
CSIR SEED Money		2,500,000
Apparatus And Equipments(Fixed Assets)	67,581	
Bank (State Bank of India)	45,293	
Advance with staff	33,642,00	
FD	12,400,000,00	
Vijaya Bank	20,000,000.00	
HRA		20,000
Bank Interest		1,288,855
RTI (Indirect Income)		120
CSIR AMPRI TUTION FEES		6,000
CSIR CBRI TUTION FEES		644,000
CSIR CIMFR TUTION FEES		1,229,000
CSIR IICB TUTION FEES		473,000
CSIR IMMIT TUTION FEES		2,795,047
CSIR NIIST TUTION FEES		1,191,000
CSIR OSDD HO TUTION FEES		15,000
CSIR CGCRI TUTION FEES		96,000
CSIO		4,000
CSIR CCMB		72 098
CSIR CDRI Tution Fees		719.000
CSIR CECRI Tution Fees		433,100
CSIR CEERI Tution Fees		3,935,000
CSIR CFTRI Tution Fees		365,000
CSIR CIMAP Tution Fees		360,000
CSIR CLRI Tution Fees		196,000
CSIR CMERI		300,500
CSIR CMMACS Tution Fees		50,194
CSIR CRRI Tution Fees		2,000
CSIR CSMCRI Tution Fees		1,238,000
CSIR IGI8 Tution Fees		1,477,000
CSIR IHBT Tution Fees		881,000
CSIR IILT Tution Fees		2,017,000
CSIR III Tution Fees		249,000
CSIR ITTR Tution Fees		352,000
CSIR NAL Tution Fees		1,107,020
CSIR NBRI Tution Fees		821,000
CSIR NCL Tution Fees		5,476,000
CSIR NEERI Tution Fees		316.000
CSIR NEIST Tution Fees		62,000
CSIR NGRI Tution Fees		362,000
CSIR NIO Tution Fees		521,000
CSIR NML Tution Fees		792,000
CSIR NPL Tution Fees		24,900
CSIR SERC Tution Fees		1,407,000
CSIR URDIP Tution Fees		
Misc. Receipt		22,010
Depreciation	106,405	
Advertisement Charges	2,457,248	
Bank Charges	101,247.50	
Contingencies	174,222	
Monorarium	126,705	
Misc. Expenses	1,505,129	
Printing & Stationery	196.964	
Professional Charges	48.515	
Refreshment Charges		
Salary	1,852,500	
Travelling Expenses	453,049	
Transportation Charges	335,738	
Telephone expenses	23,394	
TDS Interest	10,143	
Staff Welfare	5,133	
postage & Stamps	11,150	
Guest Lecturer	250,500	
Convocation expenses	113,568	
Consultant fees	2,404,667	
Profit & Loss Account		24,740,879
Total	58,694,723	58,694,723

Auditors

Highlights of Projects





13. Highlights of Projects

13.1 List of Projects completed by M.Tech 2011-13

S. No.	Student Name	Lab Name	Title of the Project			
	M. Tech 2011-13: Advanced Electronics Systems					
Ι.	Mr. Rishi Ranjan	CSIR-CEERI	Design and Implementation of Biometric Identification System for Intelligent Buildings			
2.	Mr. Navjot Kumar	CSIR-CEERI	Smart Electronics System for Underground Mines			
3.	Ms. Somsukla Maiti	CSIR-CEERI	An Efficient Approach for 3D Face Recognition			
	M. Tech 20	II-I3: Advanc	ed Semiconductor Electronics			
4.	Mr. Yashu Anand Varshney	CSIR-CEERI	Low Power DAC Architectures for Sensor Interface Circuit Applications			
5.	Mr. Amit Kumar	CSIR-CEERI	Design, Structural Analysis and Development of Digital Micro-mirror Devices for Multi-object Spectroscopy			
6.	Mr. Saroj Kanta Patra	CSIR-CEERI	Design and Fabrication of Grating-based Structures on Top of GaN/InGaN LED Surface for Improvement in Light Extraction Efficiency			
7.	Mr. Ayon Roychaudhuri	CSIR-CEERI	Design and Development of MEMS Micro-capillary Electrophoresis Devices			
8.	Mr. Ranjan Kumar Maurya	CSIR-CEERI	Design and Fabrication of Fluid-FET			
9.	Mr. Pushpendra Dwivedi	CSIR-CEERI	Design of Decimation Filter for Sigma-Delta Based Voice CODEC			
10.	Mr. Dasari Bala Sekhar	CSIR-CEERI	SWCNT Based Ammonia Gas Sensor			
.	Mr. Bhavit Kaushik	CSIR-CEERI	FPGA Implementation of Saliency Detection			
	M.Tech 2011-13: Hig	gh Power Micr	owave Devices and System Engineering			
12.	Mr.Asish Kumar Singh	CSIR-CEERI	Study and Development of Controlled Porosity Dispenser (CPD) Cathode.			
13.	Mr. Ram Prakash Lamba	CSIR-CEERI	Design and Experimental Study of High Current Pseudo Spark Switch (PSS)			



4.	Mr. Minhaz Ahmad	CSIR-CEERI	Electron Beam Propagation and Beam Wave Interaction Study in Plasma Assisted Microwave Source 'PASOTRON		
15.	Mr. Shailendra Chaudhary	CSIR-CEERI	Design and Cold-circuit Properties Simulation of 220GHz Folded Waveguide Slow Wave Structure for THz Traveling Wave Tube		
16.	Mr. Arpit Raj	CSIR-CEERI	Design Studies for Thermal Management in High- Average Power Klystrons		
17.	Ms. Rupa Shaw	CSIR-CEERI	Multi-Dispersion in Helix Traveling Wave Tube for Flat Gain-Frequency Response		
18.	Mr. Muppalla Prudhvi Raj	CSIR-CEERI	Design of Electron Beam Source, Interaction Structure and RF Window of a THz-Gyrotron		
19.	Mr. Mahesh Singh Bisht	CSIR-CEERI	Study and Development of Scandate Cathode Using Nano-technology		
		M.Tech 2011	-13: Mechatronics		
20.	Ms. Manvi Malik	CSIR-CMERI	Models and Algorithms for Vision through Bad Weather		
21.	Mr. Spandan Roy	CSIR-CMERI	Robust Control of Autonomous Mobile Robots		
22.	Ms. Aneissha Chebolu	CSIR-CMERI	Design of Micro-Nano Surface Topologies for Enhanced Antibacterial Properties		
23.	Mr. Dennis Babu	CSIR-CMERI	Real Time Prognosis of Battery Powered Electric Vehicles – A Machine Learning Approach		
24.	Ms. Rukhmini Roy	CSIR-CMERI	Detection of Microaneurysms in Diabetic Retinopathy Images using Image Processing Techniques by Programming DSP board		
25.	Mr. Shishir Kumar Singh	CSIR-CMERI	Design and Development of Pantograph based Micro- machine for Micro -Nano Scratching		
26.	Mr. Prasun Mishra	CSIR-CMERI	Development of Drive Train and Validation of Proposed Control Scheme for Medium Weight Electric Vehicle for Indian Roads		
27.	Ms. Jyotsna Pandey	CSIR-CMERI	Design and Development of Biomimetic Frog Robot for Multimode Locomotion		
	M.Tech 201	I-I3: Advance	d Instrumentation Engineering		
28.	Mr. Manjeet Singh	CSIR-CSIO	Parametric Analysis of Multi-pass Laser Spectroscopy for Trace Level Sensing of Analyte in Water		
29.	Mr. Suryakant Gautam	CSIR-CSIO	Design of Optical System Using Freeform Surfacing Technology		
30.	Mr. Jaswant Singh	CSIR-CSIO	Study of Pulsed Electric Field Technique for Liquid Food		



31.	Mr. Suman Tewary	CSIR-CSIO	Adaptive Multi-sensor Target Detection
32.	Mr. Ranjan Kumar Jha	CSIR-CSIO	Motion Transfer And Haptics For Robotic Surgery
33.	Mr. Amit Gupta	CSIR-CSIO	Design of Optical System using Hybrid Optics
34.	Mr. Vinod Parmar	CSIR-CSIO	Effect of Inter-Fibre Distance and Pressurised Flow in Photonic Crystal Fibre Based Gas Sensor
35.	Ms. Riti Kalra	CSIR-CSIO	Eye Movement Classification using EOG signal
36.	Mr. Saurav Kumar	CSIR-CSIO	Study of ZnO and bR Protein Hybrid Structure for Gas Sensing Application
	M.Tech 2011-13:	Engineering of (Buildi	Infrastructure & Disaster Mitigation
37.	Ms. Riya Bhowmik	CSIR-CBRI	Response of Piled-Raft Foundation under Combined Loading in Stone Column Improved Ground
38.	Mr. Debdutta Ghosh	CSIR-CBRI	Dissipation Strategies of Tsunami Wave on Buildings – A Numerical Study
39.	Ms. Ishwarya G	CSIR-CBRI	Development of Geopolymer Concrete Cured at Ambient Temperature
40.	Mr. Mohamed Yousuf M	CSIR-CBRI	Studies on Preparation and Applications of Nanosilica in High Strength Concrete
41.	Mr. Mohammad Suhaib Ahmad	CSIR-CBRI	Behaviour of Reinforced Concrete Beams Exposed to Fire
42.	Mr. Koushik Pandit	CSIR-CBRI	Numerical Analysis of Underground Coal Mines and Strengthening Strategies for Coal Pillars
43.	Ms. Monalisa Behera	CSIR-CBRI	Studies on Recycled Aggregate Concrete using Different Cementitious Materials
44.	Mr. Venkatesan J	CSIR-CBRI	Behaviour of Cold-formed Steel Load-bearing Wall Panel under Static and Fire Load
	M.Tech 2011-13:	Engineering of (Buildi	Infrastructure & Disaster Mitigation
45.	Mr. Thondepu Anil Pradyumna	CSIR-CRRI	Mechanistic Characterization of Bituminous Mixes Containing Reclaimed Asphalt Pavement
46.	Ms. M. Surya	CSIR-CRRI	Experimental Investigation on Structural Properties of Recycled Aggregate Concrete
47.	Ms. Sarada Pulugurta	CSIR-CRRI	Travel Demand Forecasting Using Fuzzy Logic
48.	Mr. Gautam Raj G	CSIR-CRRI	Performance evaluation of BRTS of Indian Cities
49.	Mr. Shahbaz Khan	CSIR-CRRI	Synthesis of Permanent Deformation in Flexible Pavement Using APTF



