List of the Completed Projects

Project Number	Duration (Yrs)	Title of Research Project	Summary of findings published in
1/98	1.5	Determination of moisture in rubber insulators used in rocket motors *Dr (Mrs) RC Aiyer, Dept of Physics, UoP*	Research Project Compendium – 2006-07
2/98	2	Development of fibre optic microstrain sensors for low strain measurement *Dr AD Shaligram /Dr (Mrs) DC Gharpure, Dept of Electronic Sciences, UoP*	Research Project Compendium – 2006-07
3/98	3	Nanoparticles by sol-gel method *Dr (Mrs) SK Kulkarni, Dept of Physics, UoP*	Research Project Compendium – 2006-07
4/98	3	Study of the irradiation effects of Mev energy electrons on semiconductor devices and plastic materials *Prof VN Bhoraskar/Dr SD Dhole, Dept of Physics, UoP*	Research Project Compendium – 2006-07
5/00	2	Forecasting applications of the microwave data from AMSU on board NOAA satellite *Prof RN Karekar/Wing Cdr DM Puranik, DASS, UOP*	Research Project Compendium – 2006-07
6/00	3	Study of atmospheric boundary layer over Sriharikota *Prof PN Sen, Dr S Sivramkrishnan, DASS, UoP & Dr. GV Rama, ISRO*	Research Project Compendium – 2006-07
7/01	3	Development of low energy electron beam facility for testing surface charge monitor (SCM) payload of G SAT-II *Prof VN Bhoraskar, Dr (Mrs) SV Bhoraskar/Dr SD Dhole, Dept of Physics, UoP*	Research Project Compendium – 2006-07
8/00	2	Development of regional atmospheric model to predict weather and upper wind field over Sriharikota range *Prof KC Sharma, Dr T Venugopal, DASS, UoP & Dr. GV Rama, ISRO*	Research Project Compendium – 2006-07

9/99	2	Studies on origin of extra chromosomal DNA (plasmids) in bacterial population of preantibiotic area: A probable clue for origin of plasmid DNA and its correlation to the origin of life *Dr BA Chopade, Dept of Microbiology/Dr SB Khadikikar, Dept of Physics, UoP*	Research Project Compendium – 2006-07
10/99	2	Ammonium perchlorate biodegradation by eco-friendly approach *Dr S V Ghole/ Dr S G Joshi, Dept of Chemistry, UoP*	Research Project Compendium – 2006-07
11/01	2	Application of remote sensing and GIS technology in crop inventory in a mixed cropping region, Karveer Tehsil, Kolhapur district, Maharashtra *Dr(Mrs) Vrishali Deosthali, Dept of Geography, UoP*	Research Project Compendium – 2006-07
12/02	1	Study of superfine Fe_2O_3 particles *Dr(Mrs) SS Joshi, Dept of Chemistry, UoP*	Research Project Compendium – 2006-07
13/02	1	Soft solution processing-a new route to synthesize patterned ceramics *Dr(Mrs) AA Athawale, Dept of Chemistry, UoP*	Research Project Compendium – 2006-07
14/02	1	Establishment of information resource exchange network for rural development *Dr K Sadanand Nair, Dept of Anthropology, UoP*	Research Project Compendium – 2006-07
15/02	1	Electronic structure and physics and chemistry of small clusters *Dr DG Kanhere, Dept of Physics, UoP*	Annual Report – 2008-09
16/02	1	Feasibility study of Non-destructive microwave complex permittivity measurement technique for ISRO applications *Dr(Mrs) Kalpana Joshi, SP College, Pune*	Research Project Compendium – 2006-07
17/02	1	Feasibility of Time domain on-line/off-line moisture measurement using optional electromagnetic software technique-ISRO DRDO Application *Dr(Mrs) Kalpana Joshi, S P College, Pune*	Research Project Compendium – 2006-07
18/02	1	A1-Li alloys for cryo engine propellant tank	Research Project

