

## International S&T Cooperation Project List 2004-2005

Sl. No	Project Name	PI Name & Address	Cost (Rs. In lakhs)	Duration (M/D)
1	Development of low noise cooled millimeter wave amplifiers based alluminium oxide substrate	Dr. A Agarwal, Head, Society for Applied Microwave Electronic Engineering and Research, IIT Campus, P.B No 8448, Powai, Mumbai-400076	577800	24
2	Modelling the Rupture of the June 20 1990, Rudbar Earthquake in Northwest Iran from near field SH-Wave Data	Dr. I Sarkar, Department of Earth Science, IIT, Roorkee-247667	455000	24
3	Density Functional Theory of the Mixed State of layered super conductors in the presence of pinning	Prof. Chandan Dasgupta, IIT, Bangalore - 560012	580650	36
4	Superconducting small size power devices HTS bearing and flywheen	Prof. S C Kashyap IIT, New Delhi-110016	516400	24
5	Investigation on theoretical aspects of Compton Scattering"	Dr. B K Chatterji, Bose Institute, Kolkata-700009	756000	36
6	Mixed Valency in Trinuclear Complexes	Prof. G K Lahiri, Department of Chemistry, IIT, Powai Mumbai-400076	245600	24
7	Stimulation/Optimization Modelling for integrated land and water resources management in canal commands of the Hirakud irrigation project	Dr. S.N Panda, Department of Agriculture and Food Engineering, IIT, Kharagpur-721302	207750	24
8	Characterization and development of application technology for bacillus subtilis and fluorescent pseudomonas against soil borne plants pathogens	Dr. Rama S Singh, Department of Plant Pathology, Punjab Agriculture University, Ludhiana-141001	371574	24
9	Development of novel scensitizers based on squarain dyes for photo dynamic therapy	Dr, D Ramaiah, Sc EII, Photo Science and Photonics Division RRL Trivandrum-695019	432000	24
10	Non-conventional yeast as producers of novel phytases	Dr. T Satyanarayana, Dept. of Microbiology, Delhi South Campus, Benito Juarez Road, Delhi-110021	296310	24
11	Investigations on the dynamic behavior of particulate system to through experimental, numerical, simulation and imaging methods	Dr. S Ramakrishnan, Dept. of Instrumentation Engg. , Anna University, MIT Campus, Chrompet, Chennai-600044	303800	24
12	Synthesis of fine chemicals by micro-porous molecular sieves containing bornsted and lewies acid sites	Dr. V Murugesan, Prof & Head, Dept. of Chemistry, Anna University, Chennai-600025	324878	24
13	Biomarkers Responses in Estuarine/ Coastal Fishes for Pollution Monitoring and Management	Dr. Ms Shailaja, Sc. , National Institute of Oceanography, Dona Paula, Goa-403004	513900	36
14	Health Monitoring and Retrofitting of infrastructure	Prof. Abhijit Mukherjee, IIT Mumbai-400076	384300	36
15	Design and development of integrated silica cantiliver based bio-sensors embedded with piezo-MOSFET Detection Circuit	Dr. Raman Suri, Institute of Microbial Technology, Chandirah-160036	411000	36

