

Scheme: Research & Development Support (SERC)
Programme: Science & Engineering Research Council (Engineering Sciences)
Projects Sanctioned during 2006-07

Sl. No.	Sanction No. Date of Sanction (D/M/Y)	Project Title	Project Investigator & Address
1.	SR/S3/MERC-36/2005 12.04.2006	Automated modular fixture planning for minimum tolerances	Dr. N. Venkata Reddy Deptt. Of Mechanical Engineering IIT-Kanpur Kanpur - 208016
2.	SR/S3/EECE/04/2006 18.04.2006	Use of signal and Image Processing and its application to display technology	Prof. U.B. Desai Deptt. Of Electrical Engg. IIT-Bombay Powai Mumbai - 400076
3.	SR/S3/ME/14/2005-SERC-Engg. 25.04.2006	Development of New Novel Titanium Alloys with improved Tribological properties	Dr. Geetha Manivasagam Vellore Institute of Technology Vellore - 632014
4.	SR/S3/ME/12/2005-SERC-Engg. 25.04.2006	Development of Lead free Nano Ferroelectric and Dielectric Materials by Mechanically activated Synthesis	Prof. B.S. Murthy IIT-Madras Chennai - 600036
5.	SR/S3/CE/10/2006 08.05.2006	Phase Equilibria & Interfacial Properties of Fluids & their Mictures in Nanoporous Materuials	Dr. Jayant K. Singh Deptt. Of Chemical Engg. IIT-Kanpur Kanpur - 208016
6.	SR/S3/MERC-07/2005 12.05.2006	Design, development and fabrication of continuous extrusion machine for thin sheets, tubes and sections	Dr. Santosh Kumar Deptt. Of Mechanical Engineering Banaras Hindu University Varanasi - 221005
7.	SR/S3/CE/72/2005 15.05.2006	Development of Novel Photocatalytic Materials for Water Splitting Reaction	Dr. Sadhana Rayalu Environment Materials Unit NEERI Nagpur - 440020
8.	SR/S3/CE/11/2006 15.05.2006	Investigation of single and two phase flow in microchannels	Dr. Ratan Mohan Deptt. Of Chemical Engg. IIT-Delhi Hauz Khas New Delhi - 110016
9.	SR/S3/CE/09/2006 22.05.2006	Mechanism of formation & control of size and morphology of nanoparticles in liquid phase	Dr. Rajdip Bandopadhyaya Deptt. Of Chemical Engg. IIT-Kanpur Kanpur - 208016
10.	SR/S3/MERC/55/2005 02.06.2006	Optimizing Surfacing and Cladding Through Dilution Control Using Indigenously Developed Advaced Gas Metal Arc Welding	Dr. Sunil Pandey Deptt. Of Mechanical Engineering IIT-Delhi Hauz Khas New Delhi - 110016
11.	SR/S3/CE/56/2005-SERC-Engg 08.06.2006	Personal Authentication using hand based Biometrics	Dr. Ajay Kumar Pathak IIT-Delhi Hauz Khas New Delhi - 110016
12.	SR/S3/CE/0007/2006-SERC-Engg	Communication, Computation and coverage in wireless Sensor	Dr. C. Siva Ram Murthy Deptt. Of Computer Science & Engg.

