



**47 Research Projects with a total outlay of Rs. 21.13 Crores have been sanctioned to the Faculty Members of
SRM University-AP during 2017 – till date**

S. No.	Title of the R&D project	Name of the PI and CO-PI	Department	Funding Agency	Sanction Number	Sanctioned Amount (in Rs. Lakhs)	Duration
1	Direct removal of multidrug resistance bacteria out of blood	Dr Anil K Suresh	Department of Biological sciences	DBT-Ramalingaswamy Fellowship	DBT/RLF/2012	98.00	2014-19
2	Metal-catalyzed new cross-coupling reactions via C-H bond activation and Metallacycle formation	Dr. S. Mannathan	Department of Chemistry	DST-INSPIRE	DST/INSPIRE/04/2015/002987	55.00	2016-21
3	Elucidating the role of NHRs in C elegans aging and reproduction	Dr. Manjunatha Thondamal	Department of Biological sciences	DST- INSPIRE	DST/ INSPIRE/ 04/2015/002416	96.00	2016-21
4	Mechanistic of CO Oxidation on Metal Free Catalyst and Property Package	Prof. Ranjit Thapa	Department of Physics	DST-SERB	SERB/EMR/2016/004689	35.45	2017-21
5	Theoretical Insights on the critical factors that influence the performance of non-fullerene organic solar cells	Dr Mahesh Kumar Ravva	Department of Chemistry	DST- INSPIRE	DST/INSPIRE/04/2017/001393	104.00	2017-22
6	Studies upon Modification of High Entropy alloy for Thermal Barrier Coating Applications	Dr Sheela Singh	Department of Mechanical Engineering	DST- SERB	EMR/2016/001066	52.20	2017-20
7	Development of liquid metal processing route for closed cell magnesium foam	Dr Vinod Kumar	Department of Mechanical Engineering	DST- SERB	EMR/2016/006207	66.00	2017-20

8	Microbiome mediated fate and transformation of man released nano-pollutants	Dr Anil K Suresh	Department of Biological sciences	DST- SERB	SERB/ECRA/2018/0000339	46.73	2018-21
9	Probing Charge Transport in Molecular Junctions with Impedance Spectroscopy and Transition Voltage Spectroscopy Approach	Dr Sabyasachi Mukhopadhyay	Department of Physics	DST- SERB	SERB/ECR/2017/001937	48.30	2018-21
10	Elucidating the role of FATP family of fatty acid transporters in C. elegans aging	Dr. Manjunatha	Department of Biological sciences	DST- SERB-ECR	ECR/2017/000213	44.53	2017-20
11	Tailoring of catalytic surfaces for CO ₂ reduction	Dr. Mallikarjuna Rao Motapothula	Department of Physics	DST- INSPIRE	DST/INSPIRE/04/2017/001392	102.00	2017-22
12	Evaluation of intrinsic piezoelectric coefficients and strain engineering near the morphotropic phase boundary in Pb-free oxides	Dr. Pranab Mandal	Department of Physics	DST- SERB	ECR/2018/001252	48.80	2019-22
13	First principles identification of descriptor for carbon based catalyst	Prof. Ranjit Thapa	Department of Physics	DAE-BRNS (YSRA)	37(2)/20/14/2018-BRNS/37144	28.15	2018-21
14	Development of Nano-Engineered Blue-Emitting Blinking Suppressed 'Giant' Quantum Dots	Dr. Nimai Mishra	Department of Chemistry	DST-TARE	TAR/2018/000732	18.30	2018-20
15	Ion Beam Modification of Two Dimensional(2D) Layered Materials Heterostructures: Defect Engineering and Device Performances	Dr. Jatis Kumar Dash	Department of Physics	UGC-DAE	UGC-DAE-CSR-KC/CRS/19/IBMS04/1005/1036	25.00	2019-22
16	Vector Vortex Beams and their Scattering for Communication Applications	Dr Gangi Reddy Salla	Department of Physics	DST-SRG	SERB/SRG/2019/000857	26.17	2019-21