50.	Mr. M.J. Adaikkalaraja	CSIR-CRRI	Comparative Evaluation of Basalt fibers with polypropylene and steel fibers for use in Pavement Quality concrete		
	M.Tech	2011-13: Mate	erials Resource Engineering		
51.	Mr. Satyajit Sarkar	CSIR-IMMT	Tailoring of antireflective and wetting properties of sputter deposited silica thin films by oblique angle		
52.	Mr. Biplab Ghosh	CSIR-IMMT	An evaluation of alternative path for recycling of waste printed circuit boards		
53.	Mr. Deepak Nayak	CSIR-IMMT	Development of Copper-graphite based hybrid composites by powder metallurgy and their characterization		
54.	Mr. Nigamananda Ray	CSIR-IMMT	Effect of alloying additions on microstructure and mechanical properties of Mg-5AI alloy		
55.	Ms. Anita Panda	CSIR-IMMT	Solvent extraction of cerium using Aliquat 336: Investigation of mass transfer coefficient and prediction of distribution coefficient using ANN model		
56.	Mr. Jitendra Kumar Sadangi	CSIR-IMMT	Manufacturing of heat resistant ceramic material by geopolymerisation		
57.	Mr. Rahul Mohanty	CSIR-IMMT	Study of flow behaviour in packed bed using DEM and CFD simulation		
M.Te	ch 2011-13: Advanced	Modeling and S	Simulation in Chemical Engineering and Science		
58.	Mr. Sanjeev Mishra	CSIR-NCL	Microbial Biosynthesis of Chemicals: A Model Driven Analysis		
59.	Ms. Paridhi Goel	CSIR-NCL	Optimization of Packing Geometry in Microfluidic Mixers		
60.	Mr. Vikesh Singh Baghel	CSIR-NCL	Methane recovery and CO2 sequestration from a model gas hydrate reservoir: Experiments and MD simulations		
61.	Ms. Aashti Hamid	CSIR-NCL	Artificial Immune Systems for Optimization, Clustering, and Classification Applications in Chemical Sciences and Engineering		
62.	Mr. S. Swaminathan	CSIR-NCL	Identification of Protein-DNA Interactions from ChIP- Sequence Data		
63.	Mr. Niraj Kumar Nayan	CSIR-NCL	Application of Signal Processing Techniques in Protein Sequence Analysis		
64.	Mr. Saprativ Basu	CSIR-NCL	Dynamics of Dense Cohesive Granular Flow: From Avalanching to Continuous Regime		
65.	Mr. Sourya Banik	CSIR-NCL	Modeling of Extrusion Film Casting and its Stability Analysis		
66.	Mr. Suvankar Dutta	CSIR-NCL	Two-Phase Flow and Wall-Surface Wettability		



	M.Tech 2011-13: Environmental System Engineering and Modelling					
67.	Mr. Rajesh Shenoy	CSIR-NEERI	Treatment of CSIR-NEERI's Residential Campus Domestic Wastewater Using Natural System			
68.	Ms. Shivangi Nigam	CSIR-NEERI	High Temperature Sulphur Dioxide Emission Control from Glass Industry by Dry Sorption Method using Packed Bed Column			
69.	Ms. Shilpa Kumari	CSIR-NEERI	Mathematical Modelling of Catalytic Prox Reactor for the Cleaning of Hydrogen via removing CO			
	M.Tech 201	I-I3: Advanced	Material Physics & Engineering			
70.	Ms. Indu Elizabeth	CSIR-NPL	Development of Multiwalled Carbon Nanotubes (MWCNT)/SnO2 Nano composites as Free Standing Anode for High Capacity Lithium Ion Batteries			
71.	Mr. Anuj Krishna	CSIR-NPL	Synthesis, Growth and Characterization Analyses of Single Crystals for Non Linear Optical Applications			
72.	Mr. Vattikonda Bharath	CSIR-NPL	Evaluation and Theoretical Calculation of Spin Polarisation of Cs Atomic Fountain Clock			
73.	Ms. Deepika Yadav	CSIR-NPL	Development of Multi-Color Emitting Hybrid Electroluminescent Materials and Design of Portable & Inexpensive Power supply			
74.	Mr. Dibyajyoti Mohanty	CSIR-NPL	Study of charge transport and device properties in low band gap polymer PBDTTPD based nanostructure materials for solar cell application			
75.	Mr. Achu Chandran	CSIR-NPL	Effect of metal oxide nanoparticles on the electro- optical properties of ferroelectric liquid crystals and their applications			
76.	Mr. Aswin V	CSIR-NPL	Studies on Bulk and Thin film samples of LaAI I -xCoxO3			
	M.T	ech 2011-13: E	ngineering of Structures			
77.	Ms. K. Balamonica	CSIR-SERC	Seismic Response Evaluation of Structures Subjected to Multi Support Excitation			
78.	Mr. Abhishek Kumar	CSIR-SERC	Development of Fatigue Crack Growth Model for Variable Amplitude Loading towards Damage Tolerant Philosophy			
79.	Ms. Smriti Raj	CSIR-SERC	Development of Basalt Fibre Reinforced Sandwitch Panel			
80.	Ms. A. Thirumalaiselvi	CSIR-SERC	Investigations on Blast Performance of Laced Steel Concrete Composite Slabs			
81.	Ms. J. Prameetthaa	CSIR-SERC	Influence of Micronized Biomass Silica as a Partial Replacement of Cement in Recycled Aggregate Concrete			



13.2 List of Students completing Ph.D

SI. No.	Name	Lab	Thesis title	
١.	Dr. Tanveer Ahmad	CSIR-IGIB	Mechanistic understanding of the role of asymmetric dimethylarginine and mitochondrial dysfunction in asthma Pathogenesis	
2.	Dr. Sukdeb Saha	CSIR-CSMCRI	Synthesis of Photoactive Molecular Probes for the Recognition of Cations and Anions of Biological Significance	
3.	Dr. Thushara K. S.	CSIR-NCL	MgCl ₂ .nROH: New Molecular adducts for the preparation of TiClx/MgCl ₂ catalyst for Olefin Polymerization (R= Isopropyl, Isobutyl, 2-Butyl, Tertiary Butyl)	
4.	Dr. Gulshan Singh	CSIR-IITR	Development of Molecular Techniques for the Rapid Culture-Free Detection of Bacteria in Environment	
5.	Dr. Abdul Malik	CSIR-CDRI	To study the Immunoprotective Role of Estrogen and Isoflavonoids invitro and in Estrogen Deficient Mouse Model of Osteoporosis	



List of Publications





14. List of Publications during 1st April, 2012 to 31st March, 2014

SI. No.	Title	Year	Subject- wise	Institute- wise
Ι.	Kaushik, K; Leonard, VE; Shamsudheen, KV; Lalwani, MK; Jalali, S; Patowary, A; Joshi, A; Scaria, V; Sivasubbu, S. Dynamic Expression of Long Non-Coding RNAs (IncRNAs) in Adult Zebrafish. PLOS ONE 8: e83616, 2013	2013	Biological Sciences	CSIR-IGIB
2.	Jijy, E; Prakash, P; Shimi, M; Saranya, S; Preethanuj, P; Pihko, PM; Varughese, S; Radhakrishnan, KV. Rhodium (III)-catalyzed ring-opening of strained olefins through C-H activation of O-acetyl ketoximes: an efficient synthesis of trans-functionalized cyclopentenes and spiro [2.4] heptenes. TETRAHEDRON LETTERS 54: 7127-7131, 2013	2013	Chemical Sciences	CSIR- NIIST
3.	Jain, SK; Meena, S; Qazi, AK; Hussain, A; Bhola, SK; Kshirsagar, R; Pari, K; Khajuria, A; Hamid, A; Shaanker, RU; Bharate, SB; Vishwakarma, RA. Isolation and biological evaluation of chromone alkaloid dysoline, a new regioisomer of rohitukine from Dysoxylum binectariferum. TETRAHEDRON LETTERS 54: 7140-7143, 2013	2013	Biological Sciences	CSIR-IIIM
4.	Harshvardhan, K; Jha, B. Biodegradation of low-density polyethylene by marine bacteria from pelagic waters, Arabian Sea, India. MARINE POLLUTION BULLETIN 77: 100-106, 2013	2013	Biological Sciences	CSIR- CSMCRI
5.	Kazi, MA; Reddy, CRK; Jha, B. Molecular Phylogeny and Barcoding of Caulerpa (Bryopsidales) Based on the tufA, rbcL, 18S rDNA and ITS rDNA Genes. PLOS ONE 8: e82438, 2013	2013	Biological Sciences	CSIR- CSMCRI
6.	Mudiam, MKR; Ch, R; Saxena, PN. Gas Chromatography- Mass Spectrometry Based Metabolomic Approach for Optimization and Toxicity Evaluation of Earthworm Sub-Lethal Responses to Carbofuran. PLOS ONE 8: e81077, 2013	2013	Chemical Sciences	CSIR-IITR



