

Summary of Research Projects

Sr. No.	Type of Projects	Funding Body	Number of Projects	Funding (INR Lakhs)
1.	On-Going Funded Projects	DST, DBT, AICTE, GUJCOST	28	612.09
2.	Completed Projects		10	204.63
3.	Industry Sponsored Projects(Completed)	Industrial Metal Powders(I) Pvt. Ltd Pune, Margen Impex Ltd, Velocity Pharmacy LLC, New York, Energy System Engineering, Baroda	05	17.25
4.	Resource Generation through Industry Projects	Industrial Metal Powders(I) Pvt. Ltd Pune, Margen Impex Ltd, Nimisha International, Marck Bioscience Pvt. Ltd., Kheda	07	25.8+ USD 5000
5.	MODROBS	AICTE	-	34.5

Resource Generation through Industrial Projects

Sr. No.	Funding Industry (Period)	Title of the project	Amount (INR in lakhs)
1	Industrial Metal Powders(I) Pvt. Ltd Pune, (February 2013 to June 2013)	Development of MR Fluids	1.45
2	MargenImpex Ltd, VitthalUdyognagar, Anand, Gujarat (On going, October 2013 onwards)	To develop Magnetic Fluid Seal for Rotating Shaft".	4.50
3.	Gujarat Social Infrastructure Development Society (GSIDS) (On going, September 2014onwards)	Preparation of District Human Development Report (DHDR)	6.00
4.	Nimisha International (On going since January 2012)	Heat Transfer Analysis of Bus Duct & Analysis of Al expansion joint	USD 5000
5	MARGEN Impex Ltd, V.U. Nagar (Sept. 2013 to Nov. 2014)	Design of Safety Mother Board	10.60
6	Velocity Pharmacy LLC, New York (Ongoing since July 2014)	Pharmaceutical Product Development	1.25
7	Marck Bioscience Pvt. Ltd., Kheda (November 2013 to April 2014)	Container Stability Testing	2.00
Total			25.80 + USD 5000

On-Going Research Projects at CHARUSAT

The faculty at CHARUSAT are actively involved in research and have submitted and awarded 28 projects funded by Government funding agencies like DST, DBT, AICTE, GUJCOST, etc under various schemes like SERB, MRP, RPS, INSPIRE, etc. The total funding for research projects at CHARUSAT is INR 6,12,09,000/-. In addition CHARUSAT has been granted MODROBS projects from AICTE to the tune of INR 34.5 Lakhs.

On-Going Research Projects at CHARUSAT

Sr. No.	Year of Sanction	Name of Project	Funding Agency	Grant Received (INR, in Lakhs)
A	Major Research Projects Funded by External Funding Agencies			
1	2012-13	Ferro Fluids: Science Technology Applications	DST, New Delhi	285.66
2		Identification of hydroxyl citric acid (HCA) producing bacteria and probing its HCA biosynthetic mechanisms	DST	23.00
3		Implication of P glycoprotein modulation by phytochemicals to increase bioavailability of drug in hyperglycemic stress	SERB-DST	16.10
4		Rare sugar production using isomerases and epimerase	DBT	31.52
5		Elastin Like Polypeptide (ELP) Tagged Amylase and Xylose Isomerases: Alternative Purification and Immobilization Technology	DBT	11.94
6		Eco-Friendly Bricks: A new material in Civil Engineering	DST	57.00
7		Use of <i>Actino bacteria</i> sp. as PGPR: Media Optimization, Scale-up for Biomass production and field trials	DBT	36.00
8		Eco-friendly textile effluent treatment coupled to bioelectricity generation using Microbial Fuel Cell (MFC) technology	DST-INSPIRE	35.00
9		Supramolecular hydrogels: an efficient carrier for sustained/targeted delivery of biomedical polyoxometalates	FTPYS, DST	21.7
10	2013-14	Tribological and wettability studies of nanostructured thin films	AICTE	22.79
Total				540.71
B	Minor Research Projects Funded by External Funding Agencies			
11	2012-13	Thermal conductivity of nanofluids: Potential application in heat transfer devices	GUJCOST	03.75
12	2013-14	Preparation and evaluation of biodegradable in-situ gel	GUJCOST	05.00

		forming injectable controlled drug delivery system based on thermoresponsive methyl cellulose hydrogel.		
13		Development and validation of stability indicating chromatographic methods (Accelerated and Real time stability study) for identification of some herbal formulations used in CNS disorder	GUJCOST	04.90
14		Pre-clinical pharmacokinetic studies on aphrodisiac phytoconstituent.	GUJCOST	04.00
15		Formulation of a Unique Magnetic Nanoparticles based DNA, RNA and Protein Extraction Kit	GUJCOST	03.50
16		Studies on electrical and photoelectronic properties of PbS/polymer nanocomposites	UGC-DAE-CSR, Indore	07.00
17		Carotenoids from Marine Microbes: Extraction, Purification and Applications	GUJCOST	04.00
18		To study anti-cancer effects of phosphonium ionic liquids on HPV positive and negative cervical cancer cell lines	GUJCOST	05.00
19		Evaluation of multicomponent Ayurveda formulation - Ashwagandhadilehya*	GUJCOST	03.60
20		Design, synthesis and biological evaluation of flavonoids derivatives as potential non-steroidal inhibitors in breast cancer	GUJCOST	06.20
21		Phytochemical and pharmacological studies on isolated principles of <i>Argyreiaspeciosa</i> for aphrodisiac and spermatogenic potential	GUJCOST	04.50
22	2014-15	Development and characterization of nano sized drug carrier microemulsion formulation	GUJCOST	01.80
23		Development of Dynamic Reactive Power Compensation Device for Voltage Control in Electrical Power System	GUJCOST	03.80
24		Object shape extraction and Boundary Mapping from Natural Images	GUJCOST	03.30
25		Preparation of District Human Development Report (DHDR)	GSIDS	03.00
26		Development of solution-based ZnO nanostructures as light harvesters for low-cost solar photovoltaics	GUJCOST	04.50
Total				067.85
C	Minor Research Projects Funded by CHARUSAT			
27	2013-14	Clinical Assessment of Ayurveda Formulation Ashwagandhadilehya as Aphrodisiac and in Treatment	CHARUSAT	02.73

