



## Human Resource Development Group Council of Scientific & Industrial Research

### CSIR-Nehru Science Postdoctoral Research Fellowship Scheme

Council of Scientific and Industrial Research (CSIR), an ensemble of 37 state-of-the art institutes, is amongst the foremost scientific and industrial research organizations. Over the years, this unique organization has helped India usher in a scientific milieu, creating and nurturing talent in a wide variety of S&T domains, spawned many organizations, many disciplines and most importantly has served as a nursery and training ground for most of India's talented scientists and technologists. CSIR annually publishes over 3800 papers in science journals and holds over 3000 patents.

“CSIR-Nehru Science Postdoctoral Research Fellowship Scheme” has been instituted to foster high quality research opportunities to promising fresh PhD holders in the cutting edge areas of Basic Science, Engineering, Medical and Agriculture at CSIR laboratories. Special focus will be for fundamental research in the inter-phase areas of science and technology. CSIR intends to offer one hundred (100) such fellowships every year for working in CSIR laboratories with state-of-art R&D facilities.

Eligibility: Fresh PhDs within one year of doing PhD and also those who have submitted PhD thesis.

Though CSIR Nehru Science Postdoctoral Research Fellowship is open to Indian nationals and Persons of Indian Origin, a certain number (upto 20%) of fellowships may be offered to foreign nationals.

Tenure: Two years and extendable for maximum one more year based on outstanding performance and recommendation from the Director of the CSIR lab where working.

Maximum Age Limit: 32 years , relaxable upto 5 years in case of SC/ST/OBC/Physically handicapped and women candidates, as on last date of application.

Remuneration: CSIR Nehru Science Postdoctoral Fellows will be paid a consolidated fellowship of Indian Rs. 35,000/- per month plus House Rent Allowance (HRA) as admissible and a contingency grant of Rs. 3.0 lakh per annum. 25% of the contingency grant can be used for domestic and international travel including per diem expenses.

Mode of selection: Selections to the “CSIR-Nehru Science Postdoctoral Research Fellowships” will be made through interview of short listed candidates by specially constituted Committees. Eligible candidates must route their application through the sponsoring CSIR laboratory. Applicants from abroad may also be considered in absentia, if eligible. Selection of foreign nationals will be subjected to clearance by ISTADS, CSIR.

Accommodation and other benefits: Accommodation may be provided by CSIR laboratories if available. CSIR rules on leased accommodation are being reviewed in the light of ‘Sixth Pay Commission’ recommendations and will be made applicable as and when approved. CSIR Nehru Science Postdoctoral Fellows will be entitled for Medical benefits as per the CSIR rules for Research Associates.

Other relevant information: Candidates who have worked for their PhD from a particular CSIR laboratory will not be eligible for becoming a PDF in the same CSIR laboratory under this scheme.

20% of the fellowship amount will be paid as lump sum at the end of completion of 1<sup>st</sup> and 2<sup>nd</sup> year, respectively.

All other rules and regulations will be as applicable to CSIR Research Associates (can be seen at [www.csirhrdg.res.in](http://www.csirhrdg.res.in)). In all matters, the decision of CSIR shall be final.

List of CSIR laboratories and their Niche Areas/R&D activities are given in [Annexure-III](#). For more information about CSIR labs, please visit the websites of the individual laboratories.

All correspondence pertaining to “CSIR-Nehru Science Postdoctoral Research Fellowship” should be addressed to:

Ms Sushila Khilnani,  
Scientist-G and Scientist-in-Charge, EMR-I,  
Human Resource Development Group,  
CSIR Complex, Library Avenue,  
Pusa, New Delhi-110012.  
Email : [skhilnani@csirhrdg.res.in](mailto:skhilnani@csirhrdg.res.in)  
Tel : 011-25846077

**Last date for receiving application: 13<sup>th</sup> July 2009**

## **How to Apply**

Please read the instructions, given at [Annexure-I](#), carefully before filling the Application Form. The Application Proforma is given as [Annexure-II](#). List of CSIR laboratories are given as Annexure III. Applications complete in all respect must reach on or before the closing date. Applications received after the closing date will be summarily rejected. [Application received without the Attestation of the Director of the Sponsoring CSIR laboratory will also be rejected.](#)

## **Where to Apply**

Applications duly filled in the prescribed format and complete in all respect should be sent to:

Ms Sushila Khilnani  
Scientist-G & Scientist-In-Charge  
Extramural Research (EMR)-I Division  
Human Resource Development Group  
CSIR Complex, Library Avenue, Pusa  
New Delhi-110012.