16	Developing Non-lithographic methods for nanopatterning	Dr. N Ravishankar, IIS, Bangalore-560 012	312795	36
17	External Structures in Banach spaces	Dr. V Indumathi, Pondicherry University, Pondicherry 605014	535500	36
18	Metal induced crystallization behaviour on thin films of amorphous silica	Dr. Raman Kishore, National Physical Laboratory, New Delhi 110012	535500	36
19	Investigation of activity along the Himalayan MCT: Present geomorphology & past slip; Garhwal, NW India	Dr. C S Dubey, University of Delhi, Delhi-110007	437850	24
20	High Power copper halide lasers of high beam quality for industrial Application	Dr. S K Dixit, Scientific Officer, Centre for Advance Technology(CAT), Indore - 452013	408000	24
21	Earliest phase of deccan trap activity: a proposed petrologic geochemical & isotopic investigation into the rocks & mantle xenolithe from Kutch, India	Dr. Arijit Ray, Dept. of Geology, Presidency College, Kolkata - 700073	861000	36
22	Experimental & Theoretical investigations of Hydrodynamics and Adsorption in continues Countercurrent Liquid - Solid Fluidized Bed	Dr S Pushpavanam, Prof. Chemical Engg. IIT Madras-600036	233750	24
23	Heat evolution in High Performance Concrete and its effects on long term durability	Dr. Manu Santhanam,IIT,Madras- 600 036	767000	36
24	Evolving Polution Free Sustainable Development of Groundwater Resources	Dr V. S Singh, Sc. , National Geophysical Research Institute, Hyderabad- 500007	521600	24
25	Studies on the [Fe] - hydrogenase genes of prokaryotes and eukaryotes for the improvement og hydrogen production	Dr. Debabrata Das, Dept. of Biotechnology, IIT, Kharagpur-	399300	24
26	Biodiversity and biotechnology of hydrothermal vents	Dr. Chandralata Raghukumar,Scientist, National Institute of Oceanography,Dona Paula, Goa- 403004	397000	24
27	Fematosecond near-infrared spectroscopic studies on charge carrier dynamics, exciplex dynamics and organic	Prof. Siva Umopathy,IIS, Bangalore - 560012	827400	24
28	Computational intelligence based simulation for vibration problems	Dr. Snehashish Chakraverty, Central Building Research Institute, Roorkee-247667	686000	36
29	Biocatalytic and combinatorial approaches to novel product-based antimalarial agents	Dr. Ahmed Kamal, Indian Institute of Chemical Technology, Hyderabad-500007	1335600	36
30	Energy efficient Technologies for Microbial Cell Disruption with particular reference to recovery of intracellular Biotechnology products	Prof. A.B Pandit, Institutte of Chemical Technology, Mumbai -400019	547800	36
31	Comparative Study on the Development of Soild Acid Catalysts for Alkylolation of Phenolics	Dr. S.B Halligudi, National Chemical Laboratory, Pune-411008	468700	36
32	Modelling of organic materials for light emitting diodes	Dr. Nitin Chattopadhyay, Reader, Department of Chemistry, Jadavpur University, Calcutta-700032	237600	24

33	Development of Autonomous Underwater Vehicles Technology	Dr. Elgar Desa, Scientist, National Institute of Oceanography, Goa - 403004	989400	36
34	Solitons and integrability in higher dimensional magnetic spin systems	Prof M Lakshmanan, Head, Department of Physics and Centre for Nonlinear Dynamics, Bharathidasan University, Tiruchirapalli-620 024	125400	12
35	Development of metal oxide silicon/porous silicon MEMS Sensor & Signal processing unit for atmospheric monitoring in underground coal mines	Prof. H Saha, IC, Design & Fabrication Centre, Electronics & Telecommunication Engineering Department, Jadavpur Univeristy, Kolkata-	416500	36
36	Homogeneous Operators	Prof. Gadadhar Misra, Indian Statistical Institute, Bangalore-560059	401500	36
37	Tests of fundamental symmetries, theory and presision spectroscopy with complex atoms	Prof. Bhanu Pratap Das, Senior Professor, Indian Institute of Astrophysics, Bangalore	309000	36
38	Microstructural Studies on Carbon Nanomaterials modified carbon-carbon composites	Prof. L.M Manocha, Head, Department of Material Science, Sardar Patel University, Vallabh Vidhyanagar, Gujarat - 388 120	406500	36
39	Production and application of microbial lipases	Prof. R.K. Saxen, DU, NewDelhi	23,57,000	
40	Molecular mapping of the gene(s) conferring resistance to powdery mildew in black gram	Dr. Anjana Pandey, Allahabad University, Allahabad	12,67,300	
41	Direct fluorination of plastics and composites	Prof. R.P. Singh, IIT, Kharagpur	10,04,925	3 Years
42	Semiconductor silicon for applications in solar energy microelectronics and power electronics	Dr.Krishan Pal, NPL, Delhi	15,48,000	3 Years
43	Polymerization filled composites and Gas Phase polymerization by metallocene catalyst	Prof. CK.Das, IIT, Kharagpur	11,41,500	3 Years
44	Study and development of heterogeneous photo catalytic removal of hazardous compounds form Water and Air	Dr.M.Subrahmanyam, IICT, Hyderbad	11,97,000	
45	Establishment of multipurpose high energy accelerator irradiation facility for hygenisation of food and agroproducts at CFTRI, Mysore	Dr. V. Prakash, CFTRI, Mysore	1,35,000	
46	Efficacy Of yoga therapy on various before & after treatment	Dr. Krishna Bhat, KMC &H, Manipal	22,59,000	3 Years
47	Neurophysiological changes during sudarshan kriya: an EEG and thermography evaluation	Dr. M Bhatia, AIIMS/ Sir Ganga Ram Hospital, New Delhi	29,17,880	3 Years
48	Evolution of thermal camera to detect pre-cancerous lesions or caners in early stages and to study the effect of pranyam and sudershan kriya (breathing processes) in reversing pre-cancerous lesions	Dr. Vinod Koutchipouli, AllMS, New Delhi	21,34,800	3 Years