17	Development of Fast Fluoride Ion Conducting Solid Electrolytes for Rechargeable Solid State Fluoride Ion Batteries	Dr Laxminarayana Patro	Department of Physics	DST-SRG	SRG/2019/000767	31.60	2019-21
18	Characterization of graphs by spectra of its distance and resistance matrix and some problems related to matrix theory and graph theory	Dr. Fouzul Atik	Department of Mathematics	DST-SRG	SRG/2019/000839	12.90	2019-21
19	Methane Emission from Tropical Aquatic Networks: Elucidating the underpinning mechanisms and landscape-level drivers	Dr. Shoji D. Thottathil	Department of Environmental Science	DST-SRG	SRG/2019/000539	30.22	2019-21
20	Design and Development of 'Fast Charging' Next-Generation Battery System and its Advanced Electronic Diagnostics	Dr. Sujith Kalluri	Department of Electronics and Communication Engineering	DST-SRG	SRG/2019/000194	30.00	2019-21
21	A scalable Secure Architecture Model for Privacy and Performance in IoT	Dr Ashok Kumar Pradhan	Department of Computer Science	DST-TARE	TAR/2019/000286	18.3	2019-21
22	Development of novel methods for deconvolution and denoising of seismic reflection data	Dr. Karthikeyan	Department of Electronics and Communication Engineering	DST-SERB	SERB/CRG/2019/001234	25.00	2019-22
23	Jumbo-phage as a model for ancient cell organization	Dr. Sutharsan Govindarajan	Department of Biological sciences	DBT-Wellcome Trust	IA/E/19/1/504958	124.00	2021-25
24	Mathematical analysis and Adjoint Based Stability for a Coupled Convection-Diffusion equation in Miscible Displacement	Dr. Tapan Kumar Hota	Department of Mathematics	DST-SRG	SRG/2020/000713	14.63	2021-23

25	Chemical modulator based microalgal biorefinery for the production of biofuels and bioproducts	Dr. Imran Y Pancha	Department of Biological sciences	DST-SRG	SRG/2020/000165	27.00	2021-23
26	Targeting Kennedy pathway of cellular phosphatidylethanolamine biosynthesis as a common therapeutic strategy against protozoan parasites like Leishmania donovani, Trypanosoma brucei and Entamoeba histolytica	Dr. Writoban Basu	Department of Biological sciences	DST-SRG	SRG/2020/001421	26.34	2021-23
27	Intelligent Disturbance Observer based Adaptive Control of DC-DC Power Converter for Nonlinear Loads	Dr Tousif Khan	Department of EEE	DST-TARE	TAR_2020_000386	18.30	2021-23
28	Mechanistic understanding of bacterial cytoskeleton inhibition by antibiotics and novel bacteriophage proteins	Dr. Sutharsan Govindarajan	Department of Biological sciences	DST-CRG	CRG_2020_003295	52.00	2021-23
29	Wall effects in Shock wave boundary layer interactions	Dr Satya Pramod Jammy	Department of Mechanical Engineering	DST-CRG	CRG/2020/003859	39.00	2021-24
30	Understanding the molecular basis for the extreme differential level of expression of genes from human and animal rotaviruses in gene-transfected cells: Implications for improving the growth of human vaccine strains	Prof. Durga Rao	Department of Biological sciences	DBT	BT/PR32884/MED/29/1474/2019	110.52	2021-24

