



# Board Of Research In Fusion Science & Technology (BRFST)

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## List of NFP projects to be reviewed in March 2012

No.	Project No.	CAT	Title	Name of PI	IPR-Co-od	Status as on Feb 2012
18	NFP-CRYOMAG-03	CRYO	Steady state and dynamic simulation of kW class helium refrigerator/liquefier for superconducting magnets used in superconductors	Prof. Kanchan Chaudhari Cryogenic Engg. Centre, IIT Kharagpur, Kharagpur 721 302	B. Sarkar	Extn 1
19	NFP-DIAG-04	DIAG	Measurement of Plasma Potential in the Tokamak Divertor with Laser Heated Emissive Probe	Dr. Arun K. Sharma, Pandit Deendayal Petroleum University, Raisan Village, Gandhinagar 382007	J. Ghosh	Extn 1
14	NFP-MAT-F10-03	MAT	Research and Development into Borated Steel Machining and HAZ Studies for Shielding Structures in Vacuum Vessel	Prof. K. Prasad Rao Department of Metallurgical and Materials Engineering IIT Madras, Chennai 600036	Ranjana Gangradey	Extn 1
15	NFP-08-MAT-02	MAT	Development of Lithium based ceramic pebbles for the Test Blanket Module	Dr. Ranabrata Mazumder, Dept of Ceramic Eng. NIT Rourkela Rourkela 769008	Paritosh Chaudhuri	Extn 1
16	NFP-08-COMP-01	SIM	Development of tomographic code for image reconstruction from visible radiation from Aditya and SST-1 tokamak plasma	Prof Prabhat Munshi, Nuclear Engineering and Technology Programme IIT Kanpur, Kanpur 208 016	Manoj Gupta, Ajai Kumar	Extn 1
17	NFP-08-RF&MW-03	SIM	Modeling of microwave passive components for high power applications - Phase-2	Prof. S. Sundar Microwave Laboratory, Dept of Physics. IIT Madras Chennai 600036	B K Shukla	Extn 1
20	NFP-BEAM-01	BEAM	Development of a microwave plasma based negative ion source and study of plasma dynamics through a transverse magnetic filter in the negative ion source	Dr. Sudeep Bhattacharjee Department Of Physics, IIT Kanpur Kanpur 208 016	M J Singh Mainak B, Arun K C	Extn 2
3	NFP-CRYO-IND-F12-01	CRYO	Development of Electrical Isolators for Superconducting magnets Fusion devices	Mr. C Chandramouli M/S Uniglass Industries Pvt. Ltd., Sy No. 125/1b, 111/1c, 129/1c, Near KSRTC Depot, Mysore Road, Kengeri, Bangalore - 560060	Rajiv Sharma	New
5	NFP-CRYO-IND-F12-02	CRYO	Development Of Advanced Carbonaceous Micro Fiber Adsorbents And Novel Approach For Their Integration On Cryo Panels	Mr. Swarup Udgata M/S I-DESIGN Engineering Solutions Ltd. 2nd Floor, Nyati millennium, Nagar Road, Viman nagar, Pune 411 014	Ranjana G	New
6	NFP-CRYO-F12-01	CRYO	Development and study of a Cryocooler based Cryosorption pump operating at 4.5K	Prof. S. Kasthuriangan, Centre for Cryogenic Technology, IISC, Bangalore 560012	Ranjana G	New