**“Application for CSIR-Nehru Science Postdoctoral Research Fellowship”** should clearly be written on top of the envelope containing application form.

**Last date for receiving application: 13<sup>th</sup> July 2009**

**Instructions to fill in Application Form**

- General (a) Please download the attached Form, complete it, and return.  
(b) No Column of application form should be left blank.  
(c) Use additional sheets where necessary, with relevant columns drawn thereon, inserting proper references.  
(d) Completed application should be accompanied by all the requisite documents. You are requested to go through the 'check list' of documents before submitting the application. **Incomplete applications are liable to be rejected.**  
(e) Photocopies of documents asked for need attestation.
- Item No. 1 Name given here should be the same as given in your matriculation/higher secondary certificate and degree certificates. If there is a change, addition or deletion, an affidavit from a Notary Public/Magistrate is necessary.
- Item No.9 In case grades are awarded, please attach the sheet giving conversion of grades to percentage of marks.
- Item No. 11 Specialisations may be indicated in terms of (a) Subject (b) Broad Area(s) of specialization and (c) Exact area(s) of specialisation.

For example:

- (i) a) Subject : Physics  
b) Broad area of specialization : Spectroscopy  
c) Exact area of specialization : NMR Spectroscopy
- (ii) a) Subject : Chemistry  
b) Broad area of specialization : Physical Chemistry of Polymers  
c) Exact Area of specialization : Biopolymers

**Check list of documents to be attached**

- |                                                                                                 |        |
|-------------------------------------------------------------------------------------------------|--------|
| 1. Photograph on the main application form                                                      | Yes/No |
| 2. Affidavit if you carry different name/surnames in your certificates                          | Yes/No |
| 3. Attested copy of School Leaving/High School/Secondary School Certificate (For date of birth) | Yes/No |
| 4. Attested copies of Mark Sheets/Grade Cards & Degrees for BSc/MSc/MPhil/PhD<br>BE/ME/PhD      | Yes/No |

BPharm/MPharm/PhD

MBBS/MD/MS/MCh/DM/PhD

BVSc/MVSc/PhD

- |    |                                                                                               |        |
|----|-----------------------------------------------------------------------------------------------|--------|
| 5. | List of Publications                                                                          | Yes/No |
| 6. | Reprints                                                                                      | Yes/No |
| 7. | Attested copies of Letter(s) of Acceptance for paper(s) accepted for publication & preprints. | Yes/No |
| 8. | Detailed Research Proposal                                                                    | Yes/No |
| 9. | Testimonials from 2 Referees (One should be PhD Guide)                                        | Yes/No |

**Application Form**

**COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH  
Human Resource Development Group  
CSIR Complex, Library Avenue, Pusa, New Delhi 110 012**

**APPLICATION FORM FOR “CSIR-Nehru Science Postdoctoral Research Fellowship”**

Please use BLOCK LETTERS:

Please affix a passport size photograph with your signature on top

1. Full Name:.....Sex (M/F):.....  
Last Name First Middle
- 1a. Father’s/Husband’s Name:..... Father’s/Husband’s Nationality:.....
2. Present Address:.....  
.....
3. Permanent Address in India (For Indian Nationals)/Abroad (For Foreign Nationals/NRIs/PIOs):  
.....  
.....  
.....
4. a) Date of Birth.....(b) Birth Place :.....(c) State of Domicile.....
5. Citizenship : .....
6. Category : (a) Indian National- Yes/No:..... (b) NRI - Yes/No:..... (c) PIO - Yes/No:.....  
(d) Foreign National -Yes/No:.....
7. Passport Details: (a) Passport No.:..... (b) Issuing Authority.....
8. Type of Visa held: .....
- 9.\* Do you belong to: (a)Scheduled Caste- Yes/No (b) Scheduled Tribe - Yes/No (c) OBC - Yes/ No
- 10.\* Date of arrival in foreign country:.....Date of actual/expected return:.....