SI. No.	Title	Year	Subject- wise	Institute- wise
7.	Singh, B; Parshad, R; Khajuria, RK; Guru, SK; Pathania, AS; Sharma, R; Chib, R; Aravinda, S; Gupta, VK; Khan, IA; Bhushan, S; Bharate, SB; Vishwakarma, RA. Saccharonol B, a new cytotoxic methylated isocoumarin from Saccharomonospora azurea. TETRAHEDRON LETTERS 54: 6695-6699, 2013	2013	Chemical Sciences	CSIR-IIIM
8.	Lo, R; Chandar, NB; Kesharwani, MK; Jain, A; Ganguly, B. In Silico Studies in Probing the Role of Kinetic and Structural Effects of Different Drugs for the Reactivation of Tabun- Inhibited AChE. PLOS ONE 8: e79591, 2013	2013	Chemical Sciences	CSIR- CSMCRI
9.	Biswas, AK; Lo, R; Ganguly, B. Is the Isodesmic Reaction Approach a Better Model for Accurate Calculation of pK(a) of Organic Superbases? A Computational Study. SYNLETT 24: 2519-2524, 2013	2013	Chemical Sciences	CSIR- CSMCRI
10.	Singh, B; Guru, SK; Kour, S; Jain, SK; Sharma, R; Sharma, PR; Singh, SK; Bhushan, S; Bharate, SB; Vishwakarma, RA. Synthesis, antiproliferative and apoptosis-inducing activity of thiazolo [5,4-d] pyrimidines. EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY 70: 864-874, 2013	2013	Chemical Sciences	CSIR-IIIM
11.	Trivedi, N; Gupta, V; Reddy, CRK; Jha, B. Enzymatic hydrolysis and production of bioethanol from common macrophytic green alga Ulva fasciata Delile. BIORESOURCE TECHNOLOGY 150: 106-112, 2013	2013	Biological Sciences	CSIR- CSMCRI
12.	Pathania, AS; Guru, SK; Verma, MK; Sharma, C; Abdullah, ST; Malik, F; Chandra, S; Katoch, M; Bhushan, S. Disruption of the PI3K/AKT/mTOR signaling cascade and induction of apoptosis in HL-60 cells by an essential oil from Monarda citriodora. FOOD AND CHEMICAL TOXICOLOGY 62: 246-254, 2013	2013	Biological Sciences	CSIR-IIIM
13.	Koilraj, P; Antonyraj, CA; Gupta, V; Reddy, CRK; Kannan, S. Novel approach for selective phosphate removal using colloidal layered double hydroxide nanosheets and use of residue as fertilizer. APPLIED CLAY SCIENCE 86: 111-118, 2013	2013	Chemical Sciences	CSIR- CSMCRI
14.	Koilraj, P; Kannan, S. Aqueous fluoride removal using ZnCr layered double hydroxides and their polymeric composites: Batch and column studies. CHEMICAL ENGINEERING JOURNAL 234: 406-415, 2013	2013	Chemical Sciences	CSIR- CSMCRI



SI. No.	Title	Year	Subject- wise	Institute- wise
15.	Ragavan, KV; Rastogi, NK; Thakur, MS. Sensors and biosensors for analysis of bisphenol-A. TRAC-TRENDS IN ANALYTICAL CHEMISTRY 52: 248-260, 2013	2013	Chemical Sciences	CSIR- CFTRI
16.	Manna, C; Sahu, D; Ganguly, B; Pathak, T. Furo [2,3-c] pyrans from a Vinyl Sulfone Modified Methyl 2,6-O-Anhydro- alpha-D-hexopyranoside: An Experimental and Theoretical Investigation. EUROPEAN JOURNAL OF ORGANIC CHEMISTRY 2013: 8197-8207, 2013	2013	Chemical Sciences	CSIR- CSMCRI
17.	Singh, KP; Gupta, S; Rai, P. Identifying pollution sources and predicting urban air quality using ensemble learning methods. ATMOSPHERIC ENVIRONMENT 80: 426-437, 2013	2013	Chemical Sciences	CSIR-IITR
18.	Singh, B; Sidiq, T; Joshi, P; Jain, SK; Lawaniya, Y; Kichlu, S; Khajuria, A; Vishwakarma, RA; Bharate, SB. Anti-inflammatory and immunomodulatory flavones from Actinocarya tibetica Benth NATURAL PRODUCT RESEARCH 27: 2227-2230, 2013	2013	Chemical Sciences	CSIR-IIIM
19.	Pathania, AS; Joshi, A; Kumar, S; Guru, SK; Bhushan, S; Sharma, PR; Bhat, WW; Saxena, AK; Singh, J; Shah, BA; Andotra, SS; Taneja, SC; Malik, FA; Kumar, A. Reversal of boswellic acid analog BA145 induced caspase dependent apoptosis by PI3K inhibitor LY294002 and MEK inhibitor PD98059. APOPTOSIS 18: 1561-1573, 2013	2013	Biological Sciences	CSIR-IIIM
20.	Biswal, A; Tripathy, BC; Sanjay, K; Meyrick, D; Subbaiah, T; Minakshi, M. Influence of the microstructure and its stability on the electrochemical properties of EMD produced from a range of precursors. JOURNAL OF SOLID STATE ELECTROCHEMISTRY 17: 3191-3198, 2013	2013	Chemical Sciences	CSIR- IMMT
21.	Singhal, NK; Chauhan, AK; Jain, SK; Shanker, R; Singh, C; Singh, MP. Silymarin- and melatonin-mediated changes in the expression of selected genes in pesticides- induced Parkinsonism. MOLECULAR AND CELLULAR BIOCHEMISTRY 384: 47-58, 2013	2013	Chemical Sciences	CSIR-IITR
22.	Baweja, L; Balamurugan, K; Subramanian, V; Dhawan, A. Hydration Patterns of Graphene-Based Nanomaterials (GBNMs) Play a Major Role in the Stability of a Helical Protein: A Molecular Dynamics Simulation Study. LANGMUIR 29: 14230-14238, 2013	2013	Chemical Sciences	CSIR-IITR, CSIR-CLRI



SI. No.	Title	Year	Subject- wise	Institute- wise
23.	Dighe, SU; Batra, S. lodine-mediated electrophilic tandem cyclization of 2-alkynylbenzaldehydes with anthranilic acid leading to 1,2-dihydroisoquinoline-fused benzoxazinones. TETRAHEDRON 69: 9875-9885, 2013	2013	Chemical Sciences	CSIR-CDRI
24.	Kannaboina, P; Anilkumar, K; Aravinda, S; Vishwakarma, RA; Das, P. Direct C-2 Arylation of 7-Azaindoles: Chemoselective Access to Multiarylated Derivatives. ORGANIC LETTERS 15: 5718-5721, 2013	2013	Chemical Sciences	CSIR-IIIM
25.	Sanandiya, ND; Siddhanta, AK. Facile synthesis of a new fluorogenic metal scavenging interpolymeric diamide based on cellulose and alginic acids. CARBOHYDRATE RESEARCH 381: 93-100, 2013	2013	Chemical Sciences	CSIR- CSMCRI
26.	Tatina, M; Yousuf, SK; Aravinda, S; Singh, B; Mukherjee, D. Cyanuric chloride/sodium borohydride: a new reagent combination for reductive opening of 4,6-benzylidene acetals of carbohydrates to primary alcohols. CARBOHYDRATE RESEARCH 381: 142-145, 2013	2013	Chemical Sciences	CSIR-IIIM
27.	Mohan, DC; Sarang, NB; Adimurthy, S. Water mediated deprotective intramolecular hydroamination of N-propargylaminopyridines: synthesis of imidazo[1,2-alpha] pyridines. TETRAHEDRON LETTERS 54: 6077-6080, 2013	2013	Chemical Sciences	CSIR- CSMCRI
28.	Dixit, S; Upadhyay, SK; Singh, H; Sidhu, OP; Verma, PC; Chandrashekar, K. Enhanced Methanol Production in Plants Provides Broad Spectrum Insect Resistance. PLOS ONE 8: e79664, 2013	2013	Biological Sciences	CSIR-NBRI
29.	Bhowmik, S; Batra, S. Morita-Baylis-Hillman Approach toward Formal Total Synthesis of Tamiflu and Total Synthesis of Gabaculine. EUROPEAN JOURNAL OF ORGANIC CHEMISTRY 2013: 7145-7151, 2013	2013	Chemical Sciences	CSIR-CDRI
30.	Biswal, A; Dash, B; Tripathy, BC; Subbaiah, T; Shin, SM; Sanjay, K; Mishra, BK. Influence of alternative alkali reagents on Fe removal during recovery of Mn as Electrolytic Manganese Dioxide (EMD) from Mn sludge. HYDROMETALLURGY 140: 151-162, 2013	2013	Engineering Sciences	CSIR- IMMT



SI. No.	Title	Year	Subject- wise	Institute- wise
31.	Valicherla, GR; Hossain, Z; Mahata, SK; Gayen, JR. Pancreastatin is an endogenous peptide that regulates glucose homeostasis. PHYSIOLOGICAL GENOMICS 45: 1060- 1071, 2013	2013	Biological Sciences	CSIR-CDRI
32.	Pradhan, AK; Pradhan, N; Mall, G; Panda, HT; Sukla, LB; Panda, PK; Mishra, BK. Application of Lipopeptide Biosurfactant Isolated from a Halophile: Bacillus tequilensis CH for Inhibition of Biofilm. APPLIED BIOCHEMISTRY AND BIOTECHNOLOGY 171: 1362-1375, 2013	2013	Biological Sciences	CSIR- IMMT
33.	Bhowmik, S; Khanna, S; Srivastava, K; Hasanain, M; Sarkar, J; Verma, S; Batra, S. An Efficient Combinatorial Synthesis of Allocolchicine Analogues via a Triple Cascade Reaction and their Evaluation as Inhibitors of Insulin Aggregation. CHEMMEDCHEM 8: 1767-1772, 2013	2013	Chemical Sciences	CSIR-CDRI
34.	Misra, N; Panda, PK; Parida, BK. Agrigenomics for Microalgal Biofuel Production: An Overview of Various Bioinformatics Resources and Recent Studies to Link OMICS to Bioenergy and Bioeconomy. OMICS-A JOURNAL OF INTEGRATIVE BIOLOGY 17: 537-549, 2013	2013	Biological Sciences	CSIR- IMMT
35.	Kumar, R; Richa; Andhare, NH; Shard, A; Sinha, AK. Water Compatible Multicomponent Cascade Suzuki/Heck-Aldol, Suzuki-Aldol-Suzuki, and Aldol-Suzuki-Aldol Reactions: An Ecofriendly Paradigm for Multiple Carbon-Carbon Bond Formation in One Pot. CHEMISTRY-A EUROPEAN JOURNAL 19: 14798-14803, 2013	2013	Chemical Sciences	CSIR-IHBT
36.	Bisht, KK; Suresh, E. Spontaneous Resolution to Absolute Chiral Induction: Pseudo-Kagome Type Homochiral Zn(II)/ Co(II) Coordination Polymers with Achiral Precursors. JOURNAL OF THE AMERICAN CHEMICAL SOCIETY 135: 15690-15693, 2013	2013	Chemical Sciences	CSIR- CSMCRI
37.	Manchukonda, NK; Naik, PK; Santoshi, S; Lopus, M; Joseph, S; Sridhar, B; Kantevari, S. Rational Design, Synthesis, and Biological Evaluation of Third Generation alpha-Noscapine Analogues as Potent Tubulin Binding Anti-Cancer Agents. PLOS ONE 8: e77970, 2013	2013	Chemical Sciences	CSIR-IICT