		Prof SP Butee, Govt College of Engg, Pune	Compendium – 2006-07
19/02	1	Metal foams for aerospace applications *Prof SG Sane, Govt College of Engg, Pune*	Research Project Compendium – 2006-07
20/02	1	Application of artificial neural network (ANN) to the analysis of weather using images in microwave from AMSU on board NOAA satellite-a feasibility study *Dr Ranjana Abhang, Abasaheb Garware College, Pune*	Research Project Compendium – 2006-07
21/02	3	Conducting polymer coatings for corrosion protection of steels *Prof PP Patil, North Maharashtra University & Prof SA Gangal, UoP*	Research Project Compendium – 2006-07
22/02	3	Application of Raman Spectroscopy for the characterization of aerogels *Dr VM Harpale, Ahmednagar College, Ahmednagar*	Research Project Compendium – 2006-07
23/02	1	Process development for preparation of nano sized CdS powder by organo metallic routes for solar cell application *Dr P K Khanna (C-MET)/ Prof S K Kulkarni UoP*	Research Project Compendium – 2006-07
24/03	2	Cloning and sequencing of plasmid encoded antibiotic and metal resistant genes from bacterial population of preantibiotic era: A probable clue for the origin of plasmid DNA and its correlation to the origin of life *Prof BA Chopade, Dept of Microbiology, UoP*	Research Project Compendium – 2006-07
25/03	3	Investigation into rules governing the transition from the pre-biotic to the biotic based on polymeric behavior of macromolecules and its possible reflection in the genetic code *Prof V Sitaramam, Dept of Biotechnology, UoP*	Research Project Compendium – 2006-07
26/03	1	Automatic target recognition and tracking *Ms MS Puranik, Dept of Instrumentation Science, UoP*	Research Project Compendium – 2006-07
27/03	1	A study of weather over Himalayan terrain using microwave data from AMSU-B	Research Project Compendium – 2006-07

		Prof RN Karekar/Wing Cdr DM Puranik, DASS, UoP	
28/03	1.5	Development of flow meters and their application in flow controls *Mrs PU More, Dept of Instrumentation Science, UoP*	Research Project Compendium – 2006-07
29/03	1	Implementation of the designed HRPT receiver for NOAA satellites *Prof SA Gangal, Dept of Electronic Sciences, UoP*	Research Project Compendium – 2006-07
30/03	2	New chemical routes towards synthesis of nanopiezoelectrics *Dr (Mrs) Anjali Athawale, Dept of Chemistry, UoP*	Research Project Compendium – 2006-07
31/03	2	Development of potent bacterial strain for bioremediation of Ammonium Perchlorate for an eco-friendly end product *Dr VS Ghole, Dept of Chemistry, UoP*	Research Project Compendium – 2006-07
32/03	1	Study of delay in solid propellant ignition as a function of different humidity and temperatures *Prof (Mrs) RC Aiyer, Dept of Physics, UoP*	Research Project Compendium – 2006-07
33/03	1	Feasibility study of low loss microwave filter using suspended strip lines *Prof (Mrs) RC Aiyer, Dept of Physics, UoP*	Research Project Compendium – 2006-07
34/03	1	Application of artificial neural network (ANN) to mesoscale meteorological studies using multispectral visible/ microwave data from satellite like NOAA *Dr (Mrs) DC Gharpure, Dept of Electronic Sciences, UoP*	Research Project Compendium – 2006-07
35/03	1	Development of Cu-8% Cr-4% Nb alloy for rocket engine combustion chamber *Prof NB Dhokey, Govt College of Engg, Pune*	Research Project Compendium – 2006-07
36/03	1	Oxide dispersion in copper matrix composite for elevated temperature application *Prof NB Dhokey, Govt College of Engg, Pune*	Research Project Compendium – 2006-07
37/03	3	Role of quantum dots as burn rate catalysts in	Research Project

		combustion mechanism of rocket propellants *Dr (Mrs) SS Joshi, Dept of Chemistry, UoP*	Compendium – 2006-07
38/04	2	Studies on the phase stabilization of Ammonium Nitrate through crystal modification and its application as an oxidizer of composite solid propellants *Dr (Mrs) SS Joshi, Dept of Chemistry, UoP*	Research Project Compendium – 2006-07
39/98	3	Optical study of atmospheric aerosols at Pune *Prof V V Agashe/ Dr G R Aher, Dept of Physics, UoP*	Research Project Compendium – 2006-07
40/04	1	Synthesis of bulk and thin films of diluted magnetic semiconductors and investigation of their electrical, optical and magnetic properties for various sensing applications *Dr (Mrs) Sangeeta N Kale, Fergusson College, Pune*	Research Project Compendium – 2006-07
41/04	1	Synthesis of elastomer nanocomposites for potential use at cryogenic temperature conditions *Prof Satyendra Mishra, North Maharashtra University, Jalgaon*	Research Project Compendium – 2006-07
42/04	1	Behavior of fiber reinforced high strength concrete under shear and tension *Prof B G Birajdar/ Mrs S N Madhekar (Dr A S Pant) PIET, Pune*	Annual Report 2007-08
43/04	1	Feasibility study of phased array fed reflector antennas for satellite communication *Prof Kamble Ashok, Modern College of Arts, Commerce and Science, Pune*	Research Project Compendium – 2006-07
44/04	1	Materials for magneto elastic sensors for displacement/ deflection transducers *Prof CS Garde, VIIT, Pune*	Research Project Compendium – 2006-07
45/04	1	Study of single event effects on short channel and highly packed memory devices using heavy ion irradiation *Prof SD Dhole, Dept of Physics, UoP*	Research Project Compendium – 2006-07
46/04	1	Feasibility study of diluted magnetic semiconductor quantum dots *Dr Shailaja Mahamuni, Dept of Physics, UoP*	Research Project Compendium – 2006-07