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\* To be filled in by Indian Nationals

11. Academic and Professional qualifications (from first degree onwards):

Degree/ Diploma	Subject	Percentage of Marks or Grade	Name of Univ./Institution	Duration of Course	Month & year of passing

12. Title of PhD Thesis .....

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.....

13. Specializations, in terms of Broad Area of Specialization and Exact Area of Specialization:

(a) Subject	(b) Broad Area of Specialization	Exact Area of Specialization

14. Publications and Patents: **(Please attach list of publications and patents with full references and reprints or photocopies bearing serial numbers corresponding with those in the list)**

(a) No. of Papers (i) Published.....(ii) Accepted.....

(b) No. of Books published.....(c) No. of patents: (i) Filed:.....(ii) Granted:.....

15. Prizes, Honours, Awards, Distinctions, if any: .....

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16. Fellowships held:

Name of fellowship	Name of the sponsoring agency	Dates		Amount	Name of the Host Institute
		From	To		

17. Give details of employment, if any (A separate sheet may be used):

18. Title of proposed Research and Development Project:

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.....

(Describe in detail, on a separate sheet, the Research or Development Project you would like to pursue, along with year-wise plan of work for at least two years. The project should be made in consultation with the mentor with whom you propose to work in CSIR lab.)

19. Name of CSIR Scientist and research group with whom proposed to work:

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20. Testimonials from two referees (one should be PhD Guide) who are familiar with your recent research work may be attached. Please give the names, designations, and addresses of referees:

(i).....

(ii).....

.....



21. **Declaration (Applicable to Indian Nationals/NRIs/PIOs/Foreign Nationals)**

I have read the terms and conditions of the CSIR-Nehru Postdoctoral Research Fellowship Scheme. I accept and agree to abide by these if the Fellowship is offered to me. I certify that to the best of my knowledge and belief the particulars given in the application are correct. I understand that the decision taken on my application by CSIR will be final. (If false and suppression of factual information in the application form comes to the notice of CSIR at any time during the tenure of an PDF, the CSIR-Nehru Science PDF would be liable to be terminated).

Place.....

Signature of the candidate.....

Date:.....

22. **Declaration (Specifically for NRIs/PIOs/Foreign Nationals)**

As a foreign national/Person of Indian Origin (PIO)/Non-Resident Indian (NRI), I do hereby affirm that I will abide by Indian Laws as applicable to Indian Nationals and will not participate in unlawful activities.

Place.....

Signature of the candidate.....

Date:.....

23. **Attestation by Director of CSIR Sponsoring/Placement Laboratory**

I have satisfied myself about the credentials of the applicant and will provide him/her all the infrastructure facilities to carry out his/her research work in this laboratory. The laboratory will also be responsible for his conduct and monitor his/her research progress.

Place.....

Signature of the Director with Official Seal

Date:.....