	08.06.2006	Networks	IIT-Madras Chennai - 600036
13.	SR/S3/EECE/59/2005 08.06.2006	A Checkposting Infrastructure for Parallel Scientific Applications on Computational Grids	Dr. Satish S. Vadhiyar Supercomputer Education & Research Centre IISc, Bangalore - 560012
14.	SR/S3/EECE/0008/2006-SERC-Engg 14.06.2006	Development of Better Models for Speaker - Normalisation and their Application in Automatic Speech Recognition	Dr. S. Umesh Deptt. Of Electrical Engg. IIT-Kanpur Kanpur - 208016
15.	SR/S3/ME/28/2005-SERC Engg 03.07.2006	Micromechanical Characterization of Hydroxyapatite Coating for Metallic Implants	Dr. Debabrata Basu Central Glass & Ceramic Research Institute Calcutta - 700032
16.	SR/S3/MERC/48/2005 10.07.2006	A parametric study of Performance of a Coriolis Mass Flow Rate Meter	Dr. Satish Chandra Sharma Deptt. Of Mechanical & Industrial Engineering IIT-Roorkee Roorkee - 247667
17.	SR/S3/MERC/76/2005 21.07.2006	Design and Developemnt of small Hydraulic Tractor	Dr. Arup Kumar Nandi EDG Group Central Mechanical Engineering Research Institute MG Avenue Durgapur - 713209
18.	SR/S3/MERC-21/2005 18.07.2006	Process modeling of twin wire welding system	Dr. Navneet Arora Deptt. Of Mechanical & Industrial Engineering IIT-Roorkee Roorkee - 247667
19.	SR/S3/MERC/RF-01/2006 21.07.2006	Ramanna Fellowship	Dr. Ranjit Singh Deptt. Of Mechanical Engineering Dayalbagh Educational Institute Agra - 282005
20.	SR/S3/MERC/62/2005 02.08.2006	Development of a Planter for Dibbling Cotton on Ridges	Dr. V.J.F. Kumar Zonal Research Centre Tamil Nadu Agricultural University Coimbatore - 641003
21.	SR/S3/EECE/02/2006 03.08.2006	Technology for Cooperative Utilization of Open Spectrum & Precoding based MIMO Systems	Dr. U.B. Desai Deptt. Of Electrical Engg. IIT-Bombay Powai Mumbai - 400076
22.	SR/S3/MERC-18/2005 07.08.2006	Development of a method for early evaluation of environmental impact of engineering design for all stages of their life cycle including distribution, usage and after-usestages	Dr. Amresh Chakrabarti Centre for Product Design & Manufacturing IISc Bangalore - 560012
23.	SR/S3/ME/26/2004-SERC-Engg 23.08.2006	Green Nanocomposites from renewable resources: Bipolymer silica hybrid materials	Dr. Vandana Singh Allahabad University Allahabad - 211002
24.	SR/S3/ME/26/2004-SERC-Engg 23.08.2006	Green Nanocomposites from renewable resources: Bipolymer silica hybrid materials	Dr. Rashmi Sanghi IIT-Kanpur Kanpur - 208016
25.	SR/S3/ME/29/2005-SERC Engg 15.09.2006	Electrical characterization of nanocomposites for use as novel dielectrics	Dr. Nandini Gupta Deptt. Of Electrical Engg. IIT-Kanpur Kanpur - 208016

26.	SR/S3/CE/35/2006 19.09.2006	Molecular Interactions of Leukocytic Cells with Bioactive Surfaces under Hydrodynamics Shear Flow	Dr. Sameer Jadhav Deptt. Of Chemical Engg. IIT-Bombay Powai, Mumbai - 400076
27.	SR/S3/MERC/54/2005 22.09.2006	Development of Phenomenological Models to Proportion Controlled Low Strength Materials	Dr. A. Shashishankar Deptt. Of Civil Engineering R.V. College of Engineering Bangalore - 560059
28.	SR/S3/ME/30/2005-SERC Engg 22.09.2006	Thermomechanical characterization of ceramic coatings for turbine blade materials	Dr. Ashok Kumar Ray National Metallurgical Laboratory Jamshedpur - 831007