SI. No.	Title	Year	Subject- wise	Institute- wise
38.	Kaur, R; Kumar, R; Bhondekar, AP; Kapur, P. Human opinion dynamics: An inspiration to solve complex optimization problems. SCIENTIFIC REPORTS 3: 3008, 2013	2013	Engineering Sciences	CSIR-CSIO
39.	Arigela, RK; Sarnala, S; Mahar, R; Shukla, SK; Kundu, B. Synthesis of Triazolo Isoquinolines and Isochromenes from 2-Alkynylbenzaldehyde via Domino Reactions under Transition-Metal-Free Conditions. JOURNAL OF ORGANIC CHEMISTRY 78: 10476-10484, 2013	2013	Chemical Sciences	CSIR-CDRI
40.	Kondaveeti, S; Chejara, DR; Siddhanta, AK. A facile one-pot synthesis of a fluorescent agarose-O-naphthylacetyl adduct with slow release properties. CARBOHYDRATE POLYMERS 98: 589-595, 2013	2013	Chemical Sciences	CSIR- CSMCRI
41.	Sharma, M; Mondal, D; Mukesh, C; Prasad, K. Self- healing guar gum and guar gum-multiwalled carbon nanotubes nanocomposite gels prepared in an ionic liquid. CARBOHYDRATE POLYMERS 98: 1025-1030, 2013	2013	Chemical Sciences	CSIR- CSMCRI
42.	Singh, KP; Gupta, S; Rai, P. Predicting carcinogenicity of diverse chemicals using probabilistic neural network modeling approaches. TOXICOLOGY AND APPLIED PHARMACOLOGY 272: 465-475, 2013	2013	Biological Sciences	CSIR-IITR
43.	Das, P; Mandal, AK; Reddy, GU; Baidya, M; Ghosh, SK; Das, A. Designing a thiol specific fluorescent probe for possible use as a reagent for intracellular detection and estimation in blood serum: kinetic analysis to probe the role of intramolecular hydrogen bonding. ORGANIC & BIOMOLECULAR CHEMISTRY 11: 6604-6614, 2013	2013	Chemical Sciences	CSIR- CSMCRI
44.	Sadhukhan, A; Sahu, D; Ganguly, B; Khan, NUH; Kureshy, RI; Abdi, SHR; Suresh, E; Bajaj, HC. Oxazoline-Based Organocatalyst for Enantioselective Strecker Reactions: A Protocol for the Synthesis of Levamisole. CHEMISTRY-A EUROPEAN JOURNAL 19: 14224-14232, 2013	2013	Chemical Sciences	CSIR- CSMCRI
45.	Upadhyaya, K; Ajay, A; Mahar, R; Pandey, R; Kumar, B; Shukla, SK; Tripathi, RP. A strategy to access fused triazoloquinoline and related nucleoside analogues. TETRAHEDRON 69: 8547-8558, 2013	2013	Chemical Sciences	CSIR-CDRI



SI. No.	Title	Year	Subject- wise	Institute- wise
46.	Pandey, G; Bhowmik, S; Batra, S. Synthesis of 3H-Pyrazolo [3,4-c] isoquinolines and Thieno [3,2-c] isoquinolines via Cascade Imination/Intramolecular Decarboxylative Coupling. ORGANIC LETTERS 15: 5044-5047, 2013	2013	Chemical Sciences	CSIR-CDRI
47.	Patnaik, P; Biswal, A; Tripathy, BC; Pradhan, S; Dash, B; Sakthivel, R; Subbaiah, T. Synthesis and characterization of fibrous nickel hydroxide obtained from spent nickel catalyst. TRANSACTIONS OF NONFERROUS METALS SOCIETY OF CHINA 23: 2977-2983, 2013	2013	Engineering Sciences	CSIR- IMMT
48.	Kumar, S; Guru, SK; Pathania, AS; Kumar, A; Bhushan, S; Malik, F. Autophagy triggered by magnolol derivative negatively regulates angiogenesis. CELL DEATH & DISEASE 4: e889, 2013	2013	Biological Sciences	CSIR-IIIM
49.	Pragadheesh, VS; Saroj, A; Yadav, A; Samad, A; Chanotiya, CS. Compositions, enantiomer characterization and antifungal activity of two Ocimum essential oils. INDUSTRIAL CROPS AND PRODUCTS 50: 333-337, 2013	2013	Chemical Sciences	CSIR- CIMAP
50.	Anand, N; Ramakrishna, KKG; Gupt, MP; Chaturvedi, V; Singh, S; Srivastava, KK; Sharma, P; Rai, N; Ramachandran, R; Dwivedi, AK; Gupta, V; Kumar, B; Pandey, S; Shukla, PK; Pandey, SK; Lal, J; Tripathi, RP. Identification of I-[4-Benzyloxyphenyl)-but-3-enyl]-IH-azoles as New Class of Antitubercular and Antimicrobial Agents. ACS MEDICINAL CHEMISTRY LETTERS 4: 958-963, 2013	2013	Chemical Sciences	CSIR-CDRI
51.	Chhatbar, MU; Meena, R; Godiya, CB; Siddhanta, AK. Controlled-release performance of chitosan-polyuronic acid adducts. INDIAN JOURNAL OF CHEMISTRY SECTION A-INORGANIC BIO-INORGANIC PHYSICAL THEORETICAL & ANALYTICAL CHEMISTRY 52: 1269- 1274, 2013	2013	Chemical Sciences	CSIR- CSMCRI
52.	Esther, J; Panda, S; Behera, SK; Sukla, LB; Pradhan, N; Mishra, BK. Effect of dissimilatory Fe(III) reducers on bio-reduction and nickel-cobalt recovery from Sukinda chromite-overburden. BIORESOURCE TECHNOLOGY 146: 762-766, 2013	2013	Engineering Sciences	CSIR- IMMT



SI. No.	Title	Year	Subject- wise	Institute- wise
53.	Misra, M; Kapur, P; Ghanshyam, C; Singla, ML. ZnO@CdS core-shell thin film: fabrication and enhancement of exciton life time by CdS nanoparticle. JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS 24: 3800-3804, 2013	2013	Engineering Sciences	CSIR-CSIO
54.	Misra, M; Kapur, P; Singla, ML. Optoelectronics behaviour of ZnO nanorods for UV detection. JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS 24: 3940-3945, 2013	2013	Engineering Sciences	CSIR-CSIO
55.	Raju, KSR; Taneja, I; Singh, SP; Wahajuddin. Utility of noninvasive biomatrices in pharmacokinetic studies. BIOMEDICAL CHROMATOGRAPHY 27: 1354-1366, 2013	2013	Biological Sciences	CSIR-CDRI
56.	Sawant, SD; Srinivas, M; Kumar, KAA; Reddy, GL; Singh, PP; Singh, B; Sharma, AK; Sharma, PR; Vishwakarma, RA. Ligand- free C-N bond formation in aqueous medium using a reusable Cu-Mn bimetallic catalyst. TETRAHEDRON LETTERS 54: 5351-5354, 2013	2013	Chemical Sciences	CSIR-IIIM
57.	Mandal, AK; Suresh, M; Kesharwani, MK; Gangopadhyay, M; Agrawal, M; Boricha, VP; Ganguly, B; Das, A. Molecular Interactions, Proton Exchange, and Photoinduced Processes Prompted by an Inclusion Process and a [2]Pseudorotaxane Formation. JOURNAL OF ORGANIC CHEMISTRY 78: 9004-9012, 2013	2013	Chemical Sciences	CSIR- CSMCRI
58.	Kumar, M; Kureshy, RI; Shah, AK; Das, A; Khan, NU; Abdi, SHR; Bajaj, HC. Asymmetric Aminolytic Kinetic Resolution of Racemic Epoxides Using Recyclable Chiral Polymeric Co(III)- Salen Complexes: A Protocol for Total Utilization of Racemic Epoxide in the Synthesis of (R)-Naftopidil and (S)-Propranolol. JOURNAL OF ORGANIC CHEMISTRY 78: 9076-9084, 2013	2013	Chemical Sciences	CSIR- CSMCRI
59.	Sahu, D; Ganguly, B. In silico studies to probe the catalytic role of cucurbit[n]uril on [4+2] cycloaddition reaction between cyclopentadiene and methyl acrylate. TETRAHEDRON LETTERS 54: 5246-5249, 2013	2013	Chemical Sciences	CSIR- CSMCRI