**List of CSIR Laboratories and their Niche Areas**

Sno	Name of CSIR Laboratory	Major Programmes/Thrust Areas/Niche Areas	Website
1	Advanced Materials and Processes Research Institute (AMPRI), Bhopal, Madhya Pradesh	(1) Development of Light weight materials for automobile and engineering applications; (2) Application of Natural fibre reinforced composites for engineering and building applications; (3) Industrial waste utilisation; and (4) Nano Materials.	<a href="http://www.ampri.res.in">www.ampri.res.in</a>
2	Central Building Research Institute (CBRI), Roorkee, Uttarakhand	Building Materials (Organic/Inorganic); Building Physics (Lighting Ventilation; Acoustic and heat transfer); Structure Engineering; Geotechnical Engineering; Environment and Pollution; Mechanization in development of Plants; and Architectural Planning	<a href="http://www.cbri.org">www.cbri.org</a> ; <a href="http://www.cbri.in">www.cbri.in</a>
3	Centre for Cellular and Molecular Biology (CCMB), Hyderabad, Andhra Pradesh	Genomics; Bioinformatics; Molecular Biology; Biochemistry & Biophysics; Cell Biology and Development; and Biotechnology & Biomedicine.	<a href="http://www.ccmb.res.in">www.ccmb.res.in</a>
4	Central Drug Research Institute (CDRI), Lucknow, Uttar Pradesh	Drug discovery and development; Pharmacokinetics studies; Regulatory toxicology. Systematic evaluation of medicinal properties of natural products and development of technology for drugs, intermediates and biologists.	<a href="http://www.cdriindia.org">www.cdriindia.org</a>
5	Central Electrochemical Research Institute (CECRI), Karaikudi, Tamil Nadu	Interfacial architecture to achieve electro catalysis and molecular recognition; Corrosion mitigation by novel surface-confined methodologies; Harnessing of solar energy through photo electrochemical and photovoltaic cells; Ionic liquids – new generation electrolytes; New generation materials for energy generation and storage; Electrochemical synthesis and conversions – a greener approach.	<a href="http://www.cecri.res.in">www.cecri.res.in</a>
6	Central Electronics and Engineering Research Institute (CEERI), Pilani, Rajasthan	MEMS and Microsensors; VLSI Design (Analog, Mixed signal and Digital), Nano-electronic Devices; Photonics, Optoelectronics, White LEDs, MOEMS, Integrated Optics; Power electronics; Embedded Real-Time Systems; Reconfigurable Computing; Mechatronics; Sensor Networks; Communication technologies; Instrumentation and control; Microwave Tubes (Klystrons, Gyrotrons, TWTs); Vacuum Microelectronic Devices; Terra Hertz devices; DBD Excimer Sources; and LTCC Technology.	<a href="http://www.ceeri.res.in">www.ceeri.res.in</a>
7	Central Food and Technological Research Institute (CFTRI), Mysore, Karnataka	Food Biotechnology; Nutraceuticals and Nutrigenomics; Micronutrients and Health Foods.	<a href="http://www.cftri.com">www.cftri.com</a>
8	Central Glass & Ceramics Research Institute (CGCRI), Kolkata, West Bengal	Fibre-optics and Photonics; Bio-ceramics; Ceramic based Sensors and Actuators; Nano-structured non-metallic materials; Ceramic Fuel Cells and Battery Materials; Sol-gel processing; and Engineering Ceramics.	<a href="http://www.cgcri.res.in">www.cgcri.res.in</a>
9	Central Institute of Medicinal and Aromatic Plants (CIMAP), Lucknow, Uttar Pradesh	Metabolic engineering; Secondary metabolism; Aroma genomics; Phytochemicals and Bioactives.	<a href="http://www.cimap.res.in">www.cimap.res.in</a>

10	Central Institute for Mining & Fuel Research (CIMFR), Dhanbad, Jharkhand	<p><b>(A) Mining Research:</b> Rock mechanics and Mine Planning &amp; Design; Mine system engineering and modeling; Plasma Blasting Technology; Effects of Stemming on Engineering Blasting Parameters; Numerical modeling on rock fracturing by distress blasting; Comprehensive opencast blast simulation and contour blast modeling; opencast slope stability modeling; Performance of tunnels &amp; caverns through instrumentation; Evaluation of efficiency of rock reinforcement measures; Advanced Blast - Blast Fragmentation Modeling; Pillar design; Stress modeling of coal measures in deep underground mines; Coastal Mineral exploration and exploitation; High resolution GPR subsurface modeling; Mining Geoinformatics; Satellite remote sensing application in mining areas; Carbon sequestration; Coal mine methane; and Environmental Management in Mining Areas.</p> <p><b>(B) Fuel Research:</b> Coal Bed Methane &amp; degasification; Coal carbonization; Optimization/modeling of blending parameters of coals from different indigenous and imported sources for steel and Power Industries; Coal to Oil by FT Synthesis; Biomass to Liquid Fuel, Biomass to Gasification; Solar Energy; Clean Coal Technology, Coal Preparation; High Performance Value added products from Coal, Carbon nano tubes and Hetrofullerenes from Coal, Activated Carbon; Assessment of Soil quality and its impact on Human health, Assessment of toxicity of Fly Ashes, Assessment of Soil carbon sequestration in Coal Mining areas.</p>	<a href="http://www.cimfr.nic.in">www.cimfr.nic.in</a>
11	Central Leather Research Institute (CLRI), Chennai, Tamil Nadu		<a href="http://www.clri.org">www.clri.org</a> ; <a href="http://www.clri.nic.in">www.clri.nic.in</a>
12	Central Mechanical Engineering Research Institute (CMERI), Durgapur, West Bengal	Nanomaterials; Biomaterials; Ceramic-composites; Mechatronics; Robotics; Dynamics, Design and Control; Fluid and Thermal Sciences.	<a href="http://www.cmeri.res.in">www.cmeri.res.in</a>
13	Central Road Research Institute (CRRRI), Delhi	Pavement Engineering & Materials; Road Development Planning & Management; Geotechnical Engineering; Bridges & Structures; Traffic & Transport Planning.	<a href="http://www.crridom.gov.in">www.crridom.gov.in</a>
14	Central Scientific Instruments Organization (CSIO), Chandigarh	<p><b>Engineering:</b> Mechatronics, Micromachining, Signal processing, Image processing, Embedded system, Soft computing, Bio-medical engineering, Control and instrumentation, and Materials engineering.</p> <p><b>Sciences:</b> Optical design, Aspherics, Photonics, Opto-electronics, Thin film, Nano materials, Sensors, Analytical instruments, Spectroscopy, Bio-nano technology.</p>	<a href="http://csio.res.in">http://csio.res.in</a> ; <a href="http://csio.gov.in">http://csio.gov.in</a>
15	Central Salt and Marine Chemical Research Institute (CSMCRI), Bhavnagar, Gujarat	Salt and marine chemicals; Analytical Sciences; Inorganic Materials and Catalysis; Reverse Osmosis Engineering; Electro Membrane Process; Marine Biotechnology and Ecology; Phytosalinity.	<a href="http://www.csmcri.org">www.csmcri.org</a>

