## C-MET, HEADQUARTERS

### Work Allocation

SI. No.	Name & Designation	Work allocation of staff
1.	Dr. B.B. Kale, Director General	Head of the C-MET
2.	Smt. Radha Jaisimha Registrar	Head of the Administration
Staff	under Registrar	
	1) Shri V.N. Shete, OA-II	<ol> <li>Recruitment of Group A &amp; B posts of three labs.</li> <li>Parliament Question</li> </ol>
,W1		3. Operating roster of Group A & B of three labs and Group C Pune lab.
		Correspondence with MeitY, New Delhi     Settlement of C-MET , Delhi Imprest/bills
	2) Smt. A.C. Belhe, OA-II	<ol> <li>PA to DG / Handling Imprest /Hospitality</li> <li>DPC-Group-A Technical staff</li> <li>Grievance</li> <li>Court /CAT matter</li> <li>Staff Representation matter</li> </ol>
	3) Smt. A.P. Padalikar, OA-II	<ol> <li>DPC-Below Group-A Technical staff</li> <li>RTI- Maintenance of RTI Register, Correspondence/disposal of RTI /Appeal Application/ RTI Quearterly reports</li> <li>Reports - Sexual Harrasment, Hindi language</li> <li>Correspondence/Reminder to MeitY on Policy matters/on various subs./Steno's work.</li> <li>Training matter / Put up personal claims</li> <li>Assistance to PC for Hindi Annual Report of C-MET.</li> </ol>
	4) Shri S.R. Ballal, Office Clerk	APAR maintenance, filing system/Record/Documents maintenance, day-to-day checking mails received from Labs. Maintenance of Stamp/Inward Register.
	5) Shri Y.S. Madke, SA-II	Dispatch, xerioxing, file moving etc. misc. work

SI.	Name & Designation	Work allocation of staff		
No.	100			
3.	Dr. R. Prasada Rao Programme Coordinator	Managing and monitoring the activities of the technical groups under the Programme so as to ensure that various technical and financial targets are met.  Arrange periodic reviews by the Steering		
		<ul> <li>Arrange periodic reviews by the 'Steering Committee (SC)' and ensure submission of the outcome report to the Director General. Work out plans to expedite the pending/delayed issues and report to Director General.</li> </ul>		
		<ul> <li>Carry out necessary studies on market demand and technology status of the ongoing research programmes to keep abreast with the latest developments.</li> </ul>		
		<ul> <li>Carry out a study of the competing technologies and prepare a detailed comparison report, along with suggestions. This may be done routinely every 6 months, but at any time, in case of major development.</li> </ul>		
		<ul> <li>Providing inputs to the 'Steering Committee' with regard to latest development relevant/significant to</li> </ul>		
		<ul> <li>the Programme on a regular basis.</li> <li>Prepare Annual Reports, Annual Plans, Annual Budget and Outcome Budget for the Programme for each fiscal year and submit to Director General for consideration. This plan should include details required for the completion of activities of the</li> </ul>		
		Programme for the ensuing year and also to place necessary reports in the house of Parliament.  Reviewing all technical projects at the laboratories on quarterly basis and preparing & sending Monthly & Quarterly Progress Reports to the parent Ministry		
		<ul> <li>through Director General.</li> <li>Identifying the end users for ToT of the successfully developed technologies and expanding the ToT activity by liasioning with the concerned C-MET laboratory and end user.</li> </ul>		
		<ul> <li>Working out strategies for self sustenance of C-MET and reviewing &amp; upgrading every year to reach the goal.</li> </ul>		
		<ul> <li>Reviewing of Technologies transferred at end user premises for ensuring its usefulness for the country.</li> </ul>		
		<ul> <li>Vetting of all technical projects, patents, costing and technical contents of MoUs with various</li> </ul>		

SI. No.	Name & Designation	Work allocation of staff
		<ul> <li>organizations as per C-MET Policy.</li> <li>Maintenance of project proposal records (both soft and hard) of submitted, ongoing, completed, ToT, Royalty, MoUs, etc. in the Office of Programme Coordinator for ready reference.</li> <li>Design and development of publicity materials/campaigns etc. for marketing of C-MET knowledgebase.</li> <li>Development of projects, establishment of laboratories and training of manpower.</li> </ul>
4.	Shri G.B. Rao, Senior Finance Officer	<ol> <li>Headquarters Bill processing:</li> <li>Budget Estimates, Revised Estimates and Grant-in-aid from the Ministry:</li> <li>Compiling and Submission of important Financial data:</li> <li>CPF Accounting:</li> <li>CMET and CMET CPF Audit related work:</li> <li>CAG Audit work:</li> <li>Governing Council, Executive Committee and other committee related work:</li> </ol>
Staff	under SFO	
	Shri B.A. Ghanekar OA-I	<ol> <li>Monthly Reports to Meity</li> <li>Clearing of party payment, Income Tax deduction of contractors,</li> <li>Passing Bank Payment vouchers,</li> <li>Salary, Income/Profession Tax, GIS,</li> <li>Personal claims-Medical/Telephone/News paper Reimbursement,</li> <li>TADA/advances settlement</li> <li>Interaction with Bank Authorities, L.I.C. of India</li> <li>Maintenance of C.P.F. Accounts.</li> </ol>

# CENTRE FOR MATERIALS FOR ELECTRONICS TECHNOLOGY (C-MET), HYDERABAD WORK ALLOCATION TO EMPLOYEES TECHNICAL STAFF

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Name of Group &	Project In-charge &	Name of Project & brief details of work
Group In-charge	Team Members	D I AV AI C
Refractory Metals	Arbind Kumar	Processing and Supply of Hafnium Sponge
Processing (Ultra-	Dr. Raghu C Reddy	
Pure & Special	Ms. K Bharathi	Regular supply of Hafnium sponge to VSSC against
Materials) Group	Dr. Narendra Nashani Mr. J V Rao	purchase order or MoU. Hafnium sponge is being prepared starting from Zr scrub raffinate received from
Arbind Kumar	Mr. N Parashuram Mr. Angad Choudhary Mr. Mowlali Shaik Mr. C Kishore	NFC. The processes involved are solvent extraction, hydroxide preparation, calcinations, briquetting, carbochlorination, Kroll reduction, Vacuum distillation, sponge shredding and packaging. Besides, characterization of samples at different level, safety of the systems and man power, maintenance of plants, machinery, electrical, instrumentation and control systems for trouble-free operation of the plant, interaction with the sponsoring organization, etc. are the works carried out in the project. Presently processes are continued to supply 70 Kg Hafnium sponge against purchase order received from VSSC in February, 2021. Another purchase order is expected shortly for which quotation is being sent @ Rs.2.83 lakhs per kg for 70 Kg Hf sponge. Besides, Rs.76.00 lakh worth systems (under VSSC funding) are being procured for modifications / up-gradations of the systems.
Ultra High Pure	Dr. Y. Purushotham	Purification of Germanium and Zinc
Materials Group	Mr.K Balaraju	The state of the s
Materials Group	Mr.S N Tadaka	Scrap Germanium purification by Induction zone
Dr. V. N. Mani	IVII.S IN Tattaka	refining
DI. V. IV. IVIAIII		Purification of Zinc by vacuum distillation followed
		by resistive zone refining
		• Conversion of zone refined Zinc ingot in to <3 mm
		granules.
		Development of processing technologies and IPR
	Dr. D S Prasad	Feasibility study for development of process
	Mr.P.P. Srinivasa	technology to recover valuable materials from end-of
	Kumar	life silicon solar modules
		me sheon solar modules
		• To identify suitable physical methods to separate
		components of Si- Solar module
		To optimize chemical methods for extraction of metals
		namely Pb, Cu & Sn, etc.
		To recover solar grade silicon that includes removal of