SI. No.	Title	Year	Subject- wise	Institute- wise
60.	Dinda, M; Chakraborty, S; Samanta, S; Bhatt, C; Maiti, S; Roy, S; Kadam, Y; Ghosh, PK. Solar Photothermochemical Reaction and Supercritical CO2 Work up for a Fully Green Process of Preparation of Pure p-Nitrobenzyl Bromide. ENVIRONMENTAL SCIENCE & TECHNOLOGY 47: 10535-10540, 2013	2013	Chemical Sciences	CSIR- CSMCRI
61.	Gupta, S; Koley, D; Ravikumar, K; Kundu, B. Counter Ion Effect in Au/Ag-Catalyzed Chemoselective 6-endo-dig N- and O-Cyclizations of Enyne-Urea System: Diversity-Oriented Synthesis of Annulated Indoles. JOURNAL OF ORGANIC CHEMISTRY 78: 8624-8633, 2013	2013	Chemical Sciences	CSIR-CDRI
62.	Sharma, S; Kumar, M; Kumar, V; Kumar, N. Vasicine catalyzed direct C-H arylation of unactivated arenes: organocatalytic application of an abundant alkaloid. TETRAHEDRON LETTERS 54: 4868-4871, 2013	2013	Biological Sciences	CSIR-IHBT
63.	Jain, SK; Pathania, AS; Meena, S; Sharma, R; Sharma, A; Singh, B; Gupta, BD; Bhushan, S; Bharate, SB; Vishwakarma, RA. Semisynthesis of Mallotus B from Rottlerin: Evaluation of Cytotoxicity and Apoptosis-Inducing Activity. JOURNAL OF NATURAL PRODUCTS 76: 1724-1730, 2013	2013	Biological Sciences	CSIR-IIIM
64.	Singh, BP; Nayak, S; Nanda, KK; Jena, BK; Bhattacharjee, S; Besra, L. The production of a corrosion resistant graphene reinforced composite coating on copper by electrophoretic deposition. CARBON 61: 47-56, 2013	2013	Chemical Sciences	CSIR- IMMT
65.	Singh, B; Vishwakarma, RA; Bharate, SB. QSAR and Pharmacophore Modeling of Natural and Synthetic Antimalarial Prodiginines. CURRENT COMPUTER-AIDED DRUG DESIGN 9: 350-359, 2013	2013	Chemical Sciences	CSIR-IIIM
66.	Singh, KP; Gupta, S; Rai, P. Predicting acute aquatic toxicity of structurally diverse chemicals in fish using artificial intelligence approaches. ECOTOXICOLOGY AND ENVIRONMENTAL SAFETY 95: 221-233, 2013	2013	Chemical Sciences	CSIR-IITR
67.	Sen, A; Sahu, D; Ganguly, B. In Silico Studies toward Understanding the Interactions of DNA Base Pairs with Protonated Linear/Cyclic Diamines. JOURNAL OF PHYSICAL CHEMISTRY B 117: 9840-9850, 2013	2013	Chemical Sciences	CSIR- CSMCRI



SI. No.	Title	Year	Subject- wise	Institute- wise
68.	Dharmapurikar, SS; Arulkashmir, A; Das, C; Muddellu, P; Krishnamoorthy, K. Enhanced Hole Carrier Transport Due to Increased Intermolecular Contacts in Small Molecule Based Field Effect Transistors. ACS APPLIED MATERIALS & INTERFACES 5: 7086-7093, 2013	2013	Chemical Sciences	CSIR-NCL
69.	Kondaveeti, S; Prasad, K; Siddhanta, AK. Functional modification of agarose: A facile synthesis of a fluorescent agarose-tryptophan based hydrogel. CARBOHYDRATE POLYMERS 97: 165-171, 2013	2013	Chemical Sciences	CSIR- CSMCRI
70.	Mohan, DC; Donthiri, RR; Rao, SN; Adimurthy, S. Copper(I) Iodide-Catalysed Aerobic Oxidative Synthesis of Imidazo[1,2-a]pyridines from 2-Aminopyridines and Methyl Ketones. ADVANCED SYNTHESIS & CATALYSIS 355: 2217- 2221, 2013	2013	Chemical Sciences	CSIR- CSMCRI
71.	Lambu, MR; Kumar, S; Yousuf, SK; Sharma, DK; Hussain, A; Kumar, A; Malik, F; Mukherjee, D. Medicinal Chemistry of Dihydropyran-Based Medium Ring Macrolides Related to Aspergillides: Selective Inhibition of PI3K alpha. JOURNAL OF MEDICINAL CHEMISTRY 56: 6122-6135, 2013	2013	Chemical Sciences	CSIR-IIIM
72.	Bhowmik, S; Pandey, G; Batra, S. Substituent-Guided Switch between CH Activation and Decarboxylative Cross-Coupling during Palladium/Copper-Catalyzed Cascade Reactions of 2-Aminobenzoates with 2-Haloarylaldehydes. CHEMISTRY-A EUROPEAN JOURNAL 19: 10487-10491, 2013	2013	Chemical Sciences	CSIR-CDRI
73.	Kaur, T; Hussain, K; Koul, S; Vishwakarma, R; Vyas, D. Evaluation of Nutritional and Antioxidant Status of Lepidium latifolium Linn.: A Novel Phytofood from Ladakh. PLOS ONE 8: e69112, 2013	2013	Biological Sciences	CSIR-IIIM
74.	Biswas, S; Batra, S. Copper-Catalyzed Synthesis of Substituted Isoindolo[2, I-a]quinoxalines and Isoindolo[2, I-a]quinoxalin- 6(5H)-ones. EUROPEAN JOURNAL OF ORGANIC CHEMISTRY : 4895-4902, 2013	2013	Chemical Sciences	CSIR-CDRI
75.	Kumar, M; Kureshy, RI; Ghosh, D; Khan, NUH; Abdi, SHR; Bajaj, HC. Synthesis of Chiral Ligands with Multiple Stereogenic Centers and Their Application in Titanium(IV)- Catalyzed Enantioselective Desymmetrization of meso- Epoxides. CHEMCATCHEM 5: 2336-2342, 2013	2013	Chemical Sciences	CSIR- CSMCRI



SI. No.	Title	Year	Subject- wise	Institute- wise
76.	Nashim, A; Martha, S; Parida, KM. Gd2Ti2O7/In2O3: Efficient Visible-Light-Driven Heterojunction-Based Composite Photocatalysts for Hydrogen Production. CHEMCATCHEM 5: 2352-2359, 2013	2013	Chemical Sciences	CSIR- IMMT
77.	Pragadheesh, VS; Saroj, A; Yadav, A; Chanotiya, CS; Alam, M; Samad, A. Chemical characterization and antifungal activity of Cinnamomum camphora essential oil. INDUSTRIAL CROPS AND PRODUCTS 49: 628-633, 2013	2013	Biological Sciences	CSIR- CIMAP
78.	Sharma, N; Gulia, S; Dhyani, R; Singh, A. Performance evaluation of CALINE 4 dispersion model for an urban highway corridor in Delhi. JOURNAL OF SCIENTIFIC & INDUSTRIAL RESEARCH 72: 521-530, 2013	2013	Enginering Sciecies	CSIR-CRRI
79.	Akula, A; Ghosh, R; Kumar, S; Sardana, HK. Moving target detection in thermal infrared imagery using spatiotemporal information. JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A-OPTICS IMAGE SCIENCE AND VISION 30: 1492-1501, 2013	2013	Engineering Sciences	CSIR-CSIO
80.	Kaur, T; Bhat, HA; Raina, A; Koul, S; Vyas, D. Glutathione regulates enzymatic antioxidant defence with differential thiol content in perennial pepperweed and helps adapting to extreme environment. ACTA PHYSIOLOGIAE PLANTARUM 35: 2501-2511, 2013	2013	Biological Sciences	CSIR-IIIM
81.	Singh, VK; Kavita, K; Prabhakaran, R; Jha, B. Cis-9-octadecenoic acid from the rhizospheric bacterium Stenotrophomonas maltophilia BJ01 shows quorum quenching and anti-biofilm activities. BIOFOULING 29: 855-867, 2013	2013	Biological Sciences	CSIR- CSMCRI
82.	Samala, S; Mandadapu, AK; Saifuddin, M; Kundu, B. Gold- Catalyzed Sequential Alkyne Activation: One-Pot Synthesis of NH-Carbazoles via Cascade Hydroarylation of Alkyne/6- Endo-Dig Carbocyclization Reactions. JOURNAL OF ORGANIC CHEMISTRY 78: 6769-6774, 2013	2013	Chemical Sciences	CSIR-CDRI
83.	Donthiri, RR; Pappula, V; Mohan, DC; Gaywala, HH; Adimurthy, S. Sodium Hydroxide Catalyzed N-Alkylation of (Hetero) Aromatic Primary Amines and N-1,C-5-Dialkylation of 4-Phenyl-2-aminothiazoles with Benzyl Alcohols. JOURNAL OF ORGANIC CHEMISTRY 78: 6775-6781, 2013	2013	Chemical Sciences	CSIR- CSMCRI


SI. No.	Title	Year	Subject- wise	Institute- wise
84.	Chand, SS; Jijy, E; Prakash, P; Szymoniak, J; Preethanuj, P; Dhanya, BP; Radhakrishnan, KV. Palladium/Lewis Acid Mediated Domino Reaction of Pentafulvene Derived Diazabicyclic Olefins: Efficient Access to Spiropentacyclic Motif with an Indoline and Pyrazolidine Fused to Cyclopentene. ORGANIC LETTERS 15: 3338-3341, 2013	2013	Chemical Sciences	CSIR- NIIST
85.	Sampath, G; Kannan, S. Fructose dehydration to 5-hydroxymethylfurfural: Remarkable solvent influence on recyclability of Amberlyst-15 catalyst and regeneration studies. CATALYSIS COMMUNICATIONS 37: 41-44, 2013	2013	Chemical Sciences	CSIR- CSMCRI
86.	Bharate, SB; Padala, AK; Dar, BA; Yadav, RR; Singh, B; Vishwakarma, RA. Montmorillonite clay Cu(II) catalyzed domino one-pot multicomponent synthesis of 3,5-disubstituted isoxazoles. TETRAHEDRON LETTERS 54: 3558-3561, 2013	2013	Chemical Sciences	CSIR-IIIM
87.	Kumar, S; Sharma, A; Verma, AK; Chaudhari, BP; Das, M; Jain, SK; Dwivedi, PD. Allergenicity potential of red kidney bean (Phaseolus vulgaris L.) proteins in orally treated BALB/c mice and passively sensitized RBL-2H3 cells. CELLULAR IMMUNOLOGY 284: 37-44, 2013	2013	Biological Sciences	CSIR-IITR
88.	Shashidhar, MG; Giridhar, P; Sankar, KU; Manohar, B. Bioactive principles from Cordyceps sinensis: A potent food supplement - A review. JOURNAL OF FUNCTIONAL FOODS 5: 1013- 1030, 2013	MG; Giridhar, P; Sankar, KU; Manohar, B. Bioactive 2013 Biological com Cordyceps sinensis: A potent food supplement JOURNAL OF FUNCTIONAL FOODS 5: 1013- 3		CSIR- CFTRI
89.	Misra, N; Panda, PK; Patra, MC; Pradhan, SK; Mishra, BK. Insights into Molecular Assembly of ACCase Heteromeric Complex in Chlorella variabilis-A Homology Modelling, Docking and Molecular Dynamic Simulation Study. APPLIED BIOCHEMISTRY AND BIOTECHNOLOGY 170: 1437- 1457, 2013	SK; Mishra, BK. 2013 Biological ase Heteromeric blogy Modelling, Study. APPLIED GY 170: 1437-		CSIR- IMMT
90.	Hussain, A; Yousuf, SK; Sharma, DK; Rao, LM; Singh, B; Mukherjee, D. Design and synthesis of carbohydrate based medium sized sulfur containing benzannulated macrocycles: applications of Sonogashira and Heck coupling. TETRAHEDRON 69: 5517-5524, 2013	2013	Chemical Sciences	CSIR-IIIM