16	Institute of Genomics and Integrative Biology (IGIB), Delhi	Systems Biology; Disease Biology; Genomics; Genome informatics; and RNA silencing.	<a href="http://www.igib.res.in">www.igib.res.in</a>
17	Institute of Himalayan Bioresources Technology (IHBT), Palampur, Himachal Pradesh	Natural Product Chemistry; Proteomics, genomics and metabolomics; Transgenic research; Ecology and plant adaptations; Plant pathology and plant protection against insects, pathogens and viruses; Floriculture; Biodiversity conservation.	<a href="http://www.ihbt.res.in">www.ihbt.res.in</a>
18	Indian Institute of Chemical Biology (IICB), Kolkata, West Bengal	Proteomics; Genomic Sciences; Chemical Biology; Synthetic Biology; and System Biology.	<a href="http://www.iicb.res.in">www.iicb.res.in</a>
19	Indian Institute of Chemical Technology (IICT), Hyderabad, Andhra Pradesh	Lipid Science & Technology; Polymer Chemistry; Biology; Chemical Engineering; Energy; Fluoroorganics	<a href="http://www.iictindia.org">www.iictindia.org</a>
20	Indian Institute of Integrative Medicine (IIIM), Jammu, J&K	New drug discovery from natural products (new chemical entities as well as phytochemicals); Natural product chemistry (isolation, synthesis, and medicinal chemistry); Metabolic engineering of biosynthetic pathways in plants, bacteria and fungi; Pharmacology of NCEs and phytopharmaceuticals; Bioprospecting of medicinal, aromatic plants and microbes; Drug developments in the areas of neglected diseases.	<a href="http://www.rrljammu.org">www.rrljammu.org</a>
21	Indian Institute of Petroleum (IIP), Dehradun, Uttarakhand	<b>Broad areas:</b> Chemical Engineering, Chemistry, Mechanical Engineering, and Biotechnology. <b>Specialized areas:</b> Petroleum Refining process; Separation Processes; Simulation and modeling, Process design; Heterogeneous and Homogenous catalysis; Speciality chemicals and petrochemicals; Synthetic organic chemistry and green chemistry; Lubes and bitumen processing; Alternate fuels, green fuels, bio-fuel and biomass conversion; CO <sub>2</sub> capture/sequestration; Future fuels, vehicles and emission control; Tribology; Combustion, Industrial and domestic burners.	<a href="http://www.iip.res.in">www.iip.res.in</a>
22	Indian Institute of Toxicological Research (IITR), Lucknow, Uttar Pradesh	Nanomaterial toxicology and Computation toxicology	<a href="http://www.iitrindia.org">www.iitrindia.org</a>
23	Institute of Minerals & Materials Technology (IMMT), Bhubaneswar, Orissa	Mineral Engineering: Mineralogy, Mineral Processing, Bio-mineral Processing; Advanced Materials: Plasma Technology, Colloids and Materials Chemistry.	<a href="http://www.immt.res.in">www.immt.res.in</a>
24	Institute of Microbial Technology (IMTECH), Chandigarh	Molecular Biology and Gene Regulation; Cell Biology & Immunology; Immune Mechanism in Infection; Protein Design & Engineering; Applied & Environmental Microbiology; Bioinformatic & Computer Modeling; Bioorganic Chemistry; Peptide Chemistry; Biochemical & Fermentation Engineering; Biosensors; Microbial Taxonomy	<a href="http://www.imtech.res.in">www.imtech.res.in</a>
25	National Aerospace Laboratory (NAL), Bangalore, Karnataka	Aerodynamics; Aerospace Propulsion and Energy Systems; Aerospace Structures and Materials; Aerospace Controls, Electronics and Systems	<a href="http://www.nal.res.in">www.nal.res.in</a>
26	National Botanical Research Institute (NBRI), Lucknow, Uttar Pradesh	Agricultural Biotechnology; Plant Genomics and diversity; Environmental Botany; Plant Metabolism; Systematic and Conservation Botany; and Bioactive	<a href="http://www.nbri-lko.org">www.nbri-lko.org</a>