		<ul> <li>back surface field (BSF) and emitter</li> <li>To identify environmentally sound method to trea waste chemicals</li> <li>To fine tune the optimized parameters at 10 Kg per batch size &amp; to extract valuable materials from waster Si-solar modules.</li> </ul>
Silicon Carbide Group  Dr. Sandeep  Mahajan	Dr. Sandeep Mahajan Dr M.V. Rokade	<ul> <li>SiC single crystal bulk growth process development</li> <li>Growth run and optimization of process parameters (temperature, pressure, source to seed distance, coi position, coil movement, gas flow etc) to get high resistive SiC single crystal boule.</li> <li>Characterization of grown SiC boule.</li> <li>Regular maintenance of PVT reactor and attached peripheral like gas generator, UHP gas lines, 100 KVA DG set, 100 KVA UPS, Chiller, Clean room AHU, etc.</li> <li>Draft report and presentation preparation for PMRC EB, SC, etc.</li> <li>Procurement of UHP materials - SiC seed crystal, SiC source material, ultrahigh pure gases and graphite consumables (Seed holder, crucible, heater etc).</li> </ul>
RoHS testing Group Dr. U. Rambabu	<b>Dr. U. Rambabu</b> Mr.B. Mahender Dr. K. Ramaswamy	Revenue generation through RoHS testing services     Testing of Electrical, Electronic Equipment (EEE for RoHS compliance and elemental analysis of various In house (C-MET) samples. Maintaining of NABL accreditation in the scope of chemical testing.
	*	<ul> <li>Skill development training program for Scheduled Caste &amp; Scheduled Tribe students on E-waste dismantling and testing of Restricted Hazardous Substances (RoHS) – Taking regular classes and training on E-waste dismantling/segregation and or RoHS testing using EDXRF spectrometer, ICP-OES Ion chromatography, UV-Vis spectrometer, Gast chromatography Mass Spectrometer (GC-MS) and sample preparation techniques like soxlet extraction Sonication, open digestion and microwave digestion system.</li> </ul>
		Delivering RoHS awareness lectures at Industry. Institutions outreach programs, being conducted by different organizations.
		Publishing the research articles in International journal of high repute, etc.

CoE on E-Waste	Dr. R Ratheesh	Establishment of Centre of Excellence on E-waste
STREET, CANADAM SON SANDERS	Dr. R. Ratneesn Dr. S.Rajesh Kumar	management
Group	Dr. Y Purushotham	management
Dr. R Ratheesh	Dr. U Rambabu Dr. D. S. Prasad	Recovery of valuable metals from spent printed circuit boards
	Dr. Ajay Kaushal Mr.Ch. Sudheer	Scaling up of technology from 100kg/day capacity to 1000kg/day capacity
		Development of process equipments for PCB recycling Techno economic feasibility of the process and technology transfer
		Feasibility studies on the development of recovery of other metals from PCBs
		Development of Processing Technologies for Lithium - ion Battery recycling and IPR
		Development of Hydrometallurgical recycling technology for the recovery of Li, Co, Mn and Ni from EoL Li ion batteries.
		Extraction of rare earths from EoL Permanent Magnets
		Extraction of rare earth oxides especially Nd, Pr and Dy from end of life Hard Disc Drive and lap top permanent magnets by acid leaching, solvent extraction and calcinations.
		M.Tech in E-waste Management and Resource Engineering Course
		Development of process technology for the recovery of valuable materials from end-of life silicon solar modules
		Skill Development Activities Organizing awareness programs, workshops on E-waste
		Management
		Hands on experience E-waste dismantling & segregation
SENDUST	Dr. Raghu C. Reddy	Development of flaky Fe-Si-Al alloy powders suitable
Project	Dr. Narender Nasani	for applications in Tunable Microwave Absorption.
D. D. I. C	Mr. Angad Choudhary	
Dr. Raghu C.	Mr. C. Kishore	• Work elements involve, development of Sendust
Reddy		alloy of suitable composition for microwave
		absorption applications by induction melting. Shaping
		of the powders by ball milling and heat treatments to
		get flaky powders. Coating of the flaky sendust
		powders on to copper substrates and testing its functionality.

Name of Group &	Project In-charge &	Name of Project & brief details of work
Group In-charge	Team Members	
Carbide derived	Dr. S. Rajesh Kumar	Development, process optimization and supply of
carbon for storage	Mr. Ch. Sudheer	carbide-derived-carbon
applications		
Dr. S. Rajesh		Development of of active carbon from metal carbides
Kumar		with narrow pore size distribution (0.6- 3.0nm) and high surface area (>1500m²/g) for charge storage applications Optimization of process parameters such as precursor characteristics, temperature, chlorine flow etc. chlorination experiments on continuous basis and supply to VSSC for further characterization and super capacitor fabrication and evaluation.
MEMS Sensors	Dr. Akshdeep Sharma	Dein al Elizabeth CMEMO Di i o
Dr. Akshdeep Sharma	Di. Aksildeep Silailila	<ul> <li>Design and Fabrication of MEMS Bionics Senors for AUVs</li> </ul>
		Development of Indigenous Antennas for Navigation
NaVIC	One Share St. St.	with Indian Constellation (NavlC)
	Dr. Ratheesh	(1.u.le)
Dr R. Ratheesh		
Web		
Administration	Mr. M. Ramanaji	C-MET web design and maintenance
· · · · · · · · · · · · · · · · · · · ·	vii. ivainanaji	C THE I WED design and maintenance
Dr. S. Rajesh Kumar		

# C-MET, Hyderabad

## Work Allocation of Non-S&T Staff

CI	B1	Mark Harting of the
SI.	Name	Work allocation of staff
No.	G K Venkatesan	Hoad of Office All establishment Durchase & Stores and
1	Administrative Officer	Head of Office. All establishment, Purchase & Stores and General Administration of the Laboratory including APIO under RTI.
2	Sh. V. Nageswara Rao Finance Officer	Preparation of Budget Estimates/ Revised Estimates, Pay and Allowances, NPS registration, Audit, Finalization of Accounts, Recovery and Remittance of statutory taxes and filing of IT, GST and professional tax returns, Project management and control accounting, Issue of Utilization Certificates, Scrutiny and Examination of Project, MoU, ToT proposals and Purchase files. Staff claims, Supplier's bills, Letter of Credit and Foreign payments, PFMS –EAT module, Generating, Compiling and Submission of Financial information/data  Member of Purchase and Services Committee, SVC, TOC and JPMC.
3	A. Lakshmi Vasudha, OA-I	Preparation of Pay & Allowances Statutory remittances, Processing of Bills w.r.t. Procurement files, Payment of Consolidated emoluments of Project, Co-ordination of work related to Internal Audit and CAG Audit, Verification of F-CSTs, Financial Sanctions on Procurement files, Medical Reimbursement claims, TA settlements, Advance Settlements, Reimbursement of Children Education Allowance, Canteen Allowances, News Paper Reimbursement towards purchase of News Paper LTC settlements
4	A. Kausalya, OA – II	<ul> <li>a) Secretariat Assistance to Director</li> <li>b) Preparing POs in respect of procurement through Cash/Credit Purchase</li> <li>c) RC for procurement of Gas</li> <li>d) Booking of vehicles</li> <li>e) Library In-Charge</li> </ul>
5	T. Avinash, OA – II	Tally Voucher entries, Processing of bills for payment, PFMS
6	A. Sahadev, OA – III	Stores and General Administration a) Stock entries in stores registers under respective projects b) Monitoring CPWD works c) Disposal of stores d) Recruitment of manpower under Hafnium Project e) Security & House Keeping staff f) GeM Contract in r/o Security, Housekeeping & their payment