		of Oligospermia		
28	2014-15	Development of solar Photovoltaic Powered Air-Conditioner	CHARUSAT	00.80
TOTAL (A + B + C)				612.09

Industry Sponsored Projects at CHARUSAT

Faculty members at CHARUSAT have completed five industrial projects and generated INR 17.25 lakhs.

Industry Sponsored Projects

Sr. No.	Name of Institute/ Department	Sponsoring Industry	Title of the project	Amount Sanctioned (INR in Lakhs)
1	PDPIAS	Industrial Metal Powders(I) Pvt. Ltd	Synthesis of Magnetorheological Fluid for Damper Application	01.40
2	PDPIAS	MargenImpex Pvt. Ltd	Magnetic Fluid Seal for Rotating Shaft	02.50
3	RPCP	Velocity Pharmacy LLC, New York	Pharmaceutical Product Development	01.25
4	EC/ CSPIT	Energy System Engineering, Baroda,	Design & Implementation of Digital Interface for Active Harmonic filter using Hysteresis Current Controller	00.10
5	PDPIAS	Industrial Metal Powders(I) Pvt. Ltd	Development of commercialization of Magnetorheological fluids for damper applications.	12.00
Total				17.25

Research Projects Completed During Last 4 Years

During the past four years, the faculty members at CHARUSAT have completed 10 projects funded by external organizations worth an amount of INR 2,04,63,000/-. Another project titled Installation & Field Study of Rooftop Grid-Tied 100 kWPV Power System (under JNNSM) worth INR 86 Lakhs has also been completed by Dr. T. K. Chaudhuri; the funding for which was provided by CHARUSAT.

Research Projects Completed in the Last Four Years

Sr. No.	Project Name	Principal Investigator	Funding Agency	Project Duration	Total Project
1	Study of Ultrasonic wave propagation in magnetic dispersion to develop MR Fluids	Dr. R. V. Upadhyay	GUJCOST, Government of Gujarat	Mar.2009 to Mar. 2011	05.84
2	Size dependent Magnetic Properties	Dr. R. V. Upadhyay	UGC-DAE-CSR, Mumbai	Jan. 2009 to Dec. 2012	03.30
3	Synthesis of Nano-magnetorheological fluids using neutron scattering techniques	Dr. R. V. Upadhyay	DAE-BRNS BARC	Dec. 2009 to Nov. 2012	40.00
4	Eco-Friendly Bricks: A new material in Civil Engineering	Dr. Janki Thakkar	DST, New Delhi	Jul. 2011 to Jun. 2014	57.84
5	Studies on structure of microbial exopolysaccharide (EPS) solutions and hydrogels using SANS"	Dr. BragdishIyer	UGC-DAE-CSR, Mumbai	Jan. 2012 to Dec. 2012	00.35
6	Study of the properties of heavy hadrons in relativistic formalism	Dr. Bhavin Patel	DST	Jul. 2012 to Jul. 2013	04.80
7	E-Foundry project in collaboration with IIT Bombay	Dr. B. Ravi (IIT Bombay) Dr. Mayur Sutaria	NKN, GOI	Jul. 2011 to Jun. 2014	Total project Grant: 152.00
8	Design and Development of miniaturized dualband / triband antenna using negative refractive index technique	Dr. Trushit Upadhyay	ISRO, Department of Defense	Jul. 2010 to Nov. 2013	006.80

9	Inkjet Printing of Inorganic Thin Films for Solar Photovoltaics	Dr. T. K. Chaudhuri	(SERI), DST	June 2011 to Dec 2014	078.00
10	Solution Grown CmSnS ₃ Thin Films for Solar Cells	Dr. T. K. Chaudhuri	UGC-DAE-CSR, Indore	Aug 2011 to Mar 2014	006.00
Total					204.63

The University has received MODROBS grants from AICTE for the up-gradation of its existing facilities. The grants received from MODROBS amounts to a total of INR 34,50,000/- till date.

MODROBS Grants Received from AICTE

Year	Modernization of Laboratory	Grant (INR in Lakhs)
2009-10	Reverse Engineering Lab	06.0
2010-11	Production & Automation Lab	09.5
2011-12	Machine Vision Lab	09.0
2012-13	Surface texture measuring system	10.0
Total		34.5