		Plant Products.	
27	National Chemical Laboratory (NCL), Pune, Maharashtra	Bioactive Organic Molecules; Bio-Transformations; Chemical Biology; Clean Fuels; Electroactive Materials; Electron Microscopy; Green Chemical Processes; Health Care; Materials Derived From Renewable Resources; Membrane Science; Metabolic Pathway Engineering; Microbial and Fermentation Processes; Molecular and Hybrid Materials; Molecular Modeling; NMR Spectroscopy; Novel Separation Processes; Plant Biotechnology; Renewable Energy Systems; Scientific Computing Across Length and Time Scales; Study of Complex Fluids; Supramolecular Chemistry; Surface Science Synthetic Biology.	<a href="http://www.ncl-india.org">www.ncl-india.org</a>
28	National Environmental Engineering Research Institute (NEERI), Nagpur, Maharashtra	(1) Hazardous chemicals/wastes identification & management; (2) Environmental biotechnology; (3) Environmental system analysis & environmental system development; (4) Environmental policy analysis; and (5) Climate change: (i) Studies of analytical / predictive models; (ii) Development of Materials for combating climate change; and (iii) MSW & Climate Change.	<a href="http://www.neeri.res.in">www.neeri.res.in</a>
29	North-East Institute of Science and Technology (NEIST), Jorhat, Assam	<b>Broad Areas:</b> Chemical Sciences, Biotechnology, Materials Science, Environmental Science and Engineering Science. <b>Specialized areas:</b> Drug and intermediates, bioactive molecules from natural products, steroidal chemistry, bio-organic transformations.	<a href="http://www.rrljorhat.res.in">www.rrljorhat.res.in</a> ; <a href="http://www.neist.res.in">www.neist.res.in</a>
30	National Geographical Research Institute (NGRI), Hyderabad, Andhra Pradesh	Exploration of hydrocarbons; Mineral exploration and engineering geophysics; Exploration, Assessment and Management of groundwater resources; Earthquake hazard assessment; Lithosphere, Earth's interior and Paleo-environment; Geo-environmental studies; Geophysical instrumentation; Special activities: Antarctica and Geomagnetic studies.	<a href="http://www.ngri.org.in">www.ngri.org.in</a>
31	National Institute of Interdisciplinary Science & Technology (NIIST), Thiruvanthapuram, Kerala	Development of novel enzymes- niche area for R&D for the Biotechnology; Optoelectronic and Functional Organic Materials; Functionally Graded Light Alloys and Composites; Anaerobic Digestions; Agent based Modeling; and CFD modeling of Multiphase flow.	<a href="http://www.niist.res.in">www.niist.res.in</a>
32	National Institute of Oceanography (NIO), Goa	Oceanography	<a href="http://www.nio.org">www.nio.org</a>
33	National Institute of Science Communication and Information Resources (NISCAIR), Delhi	(A) <u>Science of Science Policy:</u> Development, rationalization and use of rigorous quantitative methods for measuring impact and quality of research of individuals, journals, institutes and nations. Metrics based on simple indices (IF and h-index type) and more complex metrics (e.g. eigen-vector and Page Rank type) will be used. The long-term aim is to develop datasets, tool-kits and methodologies to aid making better R&D management decisions with regard to innovation and competitiveness.	<a href="http://www.niscair.res.in">www.niscair.res.in</a>