7	K. V. S. Krishna Prasad, OA – III	1) Administration & Establishment: Recruitment, RTI Replies preparation, Leave Account, LTC Claims, Electricity & Telephone Bills.
		2) <u>Purchase</u> : Procurement cases, Conducting SPC & SSC Meetings, placing POs, follow-up release of payment, AMCs, GeM Procurement, etc.
8	A. K. Tiwari, Office Clerk, (Posted at C-MET's Registered Office, New Delhi)	<ol> <li>To coordinate with various division/groups in MeitY for inputs and other administrative needs for the ongoing and new projects related to C-MET and EMCD Division.</li> <li>Responsible for arranging various meetings/Video Conferencing for C-MET and EMCD Division.</li> <li>Arranging logistic support to members of GC &amp; EC meeting of C-MET &amp; and other meetings including Working Group of EMCD Division.</li> <li>Preparation of draft sanctions/administrative orders for sponsored projects under EMCD Division.</li> <li>Preparation of draft closure notes for sponsored projects.</li> <li>Generation of online sanction for C-MET core fund/sponsored projects and its follow up at various stages.</li> <li>Submission of UCs of various implementing agency for liquidation to PAO, MeitY related to C-MET and EMCD Division.</li> <li>Any other work assigned by GC (R&amp;D E), Director, EMCD and other Scientific Officers of EMCD Division, MeitY and C-MET from time to time</li> </ol>
9	Lakshman, SM – II	Despatch, File movement, Supervising the lawn maintenance & other misc. work
10	K. Padma, SM – I	Cleaning & Gardening Work

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# CENTRE FOR MATERIALS FOR ELECTRONICS TECHNOLOGY (C-MET), THRISSUR

# WORK ALLOCATION TO EMPLOYEES TECHNICAL STAFF

Name of Group &	Project In-charge & Team	Name of Project & brief details of work
Group In-charge Nanomaterials, Dr. V. Kumar, Sc-G	Members Dr. V. Kumar, Sc-G, (PI) Dr. AbhisekChoudhary, Sc-B (Co-PI) Mrs. V. Priyadharsini, ST-VI	<ol> <li>Development of ceramic dielectric thin film capacitors for hybrid electric vehicle applications.         Funded by SERB, DoI (18.03.2020) – DoC (17.09.2022). In this project, following major works needs to be carried out:         <ul> <li>Design of novel ceramic dielectric material composition(s).</li> <li>Spin-coating of Ceramic thin films on non-noble metal electrodes.</li> <li>Fabrication of Ceramic dielectric thin film capacitors and characterization.</li> <li>Prototype ceramic dielectric capacitor for DC-AC inverters in Hybrid Electric Vehicles.</li> <li>Trial runs at end-users place.</li> </ul> </li> </ol>
	Dr. V. Kumar, Sc-G, (PI) Dr. T. Karthik, Sc-C, (Co-PI) Dr. T. Radhika, Sc-C, (Co-PI) Dr. AbhisekChoudhary, Sc-B Mrs. V. Priyadharsini, ST-VI Mrs. K.G. Vasanthakumari, ST-VI Mr. E.K.Sunny, ST-VI Mr. S.Susanth, ST-III	<ul> <li>2. Design and development of Ultrasonic transducer probes for medical imaging applications.</li> <li>Funded by MeitY, DoI (13.08.2021) – DoC (12.08.2024). In this project, following major works needs to be carried out:</li> <li>Design of ultrasound probes</li> <li>Development of piezoelectric transducer</li> <li>Development of backing an matching layers</li> <li>Fabrication of transducer probes</li> <li>Validation of developed probe under class 2 clinical trials</li> </ul>

2.7	D 1 1 0 T	Name of Project & brief details of work
Name of Group & Group In-charge	Project In-charge & Team Members	
Sensors, Actuators	Centre of Excellence	Centre of Excellence (CoE) in Intelligent
and Graphene group	(CoE) in Intelligent	Internet of Things (IIoT) Sensors
Dr A. Seema	Internet of Things (IIoT)	D. M.N. Marshidharan is loading Thermal
DITE STATE	Sensors,	Dr. M.N. Mrualidharan is leading Thermal
	PI: Dr. A. Seema	sensors, Humidity sensors and Level sensors
	Co PI: Dr. Karthik T,	using thermistors
	Dr. Arul Kashmir	Mohammed Shafi is looking IIoT and circuit
		side of the sensor
	Dr. M.N. Muralidharan	
	Team Members from	Sridhar Krishna is looking after the material
	Sensors, Actuators and	aspects of the sensors
6	Graphene group	The Project co –ordination is done by Dr. A.
	Shri. Sridar Krishna and	Seema
	Shri. Mohammed Shafi	
	To evaluate the	To evaluate the suitability of the graphene
	suitability of the	powder supplied by CUL for supercapacitor
	graphene powder	applications
	supplied by CUL for	
	supercapacitor	Dr. M.N. Mrualidharan is leading the team.
	applications	Characterization is taken care by him
	PI: Dr. M.N.	
	Muralidharan	Mohammed Shafi is on testing of capacitors
	Co PI: Dr. A. Seema	Sridhar Krishna is looking after graphene
	Team Members	synthesis
	Shri. Sridar Krishna and	
	Shri. Mohammed Shafi	The Project co -ordination is done by Dr.
	Sim. Wonamined Shari	A.seema
	Entrepreneurial Training	Entrepreneurial Training Programme for
	Programme for	
	Scheduled Tribe	
	Communities to produce	Applications
	Solar Lanterns/LED	
	bulbs for Lighting	Dr. M.N. Mrualidharan is looking on training
	Applications	side.
	PI: Dr. A. Seema	Mohammed Shafi is on circuit design
	Co PI: Dr. M.N.	Sridhar Krishna is looking graphene for
	Muralidharan	supercapacitors
	123 Oct 400 1990 2	2 22 3
		Dr. A. Seema: Product design and
		development
	Entrepreneurial Training	Entrepreneurial Training Programme for
	Programme for	Scheduled Caste Communities to produce
	Scheduled Caste	Digital Thermometers
	Communities to produce	Dr. M.N. Mrualidharan is looking on training
	Digital Thermometers	side.

Name of Group & Group In-charge	Project In-charge & Team Members	Name of Project & brief details of work
Group in enarge	PI: Dr. A. Seema Co PI: Dr. M.N. Muralidharan	Mohammed Shafi is on IC programming Sridhar Krishna is looking after thermistors Dr. A. Seema: Product design and development
	Dev. of Aerogel Supercapacitor based Power Module for Application in Voter Verifiable Paper Audit Trail of EVM PI: Dr. A. Seema Co PI: Dr. Stanly Jacob	Dr. A. Seema is heading the entire technical activities of the project
	Technology transfers	Murata Business India Pvt. Ltd has already paid the 50% of ToT fee.
	3D analysis system for wearable device for the prediction of tumour parameters	Dr. M.N. Muralidharan will take care of training side
	PI: Dr. A. Seema Four technologies are at different stages after obtaining the EoI	Dr. A. Seema will take care of Technical aspects
Thin Film & Plasmonic Group Dr. S.N. Potty, Sc-D	Dr. S.N. Potty, Scientist D, (PI) Dr. Rapaka S. Chandra Bose, Scientist B	Development of a new and cost effective biosensor based on transparent conducting oxide thin films working in near IR frequency.
	Mr. I. Packia Selvam, ST-V	The group has developed cost-effective plasmonic materials for near infrared and visible wavelengths for various gas sensing and biosensing applications. The new materials are cheap alternatives to the expensive noble metals used for plasmonic device applications. These metal oxide planar films can be used for developing disposable chips for several biosensing applications. Using this engineered material, C-MET Thrissur has developed a cost-effective portable biosensor for detecting food borne pathogens (such as campylobacter, shigella etc), jointly with Rajiv Gandhi Centre for Biotechnology, RGCB (under DBT)