SI. No.	Title	Year	Subject- wise	Institute- wise
91.	Chanukya, BS; Kumar, M; Rastogi, NK. Optimization of lactic acid pertraction using liquid emulsion membranes by response surface methodology. SEPARATION AND PURIFICATION TECHNOLOGY 111: 1-8, 2013	2013	Biological Sciences	CSIR- CFTRI
92.	Sahoo, M; Parida, KM. Pd(II) loaded on diamine functionalized LDH for oxidation of primary alcohol using water as solvent. APPLIED CATALYSIS A-GENERAL 460: 36-45, 2013	2013	Chemical Sciences	CSIR- IMMT
93.	Koilraj, P; Srinivasan, K. ZnAl Layered Double Hydroxides As Potential Molybdate Sorbents and Valorize the Exchanged Sorbent for Catalytic Wet Peroxide Oxidation of Phenol. INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH 52: 7373-7381, 2013	2013	Chemical Sciences	CSIR- CSMCRI
94.	Bharate, SB; Mudududdla, R; Sharma, R; Vishwakarma, RA. The first method for C-devinylation of aromatic systems. TETRAHEDRON LETTERS 54: 2913-2915, 2013	Chemical Sciences	CSIR-IIIM	
95.	Saifuddin, M; Samala, S; Krishna, DGV; Kundu, B. A Sequential One-Pot Protocol for the Synthesis of Dihydrobenzo[6,7] indolo[3 ',4 ':3,4,5]azepino[2,1-a]isoquinolines Using a Gold- Silver Combined Catalyst. SYNTHESIS-STUTTGART 45: 1553-1563, 2013	2013	Biological Sciences	CSIR-CDRI
96.	Bharate, SB; Yadav, RR; Khan, SI; Tekwani, BL; Jacob, MR; Khan, IA; Vishwakarma, RA. Meridianin G and its analogs as antimalarial agents. MEDCHEMCOMM 4: 1042-1048, 2013	2013	Chemical Sciences	CSIR-IIIM
97.	Das, A; Kureshy, RI; Prathap, KJ; Choudhary, MK; Rao, GVS; Khan, NUH; Abdi, SHR; Bajaj, HC. Chiral recyclable Cu(II)- catalysts in nitroaldol reaction of aldehydes with various nitroalkanes and its application in the synthesis of a valuable drug (R)-isoproterenol. APPLIED CATALYSIS A-GENERAL 459: 97-105, 2013	Anal agents. MEDCHERICOMIN 4: 1042-1048, 2013 Kureshy, RI; Prathap, KJ; Choudhary, MK; Rao, GVS; NUH; Abdi, SHR; Bajaj, HC. Chiral recyclable Cu(II)- s in nitroaldol reaction of aldehydes with various anes and its application in the synthesis of a valuable R)-isoproterenol. APPLIED CATALYSIS A-GENERAL 7-105, 2013		CSIR- CSMCRI
98.	Wahajuddin; Taneja, I; Arora, S; Raju, KSR; Siddiqui, N. Disposition of Pharmacologically Active Dietary Isoflavones in Biological Systems. CURRENT DRUG METABOLISM 14: 369-380, 2013	2013	Biological Sciences	CSIR-CDRI



SI. No.	Title	Year	Subject- wise	Institute- wise		
99.	Natarajan, TS; Natarajan, K; Bajaj, HC; Tayade, RJ. Enhanced photocatalytic activity of bismuth-doped TiO2 nanotubes under direct sunlight irradiation for degradation of Rhodamine B dye. JOURNAL OF NANOPARTICLE RESEARCH 15: 1669, 2013	2013	Chemical Sciences	CSIR- CSMCRI		
100.	Purushothaman, N; Ghosh, SK. Performance improvement of helix TWT using metamaterial helix-support structure. JOURNAL OF ELECTROMAGNETIC WAVES AND APPLICATIONS 27: 890-900, 2013	2013	Engineering Sciences	CSIR- CEERI		
101.	Koilraj, P; Thakur, RS; Srinivasan, K. Solid State Structural2013ChemicalTransformation of Tetraborate into Monoborate in the Interlayer Galleries of Reconstructed ZnAl Layered Double Hydroxide. JOURNAL OF PHYSICAL CHEMISTRY C 117: 6578-6586, 2013Siddhanta, AK; Kumar, S; Mehta, GK; Chhatbar, MU; Oza, 20132013Chemical					
102.	Siddhanta, AK; Kumar, S; Mehta, GK; Chhatbar, MU; Oza, MD; Sanandiya, ND; Chejara, DR; Godiya, CB; Kondaveeti, S. Cellulose Contents of Some Abundant Indian Seaweed Species. NATURAL PRODUCT COMMUNICATIONS 8: 497-500, 20132013Chemical Sciences					
103.	Patel, MK; Ghanshyam, C; Kapur, P. Characterization of electrode material for electrostatic spray charging: Theoretical and engineering practices. JOURNAL OF ELECTROSTATICS2013Engineering Sciences71: 55-60, 2013SciencesSciences					
104.	Khan, S; Nagabhushana, MN; Tiwari, D; Jain, PK. Rutting in Flexible Pavement: An approach of evaluation with Accelerated Pavement Testing Facility. 2ND CONFERENCE OF TRANSPORTATION RESEARCH GROUP OF INDIA (2ND CTRG) 104: 149-157, 2013	3 bhushana, MN; Tiwari, D; Jain, PK. Rutting vement: An approach of evaluation with vement Testing Facility. 2ND CONFERENCE PRTATION RESEARCH GROUP OF INDIA 104: 149-157, 2013		CSIR-CRRI		
105.	Raj, GG; Sekhar, CR; Velmurugan, S. Micro simulation Based Performance Evaluation of Delhi Bus Rapid Transit Corridor. 2ND CONFERENCE OF TRANSPORTATION RESEARCH GROUP OF INDIA (2ND CTRG) 104: 825-834, 2013	2013	Engineering Sciences	CSIR-CRRI		
106.	Pradyumna, TA; Mittal, A; Jain, PK. Characterization of Reclaimed Asphalt Pavement (RAP) for Use in Bituminous Road Construction. 2ND CONFERENCE OF TRANSPORTATION RESEARCH GROUP OF INDIA (2ND CTRG) 104: 1149- 1157, 2013	2013	Engineering Sciences	CSIR-CRRI		



SI. No.	Title	Year	Subject- wise	Institute- wise
107.	Surya, M; Rao, WLK; Lakshmy, P. Recycled aggregate concrete for Transportation Infrastructure. 2ND CONFERENCE OF TRANSPORTATION RESEARCH GROUP OF INDIA (2ND CTRG) 104: 1158-1167, 2013	2013	Engineering Sciences	CSIR-CRRI
108.	Yadav, NK; Shukla, P; Omer, A; Singh, RK. In silico approach to uncover the anti-cancerous activity of certain phyto-compounds. GENE THERAPY AND MOLECULAR BIOLOGY 15: 147-158, 2013	2013	Biological Sciences	CSIR-CDRI
109.	Maurya, R; Verma, S; Gupta, A; Singh, B; Kumar Yadav, H. GENETIC VARIABILITY AND DIVERGENCE ANALYSES IN Jatropha curcas BASED ON FLORAL AND YIELD TRAITS. GENETIKA-BELGRADE 45: 655-666, 2013	2013	Biological Sciences	CSIR-NBRI
110.	Dhyani, R; Singh, A; Sharma, N; Gulia, S. Performance evaluation of CALINE 4 model in a hilly terrain - a case study of highway corridors in Himachal Pradesh (India). INTERNATIONAL JOURNAL OF ENVIRONMENT AND POLLUTION 52: 244-262, 2013	2013	Engineering Sciences	CSIR-CRRI
.	Shil, AK; Das, P. Solid supported platinum(0) nanoparticles catalyzed chemo-selective reduction of nitroarenes to N-arylhydroxylamines. GREEN CHEMISTRY 15: 3421- 3428, 2013	2013	Chemical Sciences	CSIR-IHBT
112.	3428, 2013Chandrasekharam, M; Kumar, CP; Singh, SP; Anusha, V; Bhanuprakash, K; Islam, A; Han, L. 4,4 '-Unsymmetrically substituted-2,2 '-bipyridines: novel bidentate ligands on ruthenium(ii) [3+2+1] mixed ligand complexes for efficient sensitization of nanocrystalline TiO2 in dye solar cells. RSC ADVANCES 3: 26035-26046, 2013			CSIR-IICT
113.	Gupta, P; Bhargava, R; Das, R; Poddar, P. Static and dynamic 2013 Chemical magnetic properties and effect of surface chemistry on the Sciences morphology and crystallinity of DyCrO3 nanoplatelets. RSC ADVANCES 3: 26427-26432, 2013			
4.	Bharate, JB; Guru, SK; Jain, SK; Meena, S; Singh, PP; Bhushan, S; Singh, B; Bharate, SB; Vishwakarma, RA. Cu-Mn spinel oxide catalyzed synthesis of imidazo[1,2-a]pyridines through domino three-component coupling and 5-exo-dig cyclization in water. RSC ADVANCES 3: 20869-20876, 2013	2013	Chemical Sciences	CSIR-IIIM