		(B) <u>Multi-lingual Corpus Databases and their Mutual Linkages</u> : Basic studies and development of IT-enabled mechanism of building multi-lingual corpus databases in terms and expressions in different languages (foreign and Indian linked through a unique single code which could be Sanskrit). The long-term aim is to develop this into a machine-aided translation support system.	
34	National Institute of Science and Technology Development Studies (NISTADS), Delhi	(1) Economics (including financing) of innovation/ S&T changes; Economics of IPR and S&T related trade; Comparative policies including policy studies/ modelling; regulations studies in relation to S&T; (2) Economics/ Sociology/ Anthropology of knowledge economics, human resources, S&T/innovation strategy, environment, S&T movements and organization studies in relation to S&T; (3) Institutional/ law (&) economics or quantitative studies on areas related to S&T and development/ business/ entrepreneurship; S&T for tiny sector and rural; geography of S&T including area studies; (4) Quantitative studies/ modelling of S&T measurement; systems especially large systems modelling; webometrics/ data mining, inferencing; and (5) History/ Philosophy of S&T including ethical issues.	<a href="http://nistads.res.in">http://nistads.res.in</a>
35	National Metallurgical Laboratory (NML), Jamshedpur, Jharkhand	(A) Microstructural engineering: Research focus is on structure-property-processing-degradation of (i) metals and alloys, (ii) ceramics and minerals, and (iii) semiconductors. (B) Processing and recycling of industrial wastes and secondary resources: Research focus is on development of newer processes for man-made-resources (used consumer goods, industrial solid/liquid waste streams, mining and mineral processing waste) with the objective of resource conservation/recycling, value addition and environmental protection. (C) Structural integrity evaluation: The scope of the activity involve mechanical behavior of engineering materials, mechanisms of service damage accumulation, non-destructive evaluation of degradation and damage, computational modeling of damage incorporation, intelligent framework for integrity assessment, etc.	<a href="http://www.nmlindia.org">www.nmlindia.org</a>
36	National Physical Laboratory (NPL), Delhi	Superconductivity/Condensed matter physics; Photovoltaics/Organics/Polymer physics; Sensors/ Medical Electronics; Atmospheric Sciences; and Radio Sciences.	<a href="http://www.nplindia.org">www.nplindia.org</a>
37	Structural Engineering Research Centre (SERC), Chennai, Tamil Nadu	Reinforced & Prestressed Concrete Structures and Structural components; Construction Engineering; Concrete Composites and Advanced Materials; Wind Engineering (wind tunnel testing & field measurements); Structural dynamics & earthquake engineering; Computational structural mechanics, computer-aided analysis and design structures; Risk & reliability studies; Steel structures, transmission Line towers and other skeletal structures; and Fatigue & fracture; Shock & Vibration and experimental	<a href="http://www.sercm.org">www.sercm.org</a>

		mechanics.	
38	CSIR Centre for Mathematical Modeling & Computer Simulation (CMMACS), Bangalore, Karnataka	<p>Carbon cycle research (ocean, atmosphere and land) with emphasis on transport, ecosystem modelling, air-sea exchange and determination of carbon fluxes by inversion of concentration data; Nonlinear dynamics; Biological modeling; Suspension rheology; Lattice Boltzmann methods.</p> <p>Precise quantification of Earthquake Hazard in Indian subcontinent through integration of Ground motion, Global Positioning System (GPS), Geology, Tectonics and Computational Seismology to derive (i) motion and deformation models of Indian subcontinent, (ii) Seismic hazard of Indian region and Site-specific hazard of Indian megacities.</p>	<a href="http://www.cmmacs.ernet.in">www.cmmacs.ernet.in</a>
39	CSIR-Unit for Research and Development of Information Products (URDIP), Pune	Web-based information services; Technology forecasting, assessment and management; R&D management; S&T interface with society, polity and production sectors; Societal impact in open economy era; S&T and women and development.	<a href="http://www.urdip.res.in">www.urdip.res.in</a> <a href="http://www.patestate.com">www.patestate.com</a> <a href="http://www.anusandhan.net">www.anusandhan.net</a>