Name of Group &	Project In-charge & Team	Name of Project & brief details of work
Group In-charge	Members	
		Thiruvananthapuram. The group is interacting with a few institutes for developing cost effective biosensors.
		Dr. Rapaka S Chandra Bose
		> Joined the institute recently
		<ul> <li>Looking after the project related activities</li> <li>Helping the PI to frame new proposals</li> <li>Initiating proposals in thermoelectric &amp; plasmonic areas</li> </ul>
		Mr. I. Packia Selvam, ST-V
		<ul> <li>Plasmonic thin film development</li> <li>Biosensor fabrication</li> <li>Transparent heater fabrication</li> </ul>
		X-diffraction analysis
		➤ Hall measurement analysis
	18	Procurement of raw materials and equipment
		equipment
Aerogel and Energy	Dr Stanly Jacob.K,	
Aerogel and Energy Materials Lab	Dr Stanly Jacob.K, Sc-D (PI)	Project title: Dev. of high energy density lithium Ion Capacitor with
Materials Lab Dr Stanly Jacob.K,	Sc-D (PI) Smt . Rani Panicker N,	Project title: Dev. of high energy density lithium Ion Capacitor with graphite/carbon aerogel through safe
Materials Lab	Sc-D (PI) Smt . Rani Panicker N, Sc-B	Project title: Dev. of high energy density lithium Ion Capacitor with
Materials Lab Dr Stanly Jacob.K,	Sc-D (PI) Smt . Rani Panicker N,	Project title: Dev. of high energy density lithium Ion Capacitor with graphite/carbon aerogel through safe
Materials Lab Dr Stanly Jacob.K,	Sc-D (PI) Smt . Rani Panicker N, Sc-B Shri P.A. Abraham,	Project title: Dev. of high energy density lithium Ion Capacitor with graphite/carbon aerogel through safe prelithiation method (TH/SP/069)
Materials Lab Dr Stanly Jacob.K,	Sc-D (PI) Smt . Rani Panicker N, Sc-B Shri P.A. Abraham,	Project title: Dev. of high energy density lithium Ion Capacitor with graphite/carbon aerogel through safe prelithiation method (TH/SP/069)  > Planning and execution of experiments for the development lithium ion capacitor using graphite and carbon aerogel
Materials Lab Dr Stanly Jacob.K,	Sc-D (PI) Smt . Rani Panicker N, Sc-B Shri P.A. Abraham,	Project title: Dev. of high energy density lithium Ion Capacitor with graphite/carbon aerogel through safe prelithiation method (TH/SP/069)  > Planning and execution of experiments for the development lithium ion capacitor using graphite and carbon aerogel > Characterisation of electrode materials
Materials Lab Dr Stanly Jacob.K,	Sc-D (PI) Smt . Rani Panicker N, Sc-B Shri P.A. Abraham,	Project title: Dev. of high energy density lithium Ion Capacitor with graphite/carbon aerogel through safe prelithiation method (TH/SP/069)  > Planning and execution of experiments for the development lithium ion capacitor using graphite and carbon aerogel
Materials Lab Dr Stanly Jacob.K,	Sc-D (PI) Smt . Rani Panicker N, Sc-B Shri P.A. Abraham,	Project title: Dev. of high energy density lithium Ion Capacitor with graphite/carbon aerogel through safe prelithiation method (TH/SP/069)  > Planning and execution of experiments for the development lithium ion capacitor using graphite and carbon aerogel > Characterisation of electrode materials using analytical techniques such as BET,
Materials Lab Dr Stanly Jacob.K,	Sc-D (PI) Smt . Rani Panicker N, Sc-B Shri P.A. Abraham,	Project title: Dev. of high energy density lithium Ion Capacitor with graphite/carbon aerogel through safe prelithiation method (TH/SP/069)  > Planning and execution of experiments for the development lithium ion capacitor using graphite and carbon aerogel > Characterisation of electrode materials using analytical techniques such as BET, FTIR etc.
Materials Lab Dr Stanly Jacob.K,	Sc-D (PI) Smt . Rani Panicker N, Sc-B Shri P.A. Abraham,	Project title: Dev. of high energy density lithium Ion Capacitor with graphite/carbon aerogel through safe prelithiation method (TH/SP/069)  Planning and execution of experiments for the development lithium ion capacitor using graphite and carbon aerogel Characterisation of electrode materials using analytical techniques such as BET, FTIR etc. Fabrication of Lithium Ion Capacitor Characterisation of lithium on capacitor using electrochemical methods
Materials Lab Dr Stanly Jacob.K,	Sc-D (PI) Smt . Rani Panicker N, Sc-B Shri P.A. Abraham,	Project title: Dev. of high energy density lithium Ion Capacitor with graphite/carbon aerogel through safe prelithiation method (TH/SP/069)  Planning and execution of experiments for the development lithium ion capacitor using graphite and carbon aerogel Characterisation of electrode materials using analytical techniques such as BET, FTIR etc. Fabrication of Lithium Ion Capacitor Characterisation of lithium on capacitor using electrochemical methods Procurement of essential raw materials
Materials Lab Dr Stanly Jacob.K,	Sc-D (PI) Smt . Rani Panicker N, Sc-B Shri P.A. Abraham,	Project title: Dev. of high energy density lithium Ion Capacitor with graphite/carbon aerogel through safe prelithiation method (TH/SP/069)  Planning and execution of experiments for the development lithium ion capacitor using graphite and carbon aerogel Characterisation of electrode materials using analytical techniques such as BET, FTIR etc. Fabrication of Lithium Ion Capacitor Characterisation of lithium on capacitor using electrochemical methods
Materials Lab Dr Stanly Jacob.K,	Sc-D (PI) Smt . Rani Panicker N, Sc-B Shri P.A. Abraham,	Project title: Dev. of high energy density lithium Ion Capacitor with graphite/carbon aerogel through safe prelithiation method (TH/SP/069)  Planning and execution of experiments for the development lithium ion capacitor using graphite and carbon aerogel Characterisation of electrode materials using analytical techniques such as BET, FTIR etc. Fabrication of Lithium Ion Capacitor Characterisation of lithium on capacitor using electrochemical methods Procurement of essential raw materials and consumables required for the project
Materials Lab Dr Stanly Jacob.K,	Sc-D (PI) Smt . Rani Panicker N, Sc-B Shri P.A. Abraham,	Project title: Dev. of high energy density lithium Ion Capacitor with graphite/carbon aerogel through safe prelithiation method (TH/SP/069)  > Planning and execution of experiments for the development lithium ion capacitor using graphite and carbon aerogel > Characterisation of electrode materials using analytical techniques such as BET, FTIR etc. > Fabrication of Lithium Ion Capacitor > Characterisation of lithium on capacitor using electrochemical methods > Procurement of essential raw materials and consumables required for the project > Assisting in the maintenance of equipment's required for the project work > Preparation of organic aerogel
Materials Lab Dr Stanly Jacob.K,	Sc-D (PI) Smt . Rani Panicker N, Sc-B Shri P.A. Abraham,	Project title: Dev. of high energy density lithium Ion Capacitor with graphite/carbon aerogel through safe prelithiation method (TH/SP/069)  Planning and execution of experiments for the development lithium ion capacitor using graphite and carbon aerogel  Characterisation of electrode materials using analytical techniques such as BET, FTIR etc.  Fabrication of Lithium Ion Capacitor  Characterisation of lithium on capacitor using electrochemical methods  Procurement of essential raw materials and consumables required for the project  Assisting in the maintenance of equipment's required for the project work  Preparation of organic aerogel  Conversion of organic aerogel into carbon
Materials Lab Dr Stanly Jacob.K,	Sc-D (PI) Smt . Rani Panicker N, Sc-B Shri P.A. Abraham,	Project title: Dev. of high energy density lithium Ion Capacitor with graphite/carbon aerogel through safe prelithiation method (TH/SP/069)  > Planning and execution of experiments for the development lithium ion capacitor using graphite and carbon aerogel > Characterisation of electrode materials using analytical techniques such as BET, FTIR etc. > Fabrication of Lithium Ion Capacitor > Characterisation of lithium on capacitor using electrochemical methods > Procurement of essential raw materials and consumables required for the project > Assisting in the maintenance of equipment's required for the project work > Preparation of organic aerogel