49	Changes in sleep, biorhythm and melatonin secretion on Indian and Russian expedition members in Antarctica	Dr. D. Majumdar, DIP AS, Delhi	36,50,000	3 Years
50	Geophysical techniques in gas hydrates exploration	Dr. N.K Thakur, NGRI, Hyderabad	8,54,000	
51	Establishment and operationalisation of Indo- Russian Gas Hydrate Centre	Dr S Kathirolu, NIOT	88,00,000	3 Years
52	Semiconductor silicon for application in solar energy, microelectronics and power electronics	Dr. Krishan Lal, NPL Delhi	15,48,000	3 Years
53	Establishment of cold coating technology	Dr. Srikant Joshi, ARCI, Hyderabad	1,25,000	1 Year
54	Latitudinal studies of ionospheric scintillation and total electron content investigation of geomagnetic phenomena of storm sub storm and micropulsation from Indian & Russian geomagnetic data	Dr.A.K. Gwal, Barkatullah Univ. Bhopal	23,49,000	3 Years
55	Geochemistry petrology mineralogy and ore-bearing capacity of K-Alkaline complexes - Provinces, Tamil Nadu, India and their practical uses	Dr. V Ram Mohan, Madras Univ., Chennai	5,64,000	2 Years
56	Seismic characterization of the lithosphere and asthenosphere	Dr.S.S.Rai, NGRI, Hyderabad		3 Years
57	Tectonophysical modeling of rheological structure and stress field of the Indian lithosphere	Dr.A.Manglik, NGRI, Hyderabad	6,09,800	2 Years
58	Identification and characterization of future earthquake sources in Himalaya	Dr.Kamal, WIHG	11,95,000	3 Years
59	Electro magnetic study of the crust and upper mantle resistivity structure aimed at generation of Indian conductance map	Dr.B.R.Arora & Dr.Subba Rao,IIT, Mumbai	7,59,000	
60	Design and testing portable seismic station equipment	Sh.G.Suresh, IMD, New Delhi	39,40,000	3 Years
61	High Resolution monitoring of geodynamic processes using borehole	Sh.G.Suresh, IMD, New Delhi	27,75,000	2 Years
62	Experimental evaluation of about 100 critical structures and utility buildings in urban India and production of detailed scientific reports.	Dr. A. K. Shukla, IMD, New Delhi	84,50,000	18 Months
63	Establishment and operationalisation of Indo- Russian center for earthquake research.	Dr.R. S.Dattatryam, IMD, New Delhi	40,78,000	3 Years
64	Development of biochips for biomedical applications	Prof S.K.Brahmchari, IGIB, Delhi		3 Years
65	Genotype-phenotype correlation based on the principles of ayurveda with special focus on prakriti	Prof S.K.Brahmchari, IGIB, Delhi	42,16,000	4 Years