47/04	3	Modeling spatio-temporal changes in morphology and tectonic elements along with seismicity in the NE regions of India, with the help of remote sensing techniques *Prof RK Sukhatankar, DASS, UoP*	Research Project Compendium – 2006-07
48/04	2	A dynamic climatological study of precipitation over Maharashtra using conventional and remote sensed data *Dr K C Sinha Ray, DASS, UoP*	Research Project Compendium – 2006-07
49/05	1	Nanoparticle polymer resistive composites *Dr SK Kulkarni, Dept of Physics, UoP*	Research Project Compendium – 2006-07
50/05	1	High temperature oxidation study of plasma sprayed Yttria stabilized zirconia thermal barrier coatings *Prof S P Butee, Govt college of Engg, Pune*	Annual Report 2007-08
51/05	1	Perovskite nanoparticles as sensors for pollutant gases *Dr (Mrs) Anjali Athawale, Dept of Chemistry, UoP*	Research Project Compendium – 2006-07
52/05	1	Simulation of optical properties of metal nanoparticles polymer composites *Dr Suresh Gosavi, Dept of Physics, UoP*	Annual Report 2009-10
53/05	1	Analysis of residual stresses in TIG welded AA2219-T87 aluminum alloy for aerospace application. *Prof S P Butee, Govt College of Engg, Pune*	Annual Report 2007-08
54/05	1.5	Fabrication of sensitive hand held magnetometer and its use for surveying near Pune geomagnetic rock system *Dr (Mrs) SK Adhi, Dept of Instrumentation Science, UoP*	Annual Report 2009-10
55/05	1	Integrated approach to teaching Programming and Mathematics : Development of study material with accompanying software *Mr Rustom Mody & Dr Jayant Kirtane, Dept of Computer Science, UoP*	Annual Report 2009-10
56/05	1	Application of Artificial Neural networks for Non	Research Project

		Destructive fault detection *Dr (Mrs) DC Gharpure, Dept of Electronic Sciences, UoP*	Compendium – 2006-07
57/05	1	Prototyping microwave network analyzer attachment for the Non-destructive microwave complex permittivity measurement of materials *Dr Kalpana Joshi, S.P. College, Pune*	Annual Report 2007-08
58/05	2	Doppler shift flow meters for liquid and gases *Mrs Pooja More, Dept of Instrumentation Science, UoP*	Annual Report 2011-12
59/05	2	Development of Cu-8% Cr-4% Nb alloy and Oxide dispersion copper composite *Prof NB Dhokey, Govt. College of Engg, Pune*	Annual Report 2007-08
60/05	2	Studies on magnetic semiconductors for optical and/ magnetic sensors *Dr (Mrs) Shailaja Mahamuni, Dept of Physics, UoP & Dr Sangeeta N Kale, Fergusson College, Pune*	Research Project Compendium – 2006-07
61/05	2	Development of low cost NLO Chromophore doped polymer (Guest Host System) for Optoelectronics applications *Dr UP Mulik, C-MET, Pune & Dr (Mrs) RC Aiyer, Dept of Physics, UoP*	Annual Report 2008-09
62/05	2	Radio meteor shower observations from the Indian sub continent *Dr (Ms) Raka Dabhade, Fergusson College, Pune*	Annual Report 2007-08
63/05	1.5	Study of free space laser communication using semiconductor laser diode at 1 MBPS duplex with the target distance of 500/1000 meters *Dr (Mrs) SK Adhi, Dept of Instrumentation Science, UoP*	Annual Report 2009-10
64/05	1.5	Frequency allocation in mobile communication using genetic algorithms *Mrs AV Kulkarni, D. Y. Patil College of Engg, Akurdi, Pune*	Annual Report 2007-08
65/05	1.5	Fabrication of narrow bandwidth low loss microstrip filter *Dr (Mrs) RC Aiyer, Dept of Physics, UoP*	Annual Report 2007-08