Name of Group & Group In-charge	Project In-charge & Team Members	Name of Project & brief details of work
		<ul> <li>Assisting in the maintenance of equipment's required for the project work</li> <li>Procurement of essential raw materials and consumables required for the project</li> </ul>
Multilayer Ceramics, T. Radhika, Sc-C	T. Radhika , Sc-C (Co-PI) K.G. Vasanthakumari, ST-V	Design and development of ultrasonic transducer probes for medical imaging (TH/SP/075) Objectives of the Project:  Design of ultrasound probes Development of piezoelectric Transducer Development of backing and matching layers Fabrication of transducer probes Validation and clinical trials of developed probes
A Project Proposal w materials (ICGDM).	ras submitted as part of Inn	Specific work allocated:  • Development of suitable matching layer and its property evaluation.  novation Centre for Graphene Devices and 2D
		d to develop 2D materials for Wearable strain
	shielding, Flexible printing	
1.	K.G. Vasanthakumari, ST-V	<ul> <li>✓ Preparation of Matching material of         US probe through Tape casting and         other methods and its property         studies.</li> <li>✓ Preparation of 2D MXene and its         property evaluation</li> <li>✓ File works related to projects</li> </ul>
Multilayer Ceramics	Dr. Karthik T (P.I)	Project Name:
Group (MLC) Dr. Karthik T.	Group Members:	Textured lead free Na <sub>0.5</sub> Bi <sub>0.5</sub> TiO <sub>3</sub> based lead free Multilayer Actuators (TH/SP/067) Duration: May-2019- May 2022
	Sh. E.K Sunny (ST-VI)	
	Sh. Susanth S (ST-III)	<ul> <li>Details of the work:</li> <li>✓ Development of Na<sub>0.5</sub>Bi<sub>0.5</sub>TiO<sub>3</sub>based lead-free piezo composition with high strain</li> <li>✓ Development of template particles through MSS technique</li> <li>✓ Development of textured piezoceramics</li> </ul>

Name of Group &	Project In-charge & Team	Name of Project & brief details of work
Group In-charge	Members	
		through TGG and RTGG  ✓ Development of Random and textured  Multilayer actuators through ML  processing.
	Dr. Karthik T (P.I)	Project Name: Design and development of
	Group Members:	ultrasonicTransducer probes for medical imaging (TH/SP/075)
	Sh. E.K Sunny (ST-VI)	Duration: Aug-2021- Aug-2024
	Sh. Susanth S (ST-III)	<ul> <li>Details of the work:</li> <li>✓ Development of lead based piezo composition with high d<sub>33</sub></li> <li>✓ Development of PZT based ceramics and optimization of the dimensions to operate at the frequency between 2-10 MHz, suitable for curvilinear and linear probes.</li> <li>✓ Stacking of all the layers and to achieve the desired acoustic properties.</li> </ul>
Microwave	Dr. Arul Kashmir, Sc-C,	TH/SP/073 – Development of Microwave
Materials Dr. Arul Kashmir, Sc-C	(PI)	Absorber Materials Funding Agency: BRNS Total Outlay: 52.0 Lakhs Duration: 09/2020 to 09/2022 Role: Principal Investigator
		The project involves in the development of Microwave absorber (MWA) materials and its processing to fabricate flexible laminates. The MWA substrates are highly useful for the reduction of cross-over frequencies, stealth technologies and space applications. This project aims in developing the MWA substrates using a polymer — ceramic composites with larger size of 100 cm x 100 cm size, and absorbing in the frequency range of 1 GHz to 4 GHz. In addition to that, the dielectric and magnetic properties evaluation to meet the proposed Reflectivity Loss % by systematic control over the size/shape/surface of ceramic composites are the key research that are in progress.
70-1160-21460-21460-21		TH/SP/074 – Centre for Excellence in

Name of Group &	Project In-charge & Team	Name of Project & brief details of work
Group In-charge	Members	
		Intelligent IoT sensors
		Funding Agency: MeitY
		Total Outlay: Overall outlay 41 Crores
		Duration: 07/2021 to 07/2026
		Role: Co-Investigator (for three
		biomedical sensor products development)
		Under the CoE in HOT sensors, Dr Arul
		Kashmir has proposed and undertaken the
		following 03 products development under
		the stream of Biomedical sensors.
		1. Portable ECG sensors,
		2. Wearable strain sensors for Non-
		verbal communication, and
		3. Electrodermal (pH) sensors.
^		5. Electrodefinal (pf1) sensors.
		Developing the new polymer and/or polymer-
		ceramic composites and fabricating them as a
		probe for detecting the human body signals to
		sense the vital functions are the key areas we
		focus in the above stream. Also, this projects
		aims in developing sensors with selectivity,
		accuracy, sensitivity and reliability to meet
Microwave	Dr. Rajendra P. Panmand	the commercial standards.  Project Title: Development of
Materials Group	(Sc-B)	Polybutadiene/ ceramic composite
Waterials Group	(SC B)	laminates and Substrate Integrated
Dr. Rajendra P.	Mr. Prasad K. (ST-V)	Waveguides (SIW) for microwave and
		millimetre wave circuit applications.
Panmand (Sc-B)	Mr. Arun N. S. (ST-III)	minimetre wave circuit applications.
	,4:	brief details of work:
31		Objectives
		Objectives  Development of high dialectric ( c >
		• Development of high dielectric ( $\varepsilon_r >$
		60) and high quality factor (Q <sub>u</sub> >8000)
		microwave ceramic filler materials
		• Theoretical modeling of effective
		dielectric constant of
	-	Polybutadiene/ceramic composite
		laminates
		Preparation of Polybutadiene/ceramic
		laminates through Bunbery Mixing,
		Extrusion, Calendering and Hot
		pressing (BMECH) processes

Name of Group & Group In-charge	Project In-charge & Team Members	Name of Project & brief details of work
		Microwave characterization of laminates     Copper cladding of Polybutadiene/ceramic laminates     Substrate Integrated Waveguide (SIW) circuit design using HFSS     Fabrication of SIW circuits for Millimetre wave applications  Achievement
		<ol> <li>Developed ceramic filler for microwave laminates with low (for 6, 8), medium (for 9.8) and high (for 14.5) dielectric constant.</li> <li>Optimized the silane coating process on filler to avoid moisture absorption.</li> <li>Optimized the milling the ceramic and polybutadiene (PB)using two roll mill.</li> <li>Fabricated the ceramic filler- PB laminates with different dielectric constant i.e. 14.5, 13, 9.8 and 8.</li> <li>Optimized the process of copper cladding of Polybutadiene/ceramic laminates</li> <li>Development of ceramic filler - PB laminates with dielectric constant ~ 6 is in progress.</li> </ol>