29.	SR/S3/CE/31/2006 22.09.2006	Synthesis of Zeolite-Clay Based Inorganic Ion Exchange Membrane	Dr. Anupam Shukla Deptt. Of Chemical Engg. IIT-Delhi Hauz Khas New Delhi - 110016
30.	SR/S3/CE/33/2006 28.09.2006	Experimental & Theoretical Studies on Flooding & Dehydration in Proton Exchange Membrane (PEM) Fuel Cells	Dr. S. Jayanti Deptt. Of Chemical Engg. Indian Institute of Chemical Technology Chennai - 600036
31.	SR/S3/CE/32/2006-SERC Engg 26.09.2006	Optimal Operation and Advanced Control of Reactive Batch Distillation Processes	Dr. K. Yamuna Rani Deptt. Of Chemical Engg. Indian Institute of Chemical Technology Hyderabad - 500007
32.	SR/S3/CE/18/2006 28.09.2006	The Water lubricated transport of heavy oils experimentation theory	Dr. Gargi Das Deptt. Of Chemical Engg. IIT-Kharagpur Kharagpur - 721302
33.	SR/S3/MERC/32/2006 28.09.2006	Effectiveness of FRP bars in seismic strengthening of RC Frams with brick masonry infill walls	Dr. K.K. Bajpai Deptt. Of Civil Engineering IIT-Kanpur Kanpur - 208016
34.	SR/S3/MERC-43//2005 05.10.2006	Investigations on direct ceramic inkjet printing of multilayered ceramic components using a dispensing platform	Dr. K. Prakasan Deptt. Of Production Eengineering PSG College of Technology Coimbatore - 641004
35.	SR/S3/MERC-33/2005 10.10.2006	Development of high performance robotic welding system using TIME twin process integration	Dr. K.L. Rohira Welding Research Institute Bharat Heavy Electrical Limited Thiruchirapalli - 620016
36.	SR/S3/MERC-06/2005 10.10.2006	Lattice boltzmann method based simulations for a row of stationary and moving cyclinders	Dr. Amit Agrawal Deptt. Of Mechanical Engg. IIT-Bombay Powai Mumbai - 400076
37.	SR/S3/RFME/01/2006-SERC Engg 09.10.2006	Ramanna Fellowship on Detailed Investigation into Ferroelectric Nanoceramics & Thin Films of Lathanide doped Bismuth Titanate for Device Applications	Dr. Ashish Garg Deptt. Of Materials & Metallurgical Engg. IIT-Kanpur Kanpur - 208016
38.	SR/S3/CE/34/2006 09.10.2006	Inter-Droplet Interactkions in Microemulsions	Dr. Sunil S. Bhagwat Deptt. Of Chemical Engg., Institute of Chemical Technology Mumbai University Nathalal Parekh Marg, Mathunga Mumbai - 400019
39.	SR/S3/EECE/10/2006	Optimization techniques for the FGPA implementation of high speed digital	Dr. B. Venkataramani Deptt. Of ECE

	23.10.2006	communication blocks for software defined radio	National Institute of Technology Tiruchirapalli - 620015
40.	SR/S3/EECE/37/2006 26.10.2006	Coordinated Tuning of PSS and STATCOM/TCSC	Dr. Sukumar Mishra Deptt. Of Electrical Engg. IIT-Delhi Hauz Khas New Delhi - 110016
41.	SR/S3/EECE/38/2006 27.10.2006	Development of an Intelligent, Low-cost Partial Discharge (PD) Detection System	Dr. Sivaji Chakravorty Deptt. Of Electrical Engg. Jadavpur University Kolkata - 700032
42.	SR/S3/EECE/44/2006 26.10.2006	Transmission system operation and expansion planning under open access in India	Dr. S.A. Kharparde Deptt. Of Electrical Engg. IIT-Bombay, Powai Mumbai - 400076
43.	SR/S3/EECE/18/2006 27.10.2006	Developing Multi-Agent System for Performance based Resource Brokering & Management in Computational grid Environment	Dr. Nandini Mukherjee Deptt. Of Computer Science & Engg. Jadavpur University Kolkata - 700032