66/05	2	Optical wave guide based CO-CO_2 sensors using biomaterials *Dr (Mrs) Deepti Deobagkar, Dept of Zoology & Dr (Mrs) RC Aiyer, Dept of Physics, UoP*	Annual Report 2008-09
67/05	2	Study of the apparent convective cloud and cloud systems motion during the southwest monsoon season using the Meteosat-5 half-hourly infrared images *Wing Cdr DM Puranik, DASS, UoP*	Annual Report 2007-08
68/05	1.5	Development of cloud climatology and preparation of a cloud atlas on the analysis of microwave images from AMSU on board NOAA satellites using Artificial Neural networks (ANN) technique *Dr (Ms) Ranjana Abhang, Garware College, Pune*	Annual Report 2008-09
69/05	2	Modeling sorghum growth curve using IRS P4 OCM-Land data *Dr (Mrs) Vrishali Deosthali, Dept of Geography, UoP*	Annual Report 2007-08
70/06	3	Irradiation effects of electrons, protons and UV radiation on the optical coatings and thin films *Prof VN Bhoraskar/Dr SD Dhole, Dept of Physics, UoP*	Annual Report 2009-10
71/06	2.5	Gas sensors composed of maghemite and magnetite nanoparticles *Dr (Mrs) Anjali Athawale, Dept of Chemistry, UoP*	Annual Report 2008-09
72/06	2	Design of a reconfigurable embedded system platform for data collection *Dr NM Kulkarni, Dept of Electronic Science, Fergusson College, Pune, Dr A D Shaligram (Co-PI) and Dr D C Gharpure (Co-PI), Dept of Electronic Sciences, UoP*	Annual Report 2008-09
73/06	3	Crystal habit modification and morphology control of Ammonium Nitrate (AN) and Ammonium Perchlorate (AP) by crystal habit modifiers *Dr (Mrs.) S.S.Joshi, Dept of Chemistry, UoP*	Annual Report 2008-09
74/06	1	Geo-environmental study of urban/rural interface of NW part of Pune Metropolis, Maharashtra	Research Project Compendium – 2006-07

		Dr Bhavana Umrikar, Dept of Geology, UoP	
75/06	2	Investigation of catalytic efficiencies by studying structural and thermal properties of quantum dots *Dr (Mrs) SS Joshi, Dept of Chemistry, UoP*	Annual Report 2007-08
76/06	2	Identification of suitable sites for Jatropa plantation in Maharashtra using remote sensing and GIS *Dr (Mrs) Vrishali Deosthali, Dept of Geography, UoP*	Annual Report 2009-10
77/06	2	Application of ANN for defect detection in NDT images *Dr. (Mrs.) DC Gharpure, Dept of Electronic Sciences, UoP*	Annual Report 2009-10
78/06	2	Development of a sustainable house hold health-food production system by using Sprirulina and promotion of the developed technology with the help of Edusat programme of ISRO *Dr. T.D. Nikam, Dept of Botany, UoP*	Annual Report 2009-10
79/07	2	Exploring semiconductor quantum dots for solar cell applications *Dr Shailaja Mahamuni, Dept of Physics, UoP*	Annual Report 2009-10
80/07	3	Biodiversity assessment of tropical midges using geo-biological parameters and remote sensing techniques *Dr B B Nath (PI), Dept of Zoology, UoP & Dr DC Meshram (Co-PI), Dept of Geology, UoP*	Annual Report 2009-10
81/07	2	Design and development of a thermal gradient diffusion chamber for measurement of ice nuclei in the atmosphere *Dr P Pradeep Kumar, DASS, UoP*	Annual Report 2009-10
82/07	2	Application of RS and GIS techniques to evaluate effects of landuse- landcover on ravination along Pravara Basin, Maharashtra *Dr Veena U. Joshi, Dept of Geography, UoP*	Annual Report 2009-10
83/07	3	Reconstruction of late quaternary fluvio-sedimentary response of Kaveri and Palar Rivers: based on chronostratigraphy, digital geomorphometry and remote sensing analysis *Prof Vishwas S. Kale (PI), Dept of Geography,*	Annual Report 2010-11