# C-MET, Thrissur Work Allocation to Employees Non-Technical Staff (Administration)

Sl	Name	Work Allocated
No.	iniatuative Casti	
1.	Sh. Anilkumar T.K., A.O	Administrative officer, HOD
2.	Smt. Indira K.N., OA-II	All Purchase related works (Core and Sponsored Projects)
3.	Sh. Karthik Krishnaprasad, OC	All work related to Establishment & General Administration
4.	Sh. Krishnadas M.B., MTS	Despatch related works
5.	Sh. P.K. Mohanan, MTS	General work in Director's Office
Finar	ice Section	
4.	Sh. Paramasivan, SA-VI	Financial Officer (Acting)
5.	Smt. S.R. Deepika, SA-V	<ul> <li>Checking of Vouchers.</li> <li>All payments including salaries.</li> <li>Preparation of MIS, BRS etc.</li> <li>Preparation of annual accounts statements.</li> <li>Tally and PFMS entries.</li> <li>Issue of receipts for grants and all other receipts.</li> <li>Income tax and GST work and remittance of TDS, GST.</li> <li>Opening of L/C, Wire transfer, FD, renewal of FD.</li> <li>Issue of project commencement and closure intimations.</li> <li>Preparation of invoices in r/o characterization, LDs.</li> </ul>
6.	Smt. M.P. Bindumol, SA-IV	<ul> <li>Preparation of Vouchers and passing of JVS</li> <li>Salary related works including sponsored project.</li> <li>Maintenance of PO and MRIR Register/files.</li> <li>Maintenance of PF, Advance, medical register and tallying with GL etc.</li> <li>Assets Register's updating/maintenance.</li> <li>Annual PF details preparation.</li> <li>Settlement of tour bills.</li> <li>Professional tax related work.</li> <li>Settlement of personal claims like medical bill etc.</li> <li>PFMS entry</li> </ul>
7.	Sh. V.M. Sivaraman, MTS	Bank related work

# CENTRE FOR MATERIALS FOR ELECTRONICS TECHNOLOGY (C-MET), PUNE WORK ALLOCATION TO EMPLOYEES TECHNICAL STAFF

Name of Group &	Project In-charge &	Name of Project & brief details of work
Group In-charge  Materials for Renewable Energy & Sensors Dr. Sunit B. Rane	Team Members Dr. Sunit B. Rane Dr. Sudhir S Arbuj Dr. Govind G Umarji Dr. Manish D. Shinde Mrs. Shubhangi R. Damkale	<ol> <li>Development of printable silver thick film ink for Radio Frequency Identification (RFID) Tags on environment friendly, flexible substrate for smart applications", (PN/SP/073)</li> <li>Synthesis of nano sized functional silver conducting material with different morphologies.</li> <li>Synthesis of organic binder curable around 100 oC, compatible with the functional material facilitating better dispersion, rheology and adhesion.</li> <li>To formulate printable nano silver conducting paste/ink composition compatible to flexible substrate.</li> <li>To design and develop the prototype antenna tag test structures for ultra-high frequency (UHF) and Microwave range (869 MHz, 902-928 MHz and 2.45 GHz) RFID applications using in-house developed nano paste/ink on flexible substrate (paper or PET).</li> </ol> Around 100 field trials with the industry partner
	Dr. Sunit B. Rane Dr. Manish D. Shinde	<ul> <li>2. Studies on annealing on magnetic performance of NiFe laminations for Pulsed magnets used in Accelerators (PN/SP/081)</li> <li>Optimization of processing conditions for Ni–Fe lamination &amp; C- shape punched core sizes of 70 mm x 70 mm x 0.1 mm and 90 mm x 90 mm x 0.1 mm under hydrogen atmosphere.</li> <li>Structural, magnetic and electrical studies on Ni–Fe lamination &amp; C- shape punched core under annealed hydrogen atmosphere by varying process parameters such as annealing temperature, cooling rate and holding time.</li> <li>Measurement of magnetic properties such as remanence, coercivity, peak permeability and core loss under different annealing conditions.</li> <li>Microstructure –magnetic property correlation study in order to improve pulsed magnetic performance of</li> </ul>

		2
		soft magnet cores after cold work.
]	Dr. B. B. Kale Dr. Sunit B Rane Dr. Manish Shinde Dr. Sudhir S Arbuj Dr. Govind Umarji Mrs. Shubhnagi R Damkale	<ul> <li>3. Creation of R&amp;D Culture in Electronic Materials among SC and ST Students in Maharashtra</li> <li>Development of research and technical attitude in students on electronics materials, their characterization and device fabrication through interactive lecture sessions at respective colleges and at C-MET, Pune.</li> <li>Skill development program at C-MET Pune on materials synthesis / characterization equipments / processing and fabrication / water treatment / solar cells / electronic packaging / biomass utilization/Liion battery fabrication/ sensors by providing handson training.</li> <li>Exposure to the students through scientific Workshop/ Training for in the area Electronic Materials Research.</li> </ul>
	Dr. Sunit B Rane Dr. Manish Shinde Dr. Sudhir S Arbuj Dr. Govind Umarji Mrs. Shubhnagi R Damkale	<ul> <li>4. Materials for Renewable Energy and sensors applications.</li> <li>Synthesis of different semiconductor, MOFs materials for photocatalysis, hydrogen storage and hydrogen generation applications.</li> <li>Development of materials for DSSC, hybrid and perovskite solar cells</li> <li>Development of different materials and gas, VOC and NPK sensors</li> </ul>
	Dr. Sunit B. Rane Dr. B. B. Kale Dr. Varsha Raut Dr. Manish D. Shinde Dr. Tanay Seth Dr. M. V. Kulkarni Dr. Govind G Umarji Dr. Sudhir S Arbuj	<ul> <li>Centre of Excellence on Additive Manufacturing</li> <li>Additive Manufacturing Materials related to electronics products/ components (metal, ceramic, and semiconductor)</li> <li>Basic R&amp;D for Additive Manufacturing Materials related to electronics components (metal, ceramic, and semiconductor) (in collaboration with CIPET Bhuwaneshwar</li> </ul>
		Development of materials and machine for AM technology for current and next generation electronic components/ products (in collaboration with Industries-(i) Intech Additive Solutions Pvt. Ltd. Bangalore and (ii) SPEL Pvt. Ltd. Pune

2.1		
Name of Group	Project In-charge &	Name of Project & brief details of work
&	Team Members	
Group In-charge		
Nanocrystalline	Dr. Milind V.	PN/SP/064: Novel Nanostructured High Performance Anode
Materials/Nano	Kulkarni	Materials for High Energy Na-Ion Batteries
composite	Scientist 'E' &	<ul> <li>Overall Planning and Execution of the Project as "Chief</li> </ul>
Laboratory	Group Head	Investigator".
		<ul> <li>Preparation and submission of progress report and</li> </ul>
Dr. Milind V.	Dr. Ram	arrangement of project review meetings and Presentation
Kulkarni	Kalubarme,	of Progress in PRSG Meetings.
Scientist 'E' &	Scientist 'C'	
Group Head		Recruitment of staff and procurement of Capital
Oloup III	Dr. Jalinder D.	equipments (Process and Characterization), Raw
	Ambekar, ST-V	materials and consumables
	7 intockar, 51-v	<ul> <li>Initial trials for the synthesis of Anode materials</li> </ul>
1	Dr. Sonali D. Naik,	<ul> <li>Physico-chemical characterization of the anode</li> </ul>
	ST-V	materials
	D1-V	Fabrication of coin/button and pouch/rectangular type of
	Ms. Sonali A.	Na –ion battery/cells and their Electrochemical
	CONTRACTOR STREET CONTRACTOR CONTRACTOR	characterization
	Mahapure, ST-IV	
		PN/SP/068: Three Dimensional Nanostructure based
		Miniaturized and Flexible rechargeable lithium batteries for
		<u>flexible electronics</u>
		<ul> <li>Overall Planning and Execution of the Project as "Chief"</li> </ul>
V		Investigator".
		<ul> <li>Preparation and submission of progress report and</li> </ul>
		arrangement of project review meetings and
		<ul> <li>Presentation of Progress in PRSG Meetings.</li> </ul>
		Recruitment of staff and procurement of Capital
		equipments (Process and Characterization), Raw
		materials and consumables
		<ul> <li>Initial trials for development of flexible Cathode and</li> </ul>
		anode
		<ul> <li>Physico-chemical characterization of the active</li> </ul>
		materials
		<ul> <li>Fabrication of flexible Li –ion battery/cells and their</li> </ul>
		Electrochemical characterization
		<ul> <li>PN/SP/075: Centre of Excellence on Rechargeable</li> </ul>
		Battery Technology (pre cell)
		Overall Planning and Execution of the Project as "Co-
		Investigator".
		Preparation and submission of progress report and
		Presentation of Progress in PRSG Meetings.  Recruitment of staff and progrement of Capital
		recording of start and procurement of Capital
		equipments (Process and Characterization), Raw

materials and consumables

 Development of Li –ion battery chemistry of Materials up to 500 gm batch scale.