44.	SR/S3/MERC/23/2006 17.11.2006	Development of Kinematics for Asymmetric Actuation	Dr. P. Murali Krishna Deptt. Of Robotics Institute of Robotics and Intelligent Systems (IRIS) Bangalore - 560001
45.	SR/S3/MERC-64/2005 22.11.2006	Enhancement of surface of electrochemically drilled deep hole	Dr. D.S. Bilgi Deptt. Of Mechanical Engg., College of Engineering Bharati Vidyapeeth Deemed University Pune - 411043
46.	SR/S3/MERC/29/2006 01.12.2006	Development of Efficient Surface Aeration Systems for Water and Wastewater Treatment	Dr. ARK Rao Deptt. Of Civil Engineering IISc Bangalore - 560012
47.	SR/S3/ME/047/2005 04.12.2006	Development of eco-friendly chromium plating bath	Dr. S. Mohan Central Electrochemical Research Institute Karaikudi - 630006
48.	SR/S3/MERC/26/2006 05.12.2006	Design of a smart fully compliant mechanism for trajectory tracking	Dr. Bishakh Bhattacharya Deptt. Of Mechanical Engineering IIT-Kanpur Kanpur - 208016
49.	SR/S3/ME/051/2005-SERC Engg 06.12.2006	Stability of Al-based complex Metallic Alloys and Formation of Nanophase Materials through high Energy Ball Milling	Dr. N.K. Mukhopadhyay Institute of Technology Banaras Hindu University Varanasi - 221005
50.	SR/S3/ME/05/2006-SERC Engg 06.12.2006	Damage & Deformation study in structural steel using Non-linear Ultrasonic Technique	Dr. L. Sarmishtha Sagar(Palit) Materials Science & Technology Division National Metallurgical Laboratory Jamshedpur - 831007
51.	SR/S3/ME/043/2005-SERC Engg 06.12.2006	Development and Implementation of Extended finite Element Method (X-FEM) for Modeling Cohesive Discontinuities in Rock Mass	Dr. Debasis Deb Deptt. Of Mining Engineering IIT-Kharagpur Kharagpur - 721302
52.	SR/S3/MERC/31/2006 11.12.2006	Rotary Drum Type composting of Municipal Solid Waste	Dr. Absar A Kazmi Deptt. Of Civil Engineering IIT-Roorkee Roorkee - 247667

53.	SR/S3/MERC/36/2006 11.12.2006	Guidelines Development for Bride Pier Scour on cohesive Bed Rivers	Dr. Debnath Koustuv Deptt. Of Applied Mechanics Bengal Engineering & Science University Howrah - 711103
54.	SR/S3/MERC/22/2006 20.12.2006	Investigation of Lift and thrust in Asymmetric Flight	Dr. K.R. Sreenivas Deptt. Of Mechanical Engineering JNCASR Bangalore - 560064
55.	SR/S3/ME/20/2005-SERC Engg 28.12.2006	Synthesis, crystallographic characterization & study of electrical behaviour of titania zirconia & phosphate based ceramic materials	Dr. O.P. Shrivastava Deptt. Of Chemistry Dr. H.S. Gour University Sagar - 470003
56.	SR/S3/MERC-05/2006 27.12.2006	Polymer nanocomposite gear development and performance evaluation	Dr. R. Gnanamoorthy Deptt. Of Mechanical Engineering, Composite Technology Centre IIT-Madras Chennai - 600036
57.	SR/S3/MERC-62/2006 27.12.2006	Low cost automation for handling asymmetric components	Prof. P.V. Mohanram Deptt. Of Mechanical Engg. PSG College of Technology Coimbatore - 641004
58.	SR/S3/ME/04/2006 08.01.2007	Processing-Texture property relationship in bulk nano-structured / ultra-fine grained materials produced by Accumulative Roll Bonding	Dr. Satyam Suwas Deptt. Of Metallurgical Engineering IISc Bangalore - 560012