13	NFP-CRYO-F12-02	CRYO	Thermal Conductivity Studies of Cryopanel Coated with Adhesives and Activated Carbon Adsorbents down to 4.5K	Dr. Upendra Behera Senior Scientific Officer Centre for Cryogenic Technology IISc, Bangalore 560 012	Ranjana G	New
1	NFP-DIAG-IND-F12-03	DIAG	Development of advance Medium Wave IR Camera (3 – 5um) for fusion diagnostic and NDT	Mr. Rajeev Gupta M/s Green Systems, 303, Sriraj Apartment, Vastrapur Road, Ahmedabad-380015	Santosh Pandya	New
2	NFP-ELE-IND-F12-01	ELE	Real Time Data Communication Networks using 10Gbps link	Mr. Rajeev Gupta M/s Green Systems, 303, Sriraj Apartment, Vastrapur Road, Ahmedabad-380016	Haresh Dave	New
11	NFP-ELE-F12-01	ELE	Prediction and Control of Plasma Layers in a Fusion Reactor Using Hybrid PSO-ANFIS	Prof. Sakuntala Manapatra Dept. of ETC, Trident Academy of Technology F-2/A, Chandaka Industrial Estate, Near Infocity, Bhubaneswar 751024	D. Raju	New
4	NFP-MAT-F12-02	MAT	Development of tungsten coated tiles and their characterization under plasma operations in ADITYA upgrade tokamak and in SST-1 diverter tokamak	Dr. Uttam Sharma, Department of Physics, ShriVaishnav Institute of Technology and Science, Baroli, Sawner Road, Indore 452221	Joydeep Ghosh Amulya Sanyasi	New
9	NFP-MAT-F12-03	MAT	Investigation of interaction of tungsten (diverter material) with nitrogenous species in presence of H2 and D2 in for nitrogen as radiative mantle for understanding the physics of divertor detachment	Dr. Suraj Kumar Sinha Department of Physics, Pondicherry University, R.V. Nagar, Kalapet, Pondicherry 605014	N Ramsubramani	New
10	NFP-MAT-F12-04	MAT	Development of lithium orthosilicate ceramic pebbles using one dimensional nanofiber with excess lithium concentration for the Tritium breeding in Test Blanket Module	Dr. P. Muruganaran Department of Chemistry Rajiv Gandhi College of Engineering & Technology, Kilumambakkam, Pondicherry - 607 402	P M Raole	New
7	NFP-NUCL-F12-01	NUCL	Fabrication and characterization of a hybrid nanodosimeter to measure Neutron field and its evaluation to Radiation Biology	Dr. C. S. Sudhakar, Department of Medical Physics, School of Physical Sciences, Bharathiar University, Coimbatore 641 046	CVS Rao	New
8	NFP-NUCL-F12-02	NUCL	Reliability studies of solid-state X-Ray detectors in high-energy radiation (ITER-like) environment	Dr. N. V. L. Narasimha Murty School of Electrical Sciences IITBhubaneswar, Bhubaneswar 751013	CVS Rao	New
12	NFP-SIM-F12-01	SIM	Numerical Investigation of 3-D Unsteady Fluid Flow and Conjugate Heat Transfer Characteristics in a Wavy Channel based PCHE Model	Dr. Atul Sharma Department of Mechanical Engineering IIT Bombay, Powai, Mumbai 400076	Paritosh C	New
21	NFP-IND-RF-F11-04	RF	Development Of Fabrication And Measurement Techniques For Cavity For Gyrotron Assembly	Mr. Satya Swarup Udgata M/S I-DESIGN Engineering Solutions Ltd. 2337/1,Pune Trade Center, Wagholi ,Pune -412207	Ravi Prakash	Y1/1
22	NFP-MAT-F11-01	MAT	Influence of SiC and Gr on structural modification, wear resistance and Mechanical properties of Aluminium Alloy A356 Metal Matrix Composite	Mohan B Vanarotti. Assistant Professor, Department of Mechanical Engineering, Faculty of Engineering Christ University, Bangalore – 560060	Shrishail B. Padasalagi	Y1/2
23	NFP-MW-F11-01	RF	Development Of High Temperature Black Body Source For Calibrating Microwave Radiometer - Phase 2	Dr. V. Subramanian Department of Physics, IIT Madras Chennai 600 036	S K Pathak	Y1/2
24	NFP-IND-RF-F11-05	RF	Development of a method for fabrication of long (more than one meter) corrugated circular waveguides	Mr. H.B.Sangani Motif Engineers Pvt. Ltd. Plot No.390 , Road No.9 , Kathwada GIDC , Ahmedabad	H B Pandya	Y1/2
28	NFP-BASIC-F11-01	BASIC	Investigation of chaotic behaviour in ion – acoustic/ ionization waves	Dr. P.J. Kurian Reader, Dept. of Physics S.B. College, Changanacherry, Pin - 686 101	Prabal C	Y1/3