31	Imprints of Physics Beyond the Standard Model at the LHC and Future Colliders	Dr Amit Chakraborty	Department of Physics	DST-INSPIRE	DST/INSPIRE/04/2018/002972	35.00	2019-24
32	Catalysts for CO ₂ Reduction to C ₂ Product: Descriptor to Database	Prof Ranjit Thapa and Dr S. Biswas	Department of Physics	DST-NSM	DST/NSM/R&D_HPC_Applications/2021/19	28.02	2021-23
33	Developing Structure-Morphology- Performance Relationships in Organic Solar Cells	Dr Mahesh Kumar Ravva	Department of Chemistry	DST-NSM	DST/NSM/R&D_HPC_Applications/2021/16	19.92	2021-23
34	Development of Closed Cell Gold Foam for Jewellery Applications	Dr G S Vinodh Kumar	Department of Mechanical Engineering	Tanishq Jewellers (TITAN Company Ltd)	IN-KA01404072207184 T	29.60	2021-22
35	A Halide Perovskite Based Photoanode For Oxygen Evolution Reaction Using A Molecular Diode in a Hybrid Nanometer Scale Protection Layer	Dr. Sabyasachi Mukhopadhyay (Co-PI)	Department of Physics	DST- Bilateral Project with Israel and IIT Bhilai	DST/INT/ISR/P-28/2020(G)	-	2021-24
36	SRM-Amara Raja Center for Energy Storage Devices	Dr. Pardha Saradhi Maram (Chemistry), Dr. Laxminarayana Patro (Physics), Dr. Sujith Kalluri (Electronics Engg.), Dr. Surfarazhussain S Halkarni (Mechanical Engg.), Dr. Jayaprakash Sharma P (Mechanical Engg.), Dr. Tousif Khan N (Electrical Engg.)		Amara Raja Center	-	180.00	2020-25
37	Photoredox and Nickel Dual Catalyst for Reductive Coupling Reactions of Alkynes: An Atom- and Step-Economic Route to Functionalized Alkenes Synthesis	Dr. S Mannathan	Department of Chemistry	CRG-SERB-DST	CRG/2021/007699	48.00	2021-24
38	Targetted Delivery of Cobiation drugs using exosome RNA	Dr Sateesh Ellipilli	Department of Chemistry	DST-Ramanujan Fellow	RJF/2021/000066	120.00	2021-26

	nanotechnology for cancer treatment						
39	Transparent, conducting, self-cleaning rGO (reduced Graphene Oxide) surface: large area and single step growth using Pulsed Laser Deposition	Dr Siddhardha Ghhosh	Department of Physics	SRG-SERB-DST	SRG/2021/001465	25.99	2021-23
40	Sensing in the dark: An automated off-focused points detection and removal from the photons starved 3D volumetric dataset	Dr Inbarasan Muniraj	Department of Electronics and Communication Engineering	SRG-SERB-DST	SRG/2021/001464	20.8	2021-23
41	Design and development of "smart" and "hybrid" parallel microchannel cooling system to address the cooling challenges of electronic components	Dr. Lakshmi Sirisha Maganti	Department of Mechanical Engineering	SRG-SERB-DST	SRG/2021/000639	28.74	2021-23
42	Production of low-cost and high-performance fly ash based light weight block	Dr G V P Bhagath Singh	Department of Civil Engineering	SRG-SERB-DST	SRG/2021/000540	18.5	2021-23
43	Pilot-scale ultra-efficient fixative sewage dye-degradation by "3D mega catalyst" generated using intact eggshell-waste	Dr. Anil K. Suresh	Department of Biological Sciences	ATGC-DBT	Approved	27	2021-23
44	Efficient Algorithms for Dualization Problem for Subclasses of Boolean Functions	Dr Murali Krishna Enduri	Department of Computer Sciences	TARE-SERB	TAR/2021/000342	18	2021-24
45	Data driven Mechanism for design Mechanism	Dr Udaya Sankar	Department of Electronics and Communication Engineering	TARE-SERB	TAR/2021/000114	18	2021-24

46	Design Principle of Single Atom Catalyst for Nitrogen Fixation over HER: Energy Parameter, Electronic Descriptor and Database	Prof. Ranjit Thapa	Department of Physics	CRG-SERB	CRG/2021/000620	32	2022-25
47	Ethics of Tobacco Industry	Dr Aqsa Agha	Department of History	Institute of Public Health	-	5	