59.	SR/S3/CE/41/2006 08.01.2007	Deformation of Charged Drops & Vesicles at Ultra Low Surface Tension in Brownian and Non-Brownian Regime	Dr. Rochish Thaokar Deptt. Of Chemical Engineering IIT-Bombay Powai Mumbai - 400076
60.	SR/S3/MERC-57/2006 03.01.2007	Process modeling and online monitoring of laser beam welding	Dr. K. Sankaranarayananaswamy Deptt. Of Mechanical Engineering National Institute of Technology Tiruchirapalli - 620015
61.	SR/S3/ME/01/2006 09.01.2007	Microbial mediated removal of iron mineral impurities from kaolin for value addition	Dr. Sathy Chandrasekhar Regional Research Laboratory Thiruvananthapuram - 695019
62.	SR/S3/ME/06/2006-SERC Engg 15.01.2007	Realization of crack free thick film PZT for the application to piezo contilver fabrication	Dr. N.V. Giridharan Vellore Institute of Technology Vellore - 632014
63.	SR/S3/CE/49/2006 12.01.2007	Investigations on Poly (ionic liquid) based membrane materials	Dr. U.K. Kharul Polymer Science & Engineering Division National Chemical Laboratory Pune - 411008
64.	SR/S3/CE/43/2006 12.01.2007	Control of Reactive Distillation Systems	Dr. Nitin Kaistha Deptt. Of Chemical IIT-Kanpur Kanpur - 208016
65.	SR/S3/EECE/76/2006 16.01.2007	Real-Time Multi Human Tracking & Activity Recognition system	Dr. K. Ramar Deptt. Of Computer Science & Engg. National Engineering College K.R. Nagar Kovilpatti - 628503
66.	SR/S3/CE/38/2006	Study on Free Surface of Concentrated suspensions	Dr. Anurag Singh Deptt. Of Chemical Engineering IIT-Guwahati

	16.01.2007		Guwahati - 781309
67.	SR/S3/EECE/74/2006 16.01.2007	Development of a Generalized Additive Homomorphic Public-Key Cryptosystem for Real World Environment	Dr. M. Padmavathamma Deptt. Of computer Science Sri Venkateswara University Tirupati - 517502
68.	SR/S3/CE/46/2006 16.01.2007	Reactive Separations of Organic & Inorganic Mixtures using Functionalized Polymers	Prof. V.G. Gaikar Deptt. Of Chemical Engineering Institute of Chemical Technology Mumbai - 400019
69.	SR/S3/ME/024/2005 17.01.2007	Nano structured LTCC (Low Temperature Co-fired Ceramic) composite tapes for modern high speed communication integrated circuits	Dr. Manoj Raama Varma Regional Research Laboratory Thiruvananthapuram - 695019
70.	SR/S3/MERC-50/2006 16.01.2007	Studies and algorithms for operational modal analysis of mechanical structures	Dr. S.V. Modak Deptt. Of Mechanical Engineering IIT-Delhi Hauz Khas New Delhi - 110016
71.	SR/S3/CE/44/2006 17.01.2006	Fabric Dyeing by Redox Mediated Environment Frindly Process	Dr. M. Anbu Kulandaimnathan Electro Organic Division Central Electrochemical Research Institute Karaikudi - 630006
72.	SR/S3/CE/40/2006 17.01.2007	High Temperature Gas Phase Synthesis & Characterization of Tailored Ultra Fine Powders	Dr. Virendra Sethi Centre for Environment Science & Engg IIT-Bombay Powai Mumbai - 400076
73.	SR/S3/MERC-34/2006 25.01.2007	Development of automatic engine components using plasma sprayed metal matrix composite	Dr. C.G. Saravanan Deptt. Of Mechanical Engineering Annamalai University Annamalainagar - 608002