SI. No.	Title	Year	Subject- wise	Institute- wise
115.	Jain, SK; Pathania, AS; Parshad, R; Raina, C; Ali, A; Gupta, AP; Kushwaha, M; Aravinda, S; Bhushan, S; Bharate, SB; Vishwakarma, RA. Chrysomycins A-C, antileukemic naphthocoumarins from Streptomyces sporoverrucosus. RSC ADVANCES 3: 21046-21053, 2013	2013	Chemical Sciences	CSIR-IIIM
116.	Unnikrishnan, P; Varhadi, P; Srinivas, D. Efficient, direct synthesis of dimethyl carbonate from CO2 using a solid, calcined zirconium phenylphosphonate phosphite catalyst. RSC ADVANCES 3: 23993-23996, 2013	2013	Chemical Sciences	CSIR-NCL
117.	Sahu, SC; Samantara, AK; Satpati, B; Bhattacharjee, S; Jena, BK. A facile approach for in situ synthesis of graphene-branched- Pt hybrid nanostructures with excellent electrochemical performance. NANOSCALE 5: 11265-11274, 2013	2013	Chemical Sciences	CSIR- IMMT
118.	Deshmukh, AB; Shelke, MV. Synthesis and electrochemical performance of a single walled carbon nanohorn-Fe3O4 nanocomposite supercapacitor electrode. RSC ADVANCES 3: 21390-21393, 2013	2013	Chemical Sciences	CSIR-NCL
119.	Bharate, JB; Sharma, R; Aravinda, S; Gupta, VK; Singh, B; Bharate, SB; Vishwakarma, RA. Montmorillonite clay catalyzed synthesis of functionalized pyrroles through domino four- component coupling of amines, aldehydes, 1,3-dicarbonyl compounds and nitroalkanes. RSC ADVANCES 3: 21736- 21742, 2013	2013	Chemical Sciences	CSIR-IIIM
120.	 Kusunuru, AK; Tatina, M; Yousuf, SK; Mukherjee, D. Copper mediated stereoselective synthesis of C-glycosides from unactivated alkynes. CHEMICAL COMMUNICATIONS 49: 10154-10156, 2013 		Chemical Sciences	CSIR-IIIM
121.	Saha, S; Agarwalla, H; Gupta, H; Baidya, M; Suresh, E; Ghosh, SK; Das, A. New chemodosimetric probe for the specific detection of Hg2+ in physiological condition and its utilisation for cell imaging studies. DALTON TRANSACTIONS 42: 15097-15105, 2013	valla, H; Gupta, H; Baidya, M; Suresh, E; Ghosh, 2013 Chemical New chemodosimetric probe for the specific 1g2+ in physiological condition and its utilisation ing studies. DALTON TRANSACTIONS 42: 5, 2013		CSIR- CSMCRI
122.	Pradhan, AC; Varadwaj, GBB; Parida, KM. Facile fabrication of mesoporous iron modified Al2O3 nanoparticles pillared montmorillonite nanocomposite: a smart photo-Fenton catalyst for quick removal of organic dyes. DALTON TRANSACTIONS 42: 15139-15149, 2013	2013	Chemical Sciences	CSIR- IMMT



SI. No.	Title	Year	Subject- wise	Institute- wise
123.	Bharmoria, P; Kumar, A. Interactional behaviour of surface active ionic liquids with gelling biopolymer agarose in aqueous medium. RSC ADVANCES 3: 19600-19608, 2013	2013	Chemical Sciences	CSIR- CSMCRI
124.	Mondal, D; Sharma, M; Maiti, P; Prasad, K; Meena, R; Siddhanta, AK; Bhatt, P; Ijardar, S; Mohandas, VP; Ghosh, A; Eswaran, K; Shah, BG; Ghosh, PK. Fuel intermediates, agricultural nutrients and pure water from Kappaphycus alvarezii seaweed. RSC ADVANCES 3: 17989-17997, 2013	2013	Chemical Sciences	CSIR- CSMCRI
125.	Sharma, M; Mukesh, C; Mondal, D; Prasad, K. Dissolution of alpha-chitin in deep eutectic solvents. RSC ADVANCES 3: 18149-18155, 2013	2013	Chemical Sciences	CSIR- CSMCRI
126.	Roy, T; Kureshy, RI; Khan, NH; Abdi, SHR; Bajaj, HC. Asymmetric cycloaddition of CO2 and an epoxide using recyclable bifunctional polymeric Co(III) salen complexes under mild conditions. CATALYSIS SCIENCE & TECHNOLOGY 3: 2661-2667, 2013	2013	Chemical Sciences	CSIR- CSMCRI
127.	Mondal, D; Sharma, M; Mukesh, C; Gupta, V; Prasad, K. Improved solubility of DNA in recyclable and reusable bio- based deep eutectic solvents with long-term structural and chemical stability. CHEMICAL COMMUNICATIONS 49: 9606-9608, 2013	2013	Chemical Sciences	CSIR- CSMCRI
128.	Chakraborty, S; Mookherjee, S; Sen, A; Ray, K. Analysis of COCH and TNFA Variants in East Indian Primary Open-Angle Glaucoma Patients. BIOMED RESEARCH INTERNATIONAL : 937870, 2013	Biological Sciences	CSIR-IICB	
129.	Chejara, DR; Kondaveeti, S; Prasad, K; Siddhanta, AK. Studies 2013 on the structure-property relationship of sodium alginate based thixotropic hydrogels. RSC ADVANCES 3: 15744- 15751, 2013		Chemical Sciences	CSIR- CSMCRI
130.	Ghosh, K; Kar, D; Joardar, S; Sahu, D; Ganguly, B. Azaindole-2013Chemical1,2,3-triazole conjugate as selective fluorometric sensor for dihydrogenphosphate. RSC ADVANCES 3: 16144-16151, 2013Sciences			CSIR- CSMCRI
131.	Pahari, SK; Pal, P; Saha, A; Mahanty, S; Panda, AB. An alternative hydrolytic synthesis route for uniform metal selenide nanoparticles. RSC ADVANCES 3: 16322-16325, 2013	2013	Chemical Sciences	CSIR- CGCRI



SI. No.	Title	Year	Subject- wise	Institute- wise		
132.	Sharma, M; Mondal, D; Mukesh, C; Prasad, K. Solvent2013Chemicalresponsive healing of guar gum and guar gum-multiwalled carbon nanotube nanocomposite gels prepared in an ionic liquid. RSC ADVANCES 3: 16509-16515, 2013Sciences					
133.	Abhijith, KS; Ragavan, KV; Thakur, MS. Gold nanoparticles enhanced chemiluminescence - a novel approach for sensitive determination of aflatoxin-B1. ANALYTICAL METHODS 5: 4838-4845, 2013	2013	Engineering Sciences	CSIR- CFTRI		
134.	Pal, P; Pahari, SK; Giri, AK; Pal, S; Bajaj, HC; Panda, AB. Hierarchically order porous lotus shaped nano-structured MnO2 through MnCO3: chelate mediated growth and shape dependent improved catalytic activity. JOURNAL OF MATERIALS CHEMISTRY A 1: 10251-10258, 20132013Chemical SciencesDevarapalli, RR; Kashid, RV; Deshmukh, AB; Sharma, P;2013Chemical					
135.	Devarapalli, RR; Kashid, RV; Deshmukh, AB; Sharma, P; 2013 Das, MR; More, MA; Shelke, MV. High efficiency electron field emission from protruded graphene oxide nanosheets supported on sharp silicon nanowires. JOURNAL OF MATERIALS CHEMISTRY C 1: 5040-5046, 2013					
136.	Varadwaj, GBB; Parida, KM. Montmorillonite supported metal nanoparticles: an update on syntheses and applications. RSC ADVANCES 3: 13583-13593, 2013	Chemical Sciences	CSIR- IMMT			
137.	Mukesh, C; Mondal, D; Sharma, M; Prasad, K. Rapid dissolution of DNA in a novel bio-based ionic liquid with long-term structural and chemical stability: successful recycling of the ionic liquid for reuse in the process. CHEMICAL COMMUNICATIONS 49: 6849-6851, 2013		CSIr- CSMCRI			
138.	Sharma, DK; Lambu, MR; Sidiq, T; Khajuria, A; Tripathi, AK; Yousuf, SK; Mukherjee, D. Ammonium chloride mediated synthesis of alkyl glycosides and evaluation of their immunomodulatory activity. RSC ADVANCES 3: 11450-11455, 2013	ni, 2013 Chemical de Sciences eir 0-		CSIR-IIIM		
139.	Martha, S; Nashim, A; Parida, KM. Facile synthesis of highly active g-C3N4 for efficient hydrogen production under visible light. JOURNAL OF MATERIALS CHEMISTRY A 1: 7816- 7824, 2013	2013	Chemical Sciences	CSIR- IMMT		



SI. No.	Title	Year	Subject- wise	Institute- wise
140.	Sadhu, S; Poddar, P. Growth of oriented single crystalline La- doped TiO2 nanorod arrays electrode and investigation of optoelectronic properties for enhanced photoelectrochemical activity. RSC ADVANCES 3: 10363-10369, 2013	2013	Chemical Sciences	CSIR-NCL
141.	Vashisht, R; Bhardwaj, A; Brahmachari, SK. Social networks to biological networks: systems biology of Mycobacterium tuberculosis. MOLECULAR BIOSYSTEMS 9: 1584-1593, 2013	2013	Biological Sciences	CSIR- OSDD
142.	Bala, M; Verma, PK; Sharma, U; Kumar, N; Singh, B. Iron phthalocyanine as an efficient and versatile catalyst for N-alkylation of heterocyclic amines with alcohols: one-pot synthesis of 2-substituted benzimidazoles, benzothiazoles and benzoxazoles. GREEN CHEMISTRY 15: 1687-1693, 2013	Chemical Sciences	CSIR-IHBT	
143.	Varadwaj, GBB; Rana, S; Parida, KM. A stable amine functionalized montmorillonite supported Cu, Ni catalyst showing synergistic and co-operative effectiveness towards C-S coupling reactions. RSC ADVANCES 3: 7570-7578, 2013	GBB; Rana, S; Parida, KM. A stable amine zed montmorillonite supported Cu, Ni catalyst ynergistic and co-operative effectiveness towards ling reactions. RSC ADVANCES 3: 7570-7578,2013Chemical Sciences		CSIR- IMMT
144.	Ghantani, VC; Lomate, ST; Dongare, MK; Umbarkar, SB. Catalytic dehydration of lactic acid to acrylic acid using calcium hydroxyapatite catalysts. GREEN CHEMISTRY 15: 1211- 1217, 2013	2013	Chemical Sciences	CSIR-NCL

Tables





Lab-wise break up of current enrollments in participating CSIR labs under various Programs of AcSIR is summarized in the following:

Table 1: Lab-wise break up of admission in Integrated M.Tech-Ph.D program

S. No.	Lab	2012 Session	2013 Session
١.	CSIR-CBRI	08	06
2.	CSIR-CEERI	16	
3.	CSIR-CGCRI	05	04
4.	CSIR-CIMFR	10	05
5.	CSIR-CMERI	09	06
6.	CSIR-CRRI	07	06
7.	CSIR-CSIO	4	09
8.	CSIR-IICT	05	
9.	CSIR-IIP	10	08
10.	CSIR-NEERI	04	
.	CSIR-NML	05	07
12.	CSIR-NPL	09	07
13.	CSIR-SERC	15	4
	Total	117	83



Table 2: List of Students in Participating CSIR Labs in Ph.D. Program (Aug'12 Session)

S. No.	Laboratory	Biological Sciences	Chemical Sciences	Engineering Sciences	Mathe- matical & Information Sciences	Physical Sciences	Integrated PhD	Total
١.	CSIR-CBRI	0	0	6	0		0	7
2.	CSIR-CDRI	20	6	0	0	0	0	26
3.	CSIR-CECRI	0	10	0	0	0	0	10
4.	CSIR-CEERI	0	0	4	0	3	7	14
5.	CSIR-CFTRI	8	0	5	0	0	0	13
6.	CSIR-CGCRI	0	0	3	0	3	0	6
7.	CSIR-CIMAP	5	0	0	0	0	0	5
8.	CSIR-CLRI	0	4	0	0	0	0	4
9.	CSIR-CMERI	0	0	2	0	0	0	2
10.	CSIR-CMMACS	0	0	I	0	0	0	
11.	CSIR-CSIO	0	0	18	0		0	19
12.	CSIR-CSMCRI		8	0	0	0	0	9
13.	CSIR-HQ	6	0	0	0	0	0	6
14.	CSIR-IGIB	47	0	0	0	0	0	47
15.	CSIR-IHBT	8	I	0	0	0	0	9
16.	CSIR-IICB	2	0	0	0	0	0	2
17.	CSIR-IICT	8	61	I	0	0	0	70
18.	CSIR-IIIM	23	13	0	0	0	0	36
19.	CSIR-IIP	0	4	0	0	0	0	4
20.	CSIR-IITR	10	4	0	0	0	0	14
21.	CSIR-IMMT	4	3	2	0	2	0	
22.	CSIR-NBRI	12	0	0	0	0	0	12
23.	CSIR-NCL	12	60	8	0	3	0	83
24.	CSIR-NEERI	0	0	0	0	3	0	3
25.	CSIR-NEIST	3	3	0	0	0	0	6
26.	CSIR-NGRI	0	0	0	0		0	
27.	CSIR-NIIST	0	15	1	0	2	0	18
28.	CSIR-NIO	0	0	0	0	5	0	5
29.	CSIR-NML	0	0	2	0	0	0	2
30.	CSIR-NPL	I	4	0		7	0	13
31.	CSIR-SERC	0	0	I	0	0	3	4
32.	CSIR-URDIP	0	0	0	2	0	0	2
	Total	170	196	54	3	41	10	474



Table 3: List of Students in Participating CSIR Labs in Ph.D. Program (Jan'13 Session)

S. No.	Laboratory	Biological Sciences	Chemical Sciences	Engi- neering Sciences	Mathe- matical & Infor- mation Sciences	Physical Sciences	Integrat- ed PhD	Total
١.	CSIR-CCMB	3	0	0	0	0	0	3
2.	CSIR-CDRI	10	0	0	0	0	0	10
3.	CSIR-CECRI	0	3	0	0		0	4
4.	CSIR-CFTRI	13	0		0	0	0	14
5.	CSIR-CIMAP	9	2	0	0	0	0	
6.	CSIR-CLRI	0	8	0	0	0	0	8
7.	CSIR-CMERI	0	3	7	0	0	0	10
8.	CSIR-CMMACS	0	0		2	0	0	3
9.	CSIR-CRRI	0		0	0	0		2
10.	CSIR-CSIO	0	0	0	0	3	0	3
.	CSIR-CSMCRI	2	12	0	0	0	0	14
12.	CSIR-IGIB	24	0	0	0	0	0	24
13.	CSIR-IHBT	8	4	0	0	0	0	12
14.	CSIR-IICB	13	0	0	0	0	0	13
15.	CSIR-IICT	5	60	2	0	0	0	67
16.	CSIR-IIIM	15	0	0	0	0	0	15
17.	CSIR-IIP	0	6	0	0	0	0	6
18.	CSIR-IITR	3	3	0	0	0	0	6
19.	CSIR-IMMT	6	0		0	0	0	7
20.	CSIR-NBRI		0	0	0	0	0	
21.	CSIR-NCL	13	29	2	0	3	0	47
22.	CSIR-NEERI	0	0	0	0	8	0	8
23.	CSIR-NEIST	0	2	0	0	0	0	2
24.	CSIR-NGRI	0	0	0	0	8	0	8
25.	CSIR-NIIST	2		0	0	0	0	13
26.	CSIR-NIO	0	0	0	0	7	0	7
27.	CSIR-NISTADS	0	0	0	0	0	0	0
28.	CSIR-NPL	0	4	0	0	5	0	9
	Total	137	148	14	2	35	I	337



Table 4: List of Students in Participating CSIR Labs in Ph.D. Program (Aug'13 Session)

S. No.	Laboratory	Biological Sciences	Chemical Sciences	Engi- neering	Mathe- matical	Physical Sciences	Integrat- ed Ph.D	Total
				Sciences	& Infor-			
					mation			
		0	0	0	Sciences	0	0	0
	CSIR-CBRI	0	0	0	0	0	8	8
<u> </u>	CSIR-CCIMB	4	0	0	0	0	0	4
3.	CSIR-CDRI		/	0	0	0	0	28
4.	CSIR-CECRI	0	14		0	<u> </u>	0	17
5.	CSIR-CEERI	0	0	2	0	0	16	
6. 7	CSIR-CFTRI	9	0	2	0	0	0	
/.	CSIR-CGCRI	0	0	0	0	0	0	
8.	CSIR-CIMAP	3	3	0	0	0	0	6
9.	CSIR-CIIMFR	0	2	2	0	0	0	4
10.	CSIR-CLRI	0	2	0	0	0	0	
	CSIR-CIMERI	0	6	8	0	1	0	15
12.	CSIR-4PI	0	0	0	0	2	0	2
13.	CSIR-CRRI	0	0		0		4	6
14.	CSIR-CIMIMACS	0	0	0		0	7	
15.	CSIR-CSIO	0	0	/	0	3	/	17
16.		5	5	0	0	0	0	10
17.	CSIR-IGIB	20	0	0	0	0	0	20
18.	CSIR-IHB I	6		0	0	0	0	/
19.	CSIR-IICB	3	/	0	0	0	0	10
20.	CSIR-IIC I	6	34	2	0	0	0	42
21.	CSIR-IIIM	5	3	0	0	0	0	8
22.	CSIR-ILLR		0	0	0	0	0	
23.	CSIR-IMM I		12	/	0		5	26
24.	CSIR-NAL	0	0	2	0	0	0	2
25.	CSIR-NBRI	14	0	0	0	0	0	14
26.	CSIR-NCL		31	10	0		0	53
27.	CSIR-NEIST		0	0	0	0	0	
28.	CSIR-NGRI	0	0	0	0	9	0	9
29.	CSIR-NIIST	5	6		0	4	0	16
30.	CSIR-NIO	0	0	0	0	10	0	10
31.	CSIR-NML	0	0	9	0	0	0	9
32.	CSIR-NISTADS	0	0	0	5	0	0	5
33.	CSIR-NPL	0	3	9	0	12	0	24
34.	CSIR-SERC	0	0	2	0	0	5	7
35.	CSIR-URDIP	0	0	0	2	0	0	2
	TOTAL	126	136	67	5	48	45	427



Table 5: List of Students in Participating CSIR Labs in Ph.D. Program (Jan'14 Session)

S. No.	Laboratory	Biological Sciences	Chemical Sciences	Engi- neering Sciences	Mathe- matical & Infor- mation Sciences	Physical Sciences	Integrat- ed PhD	Total
Ι.	CSIR-AMPRI	0	0	5	0	0	0	5
2.	CSIR-CCMB	7	0	0	0	0	0	7
3.	CSIR-CDRI	12		0	0	0	0	13
4.	CSIR-CECRI	0	12	0	0		0	13
5.	CSIR-CFTRI	26	0	3	0	0	0	29
6.	CSIR-CIMAP	2		0	0	0	0	3
7.	CSIR-CLRI	0	2	0	0	0	0	2
8.	CSIR-CMERI	0	2	0	0	0	4	6
9.	CSIR-4PI	0	0				0	3
10.	CSIR-CRRI	0	0	0	0			2
.	CSIR-CSIO	0	0	8	0	0	0	8
12.	CSIR-CSMCRI	9	13	0	0	0	0	22
13.	CSIR-IGIB	12	0	0	0	0	0	12
4.	CSIR-IHBT	6	2	0	0	0	0	8
15.	CSIR-IICB	6	2	0	0	0	0	8
16.	CSIR-IICT	13	70		0	0	0	84
17.	CSIR-IIIM	9	2	0	0	0	0	
18.	CSIR-IIP	0		0	0	0	0	
19.	CSIR-IITR	6	0	0	0	0	0	6
20.	CSIR-IMMT	6	5	2	0		0	14
21.	CSIR-NAL	0	0	4	0	0	0	4
22.	CSIR-NBRI	9	0	0	0	0	0	9
23.	CSIR-NCL	7	18	0	0	2	0	12
24.	CSIR-NEERI	0	0	0	0	3	0	3
25.	CSIR-NEIST			0	0	0	0	2
26.	CSIR-NGRI	0	0	0	0	6	0	6
27.	CSIR-NIIST	2	10		0	2	0	15
28.	CSIR-NISCAIR	0	0	0	6	0	0	6
29.	CSIR-NISTADS	0	0	0	3	0	0	3
30.	CSIR-NPL	0	3	3	0	4	7	17
31.	CSIR-SERC	0	0		0	0	0	
	Total	133	145	29	10	21	12	350



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