 Development of Na –ion battery chemistry of Materials up to 10, 100 & 500 gm batch scale.

Development of Solid State Polymer Li ion battery

Fabrication of full cells and optimization of materials with respect to enhanced capacity comparable commercial ones and ToT of the same.

 Collection of data of all materials for designing all kind of rechargeable prototype batteries.

 Design of equipments for material manufacturing at pilot level scale

 Design of equipment for manufacturing of fabrication of Li-ion cells at pilot level.

Regeneration of cathode and anode from spent batteries.

 The CoE shall establish necessary infrastructure to enable R&D, Innovation (IPR), Product Development and Testing.

PN/TS/21-22/P01: Physico-chemical testing, modification / development and electrochemical evaluation of Graphite fines supplied by GIL for its usage as Anode in Li-ion batteries and making Anodes in Li-Ion batteries using the same

 Define the properties of the End Product i.e. of Graphite and of the Anodes as well as the range of these properties.

 Evaluation of Graphite Fines supplied by GIL for all Physical & Chemical properties as required by end product (Graphite and Anodes) of the study.

 Modification of Graphite fines provided by GIL for physical & chemical properties for achieving desired properties / values in end product.

Physico-chemical and electrochemical testing of the Pristine and Modified Graphite fines

 Evaluation of its usage as Anode in Li-ion batteries by making suitable cells. Development of Anodes using the graphite.

 Preparation of detailed performance / test report of developed materials for usage of GIL as reference for its target customers.

 Detailing of various steps / processes / equipment / inputs required for manufacturing of anode and graphite developed across the product range and setting the parameters of each type.

Any other scope that may arise with mutual consent of

both parties.

### Arranging a lab visits

- Technical services Project:
- To Initiate the Technical services project with Industries/Startups/MSMEs
- Signing of MoU and NDA.
- Submission of Project proposal

### Transfer of Technology:

- Cost Calculations, Preparation of ToT Documents and Expression of Interest Documents,
- Discussions with Interested Parties

### Foreign as well as Indian Collaborations

- To establish the collaborations with Research Organization and Universities.
- Exploratory Project Activities
- To carry out Exploratory Research activities for the future sponsored projects, such as
- Development of Materials for Energy Storage & generation Applications.
- Development of Materials for Radiation Shielding Applications.
- Development of E-Nose/Sensor for VOCs based early stage detection of diseases.
- Flexible & Wearable Electronics: materials and devices.
- Nanomaterials/ Polymer Nanocomposite based Sensor Materials & Devices

#### Administrative responsibilities

- Stores and purchase related to project.
- Member of the various committees like LPC, Disposal Committee etc. Member/Chairman of the Screening / Selection/ Reviewing committee for the recruitment of project staff

#### Other

- Characterization Equipment related activities as Project manager/ In charge
- Maintenance and operation of TG/DTA/DSC
- Maintenance and operation of FE-SEM
- Guiding PhD/M.Phil/MSc./M.Tech./BE Students
- Organization of International/National conference
- workshop

Name of Group & I	Project In-charge &	Name of Project & brief details of work
1	Team Members	
Nanotechnology I Group I	Team Members Dr. Tanay Seth Dr. (Mrs. ) Varsha B. Raut	Center of Excellence on Additive Manufacturing Initiation and tendering of purchase of capital equipments/ materials through GeM portal; Table top X-ray diffractometer Induction Plasma System Chemicals, gases, raw materials etc. Interaction with suppliers and users regarding procurement of capital equipments To procure and Install custom made Induction Plasma System for the synthesis of nano /micron sized (spheroidization) powders Trouble free operation, fault diagnosis and routine maintenance of Transferred Arc Thermal Plasma (TAPR) system for the synthesis of nano powders Maintenance of gas lines, water chiller and water level switches etc. Synthesis of metal/ metal oxide nanopowders by Transferred Arc Thermal Plasma for FFT printing Physico-chemical characterisation of synthesised nanopowders/ spheroidized powders To investigate and optimize the effect of reaction parameters such as plasma power, plasma composition, rector pressure, quench gas flow rates on particle size and its distribution for various nano powders synthesized by using induction plasma technique Initial trials for spheroidization of irregularly shaped powders and their optimisation for AM applications Physico-chemical characterisation of synthesised
		nanopowders/ spheroidized powders

Name of Group & Group In-charge	Project In-charge & Team Members	Name of Project & brief details of work
Nanomaterials group Group incharge: Dr. P. V. Adhyapak	Dr. P. V. Adhyapak, PI     Mr. Sachin Karpe,     Member     Mrs. Aiswarya Remesh,     Member	Digitalization and Quantification Studies of High Sensitive Indigenous NOx Sensor and its Optical Calibration. Brief details of work:  1. Synthesis and characterization of nanostructured materials sensitive towards NOx.  2. Electrical and optical sensing characterization of the developed materials.  3. Preparation of proto-type NOx sensor.  4. Digitalization and calibration of developed electrical and optical NOx sensor.
	1. Dr. P. V. Adhyapak, PI 2. Mr. Sachin Karpe, Member 3. Mr. Ganesh Bhise, Member  Collaborator: (CDAC (H))	<ul> <li>Development of Smart Parking Management system using sensors, IoT and GIS technologies.</li> <li>Brief details of work:</li> <li>1. Development of an IoT device and interfacing CNG, NOx, SOx, and CO<sub>2</sub> sensors to monitor pollution levels in the parking infrastructures</li> <li>2. Integrating occupancy sensors within the parking infrastructure to identify free/occupied lots within the infrastructure.</li> <li>3. Displaying the sensor information on a GIS system and generating a positional spread of the pollution levels within the parking infrastructure and occupancy layout.</li> </ul>
	1. Mrs. Amruta Bang, PI	Self powered breath analyzer cum e-skin for potential health monitoring based on piezoelectric nanogenerator Brief details of work:  1. Development of self-powered Nanogenerator for Breath Sensing.  2. Development of Self-powered e-skin for diabetes detection.

Name of Group	Project In-charge &	Name of Project & brief details of work
&	Team Members	
Group In-charge		
Electronic Packaging Group (EPG)  Dr. Shany Joseph (Sc. D)	Dr. Shany Joseph (Scientist – D)  1. Dr.Shany Joseph(Sc.D) 2. Dr Ranjit Hawaldar (Sc.C) 3. Dr. Ranjit Kashid (Sc.B) 4. Dr Vijaya Giramkar (ST-V) 5. Mr Janardhan Gadde (ST-III) 6. Dr. Punam Jadhav (RA- III) 7. Dr.Ravindra Deshmukh( PA- II) 8. Ms. Adhitya K R (PA-1)	<ul> <li>PN/SP/079 Development of Micro Solid Oxide Fuel Cells         <ul> <li>(μ-SOFC) in LTCC Technology</li> </ul> </li> <li>Synthesis of electrolyte, cathode and anode materials and their characterization</li> <li>Preparation of Half cells and characterization</li> <li>Preparation of planar SOFC and characterization</li> <li>Fabrication of SOFC integrated LTCC packages with gas flow channels and integrated heaters for testing at H2e</li> <li>Preparation of final SOFC device in LTCC asper final design for demonstration</li> </ul>
	Dr. Shany Joseph (Scientist – D)  1. Dr.Shany Joseph(Sc.D) 2. Dr Ranjit Hawaldar (Sc.C) 3. Mr Janardhan Gadde (ST-III) 4.Dr. Ranjit Kashid (Sc.B) 5. Dr Vijaya Giramkar (ST-V) 6. Mr. Hrithik Kale (PA-1) 7.Ms. Aishwarya K P (PA-1) 8. Mr. Rohan Darve(PA)	<ul> <li>Fabrication of different designs of LTCC based packages with micro-channels and jet-impingement designs</li> <li>Testing of devices at IITB and design modification</li> <li>Fabrication of specified number of packages for cooling of 200W and 350 W processor for CDAC</li> <li>Preparation of Coderite and glass material for tape casting and their characterization</li> <li>Preparation of LTCC tapes using these indigenous materials.</li> <li>Fabrication of final device using CMET's LTCC tape and submit the required Number to CDAC</li> </ul>