74.	SR/S3/EECE/64/2006 29.01.2007	A five level inverter scheme with common mode voltage supression and DC Link Capacitor balancing for Induction Motor Drives fro High Power Applications by cascading two-level and three - level inverter structures	Dr. K. Gopakumar Centre for Electronics Design & Technology IISc Bangalore - 560012
75.	SR/S3/ME/036/2006-SERC Engg 31.01.2007	Studies on ambient and elevated temperature properties of joints of metals prepared by adhesive joining using nanoparticle filled adhesive	Dr. P.K. Ghosh Deptt. Of Metallurgical & Materials Engineering IIT-Roorkee Roorkee - 247667
76.	SR/S3/ME/026/2005-SERC Engg 31.01.2007	An investigation on the technical feasibility of making long multifilamentary MgB2 superconducting wires	Dr. U. Syamaprasad Regional Research Laboratory Thiruvananthapuram - 695019
77.	SR/S3/ME/023/2005-SERC Engg 25.01.2007	Thermal Stress modeling and design of twin roll caster to obtain thin alloy sheet with extremely fine/amorphous structure	Dr. Sudipto Ghosh Deptt. Of Metallurgical & Materials Engineering IIT-Kharagpur Kharagpur - 721302
78.	SR/S3/ME/021/2006-SERC Engg 31.01.2007	Processing of Dense Hydroxyapatite - Zirconia composites with improved mechanical properties	Dr. S. Bhattacharya Deptt. Of Ceramic Engineering National Institute of Technology Rourkela - 769008

79.	SR/S3/ME/16/2005-SERC Engg 31.01.2007	Synthesis & Characterization of Carbon Nanotubes on the Surface of Glass Fiber and its composites in Epoxy Matrix	Dr. Kamal K. Kar Deptt. Of Mechanical Engineering IIT-Kanpur Kanpur - 208016
80.	SR/S3/ME/020/2006-SERC Engg 31.01.2007	Molecularly engineered novel membrane precursors and preparation of novel polymer nanocomposites membranes for selective separation of gas mixtures	Dr. Susanta Banerjee Materials Science Centre IIT-Kharagpur Kharagpur - 721302
81.	SR/S3/ME/019/2006-SERC Engg 31.01.2007	Development of carbon-ceramic composites and the influence of oxidation of elevated temperatures on their properties	Dr. G.S. Bhatia National Physical Laboratory New Delhi - 110012
82.	SR/S3/MERC/43/2006 05.02.2007	Development of Net Shape Manufacturing Process of Structural Advanced Ceramics Metals/Ceramic Matrix Composites through Rapid Prototyping (RP) Integrated Gelcasting	Dr. Biswanath Mondal Centre for Advanced Materials Processing Central Mechanical Engineering Research Institute Durgapur - 713209
83.	SR/S3/MERC-35/2006 03.02.2007	Development of a wireless sensor for monitoring of tumbling mill	Prof. B.K. Mishra Regional Research Laboratory Bhubaneswar - 751013
84.	SR/S3/MERC/12/2006 09.02.2007	Consolidation and Shear Strength Behaviour of Cohesive soils with the Emphasis on its Intermediate Microfabric	Dr. Amitava Prashant Deptt. Of Civil Engineering IIT-Kanpur Kanpur - 208016
85.	SR/S3/MERC/29/2006 21.02.2007	Investigation of Compatibility issues between Indian Cement and water reducing chemical admixtures	Dr. Manu Santhanam Deptt. Of Civil Engineering IIT-Madras Chennai - 600036
86.	SR/S3/MERC-60/2006 17.01.2007	Development of a mixed refrigerant J-T Type Cryocoolers	Dr. Milind D. Atrey Deptt. Of Mechanical Engg. IIT-Bombay, Powai Mumbai - 400076
87.	SR/S3/MERC-46/2006 17.01.2007	Design, fabrication and characterization of microfluidic flow control using magnetic particles	Dr. S.K. Mitra Deptt. Of Mechanical Engineering IIT-Bombay, Powai Mumbai - 400076