		UoP	
84/07	3	Design, development, characterization, analysis and fabrication of high response hydrogen leak sensors *Mrs R P Mudhalwadkar (PI), Govt. College of Engineering, Pune*	Annual Report 2009-10
85/07	3	Preparation of micro crystalline powders of $ZnNb_2O_6$, Mg Nb_2O_6, $MgTa_2O_6$, $ZnTaO_3$, $MgTaO_3$ for microwave dielectric applications *Dr MY Khaladkar (PI), Govt. College of Engg., Pune*	Annual Report 2009-10
86/07	2	A study of geomorphic characteristics and structural elements in select seismically active regions of India; with the help of remote sensing techniques *Dr P Pradeep Kumar, Prof R K Sukhtankar & Dr S K Guha, DASS, UoP*	Annual Report 2009-10
87/07	3	Development and analysis of MOS device with embedded nanocrystals of silicon dioxide layer for enhancement in charge transfer rate *Prof SV Ghaisas, Dept of Electronic Sciences, UoP*	Annual Report 2011-12
88/07	3	Synthesis and characterization of composite of single walled carbon nanotubes with Ag by Electrochemical methods *Dr Santosh K Haram, Dept of Chemistry, UoP*	Annual Report 2009-10
89/07	2	Simulating urban growth using GIS&RS- a case study of Pune city, India *Dr Vijaya Pradip Khairkar, Dept of Geography, UoP*	Annual Report 2009-10
90/07	3	Synthesis of ZnS thin film by modified spray pyrolysis method and study of its physical properties for optical sensor and solar cell applications *Prof R V Zavare (PI), & Mr S A Arote (Co-PI), Sangamner college, Sangamner*	Annual Report 2011-12
91/07	1	Feasibility study of tailoring Diluted Magnetic Semiconductor (DMS) materials with transition temperature (T_c) around room temperature	Annual Report 2009-10

		Dr (Mrs) Anjali Kshirsagar, Dept of Physics, UoP	
92/07	2	Biodiversity and gravitational studies of rotifer fauna from few freshwater bodies around Pune, Maharashtra *Dr Kalpana Pai, Dept of Zoology, UoP*	Annual Report 2010-11
93/07	2	Autonomous navigation system for Low Earth Orbit (LEO) satellite using global navigation satellite system (GNSS) *Prof S A Gangal (PI) & Dr Suwarna Datar, (Co-PI), Dept of Electronic Sciences, UoP*	Annual Report 2011-12
94/07	3	Study of temporal and spacial distribution of seaweeds for their sustainable utilization using ground based and satellite borne systems *Dr BB Chaugule, (PI), Dept of Botany, UoP* *Dr DB Jadhav, (Co-PI), IITM, Pune*	Annual Report 2011-12
95/07	1	Design and simulation of Satellite-borne, high-resolution interferometric measurement of mansoon Rain rate (SHIMMER) *Dr D M Puranik, DASS & Prof RN Karekar, UoP*	Annual Report 2009-10
96/08	2	Gas sensing applications of Metallophthalocyanines *Datir Ashok Maruti, Arts, Commerce and Dadasaheb Rupwate Science College, Akole, Dist. Ahmednagar*	Annual Report 2010-11
97/08	3	Synthesis of undoped and Cd, Al, In, B doped nanostructures of ZnO by intermittent chemical spray pyrolysis for optoelectronic and gas sensing applications *Mr C M Mahajan, Engineering Sciences Department, VIT, Pune*	Annual Report 2011-12
98/08	2	Application of GIS-RS in mapping and conservation of threatened medicinal plant species from Northern Western Ghats of India *Dr Ankur Patwardhan, Dept. of Biodiversity, Garware College, Pune*	Annual Report 2009-10
99/08	3	Studies on preparation and photo catalytic applications of Nanocrystalline TiO_2 and its nanocomposites *Dr (Mrs) SS Joshi, Dept of Chemistry, UoP*	Annual Report 2011-12

100/08	3	Development and characterization of thin film solid electrolyte cells as voltage source, temperature, pressure and gas sensor *Dr SB Iyyer, Dept of Physics, Ahmednagar College*	Annual Report 2011-12
101/08	2	Photographic observations of meteor showers *Dr Ms Raka V Dabhade, Fergusson College, Pune*	Annual Report 2011-12
102/08	2	Design, development and realization of gasifier Cookstoves *Shri SK Babar, DY Patil College of Engineering, Akurdi, Pune*	Annual Report 2009-10
103/08	3	Developing magnetic tracers for anthropogenic dust-aerosol particulate loading in the Metropolitan regions of Mumbai and Pune in Maharashtra *Dr S J Sangode, Dept of Geology, UoP*	Annual Report 2011-12
114/09	1	Study of Si quantum dots for solar cell applications *Dr Shailaja Mahamuni, Dept of Physics, UoP*	Annual Report 2011-12