Dr. Shany Joseph(Sc.D) Dr Ranjit Hawaldar(Sc.C) Dr. Vijaya Giramkar (ST – V) Dr. Ranjit Kashid (Sc.B) Mr Janardhan Gadde (ST-III) Mr. Pankaj Jagdale (PA-1)	<ul> <li>Synthesis of LTCC material, Silver, Silver-palladium</li> <li>Preparation of resin- LTCC/Ag/Ag-Pd/carbon composite</li> <li>Additive manufacturing trials and its optimization</li> <li>Development of 3d Printer in collaboration with M/s J G robotics, Mumbai</li> <li>Additive manufacturing of LTCC Package for packaging of optical chip</li> </ul>
. Ms. Jesly Joseph (PA-1) . Ms. Jyoti Kondhalkar(PA) . Ms. Chaitali Chaudhari (Administrative Assistant)	
Dr. Ranjit Hawaldar(Sc.C  Dr. Shany Joseph (Sc.D)  Dr. Ranjit Kashid (Sc.B)  Dr. Vijaya Giramkar (ST – V)  Mr Janardhan Gadde	PN/TS/018 Fabrication at high temperature spiral coils/probes wing LTCC technique  • Fabrication of eddy current sensor using LTCC as per specified design  • Testing of sensors at NML  • Fabrication of next set of sensors as per modified design  • Total three iterations to be tried.
).	(PA-1) Ms. Jyoti Kondhalkar(PA) Ms. Chaitali Chaudhari (Administrative Assistant)  Ranjit Hawaldar(Sc.C  Dr. Shany Joseph (Sc.D)  Dr. Ranjit Kashid (Sc.B)  Dr. Vijaya Giramkar (ST – V)

# C-MET, Pune Work Allocation to Employees

Non-Technical Staff (Administration)

Non-Technical Staff (Administration)			
Sl	Name	Work Allocated	
No.			
01	Mr P.V.Bhoite-	Establishment & Administration:	
	Office	All personnel matters relating to recruitment and promotion,	
	Assistant –I	establishment matters such as maintenance of service books, personal	
	Admin.Officer	files, leave records, personal claims, sanction advances, training,	
	(A)	higher studies, travel/transport etc. Overall responsibilities of Purchase	
		and Stores. Printing & Stationery, Security, Garden, House-Keeping	
		matters and General Administration. Physical Verification of stores,	
		Weeding out of old records, disposal of unserviceable/obsolete scrap	
		materials. Any other duties assigned from time to time.	
02	Shri G.R.Kale-	All establishment matters relating to staff of Pune. Maintenance of	
	Office	service books, Leave records, increment., All joining and resignation	
	Assistant-III	formalities. Sanction of advances, reimbursement of perks as per Staff	
		Rules/Policy Manual. To deal with other personnel matters of the staff	
		of Pune.Supply. permission for hire study, Recruitment of core &	
		project Staff, promotion of S&T and non S&T staff, ACR/ Probation	
		clearance. Monthly/quarterly reports. Training /Seminar etc. Matter	
		of Ph. D. Any other duties as assigned from time to time.	
03	Shri R.M.	To deal with all matters related to Purchase from Processing of	
	Damkale- Office	Indents (Import and Indigenous). Floating of enquiries	
	Assistant-III	(Single/Limited/Open Tender basis) up to issue Purchase Order.	
		Preparing Customs clearance documents. Submission of monthly	
		expenditure statement (Core/Sponsored/Technical Services project)	
		and follow up of work. Payment of bills and Annual Maintenance	
		Contract of Office/Laboratory Equipments. Maintenance of Indent	
		Process Register, Purchase Order and E.M.D/Security Deposit	
		Register. Any other duties as assigned from time to time.	
04	Shri	To Asst. Sh., R.M. Damkale in Purchase matter	
	V.R.Kondhalkar-	To deal with all matters relating to Stores, Printing & Stationery.	
	SA-III	Assistance to A.O. for Disposal of obsolete/unserviceable scrap	
		materials and weeding out of old records. Receipt and issue for	
		consumable and non consumable items, Maintenance of Stock ledger,	
		Physical Verification of stores, Payment of bills viz:-, Xerox,	
	1	Security, House-keeping, etc Payment of Travel/Taxi, Telephone,	
		Water/Property Tax, Payment of Garden, MSEB etc. Any other	
		duties as assigned from time to time.	
	Shri.	SSM will be exclusively used for Administration Office. Who will	
05	C.N.Chavan	perform necessary duties including Inward Xeroxing, File Moving,	
	SA-II	Filling of Papers, Meeting arrangement. Any other duties assigned	
		from time to time and finance section	

# C-MET, Pune- Finance Section-Work allocation of employees Non Technical Staff

SI	Name	Work allocated
No 1	Shri Pritam Saha,	Monitoring & shooting of day to day accounting & finance functions
1	Finance Officer	<ul> <li>Monitoring &amp; checking of day to day accounting &amp; finance functions</li> <li>Finalization of accounts –CMET Pune</li> </ul>
	i mance Officer	3 10 10 10
		• Coordination with auditors (Statutory/Internal/C&AG etc.)
		• Checking & monitoring Payroll (core & project staff) & MIS reports
		• Checking & approving all payments (Employees/ Project Staff / Vendors
		etc.) & all receipts – (DDO functions)  • Taxation & Statutory matters – Income Tax/GST/TDS/ Profession
		Tax/PF/NPS etc
		PFMS entries –monitoring & approving
		• Liaison with banks – Foreign LCs etc.
		Checking Project proposals / Project commencements/ Projects closures
		(Financial aspects)
		Preparing Utilization Certificates & Statement of Accounts for all
		projects.
		Processing all payments through GEM / Bharatkosh
		Any other work as assigned by Director from time to time
2	Shri L B Gupta	Maintenance of day to accounts
	Accountant:	Assisting during finalization of accounts –CMET Pune
	OA-I	Preparation of Salaries (Pune Lab)
		Employee ITDS & Form 16 generation
		Attending auditors (Statutory/Internal/C&G etc.)
		Preparation of monthly MIS reports for Pune Lab
		<ul> <li>Preparation of Bank Reconciliation Statements – C MET Pune</li> </ul>
		Processing of TA & DA claims
		PFMS entries
		Any other work as assigned by FO from time to time
3	Shri.S. M.	<ul> <li>Processing of all payments – Core &amp; Projects</li> </ul>
	Parsankar	CEA reimbursements & LTC settlements
	OA-III	Project Staff Salaries
		Accounting for all kind of receipts
		LC matters – Inland & Foreign
		Day to day communication with banks
		Assisting in professional tax matters
	GL LT L	Any other work as assigned by FO from time to time
4	Shri Rahul Bagad	<ul> <li>Processing of medical reimbursement claims – Core &amp; Projects</li> </ul>
	SA-III	Processing of vendor claims - Core & Projects
		<ul> <li>Processing other payments – Core &amp; Projects</li> </ul>

Data entry in Tally
NPS remittances
<ul> <li>Monthly /Quarterly compilation of data for GST &amp; ITDS return submission</li> </ul>
Arrangement & submission of regular records to auditors
Any other work as assigned by FO from time to time