29	NFP-DIAG-F11-03	DIAG	Investigation and quantification of deposited materials on tokamak vacuum vessel wall, windows and limiter using Laser Induced Breakdown Spectroscopy (LIBS).	Prof. Awaadresh Kumar Rai Department of Physics, University of Allahabad, Allahabad, 211002	Ajai Kumar Vijay Bedakihale	Y1/3
25	NFP-ELE-F11-01	ELE	FPGA based standalone tunable Fuzzy Logic Controller module	Dr Sarat K. Patra, Professor Dept of Electronics and Communication Engg. NIT, Rourkela – 769008	Jignesh Patel	Y1/3
26	NFP-MAT-F11-02	MAT	Characterization and development of dissimilar metal joints by pulsed Nd: YAG laser welding	Dr. Susanta Kumar Sahoo Department of Mechanical Engineering, N.I.T., Rourkela-769008,	Arun KC Vijay B	Y1/3
27	NFP-SIM-F11-01	SIM	Numerical prediction of high heat flux to plasma facing material using thermal plasma jet impingement model	Dr. K. Ramachandran Professor & Head - Centre for Research in Thermal Management, Karunya University Coimbatore – 641 114	G Ravi Bala Mukherjee	Y1/3
32	NFP-DAQ-A09-01	DAQ	Sensor Network testbed for Tokamak environment	Prof. Prabhat Ranjan DAII-CT, Near Indroda Circle, Gandhinagar 382 007	D. Raju	Y2/2
31	NFP-DIAG-F10-02	DIAG	Construction of a transverse cooled Li - atomic beam for plasma diagnostics	Dr. Ashok Vudayagiri, Asst. Prof., School of Physics, University of Hyderabad, Hyderabad 500046	Ajai Kumar	Y2/2
30	NFP-MAT-F10-01	MAT	Synthesis and thermo-mechanical characterization of nanoceramic Li <sub>2</sub> TiO <sub>3</sub> by high energy Ball Mill For Blanket Applications	Dr. S. K. S. Parashar Kalinga Institute Of Industrial Technology, KIIT University, Bhubaneswar -751024	Paritosh Chaudhuri	Y2/2
34	NFP-BASIC-F10-01	BASIC	Interaction of hydrogen with graphite tiles in a plasma environment and study of spatial & temporal evolution of hydrogenated carbonaceous dust formations	Dr. M. Bose, Department of Physics, Jadavpur University, Kolkata 700 032.	S Mukherjee	Y2/3
33	NFP-DIAG-F10-01	DIAG	Study Of Fragmentation Of Molecules In Edge-Plasma Relevant Ion-Surface Interaction	Prof Rama Shanker Dept. Of Physics, BHU, Varanasi 221005	Ajai Kumar	Y2/3
35	NFP-MAT-02	MAT	Preparation of tungsten carbide cast for neutron sheilding in the fusion reactor wall	Dr. Nayak B. B. Scientist, Advance Materials Technology Deptt., IMMT Bhubaneshwar 751 013	CVS Rao	Y3/3
36	NFP-08-BEAM-02	MAT	Life estimation and microstructural damage of irradiated and unirradiated Cu-Cr-Zr alloy	Prof. K. K. Ray Dept. of Metallurgical & materials Engineering, IIT Kharagpur, Kharagpur 721 302	Arun KC C. Rotti	Y3/3