

UGC- DAE CONSORTIUM FOR SCIENTIFIC RESEARCH
CALL FOR PROPOSALS FOR COLABORATIVE RESEARCH
2019-2020
AT UGC-DAE CSR, KALPAKKAM NODE

The UGC-DAE Consortium for Scientific Research is an Inter–University Centre (www.csr.res.in) established by the University Grants Commission and provides access to various research facilities of DAE. The Consortium has set-up a number of state-of-art research facilities in the area of Material Science at Indore, which are primarily meant for researchers from universities and other educational institutions. The consortium also operates similar CSR Centres at Mumbai and Kolkata.

A UGC-DAE CSR Node has been established at Kalpakkam, Tamil Nadu (about 70 Kms from Chennai). It has set up comprehensive characterization facilities such as **Field Emission Scanning Electron Microscope (FE-SEM), Focused Ion-Beam Scanning Electron Microscope (FIB-SEM), High Resolution Transmission Electron Microscope (TEM), -ray Photoelectron Spectroscopy(XPS), Glancing Incidence X-ray Diffraction (GIXRD), 15T Magneto-resistance setup, Ball indentation, Small punch creep, NMR, 7T SQUID Magnetometer, Raman spectrometer, Atomic Force Microscope.** Materials synthesis facilities in terms of **Infrared float zone single crystal furnace, High Energy Ball Milling, electron beam evaporation system, RF Sputter deposition system are available.** Advanced computational facilities are also available. **A 200 KV heavy ion accelerator** has also been installed at the Node. Apart from these, access to advanced physical, chemical and engineering facilities at IGCAR (www.igcar.gov.in) can also be provided through the Node and may be used for collaborative research.

During the last few years, about 50 Collaborative Research Scheme (CRS) proposals had been sanctioned to various universities to carry out collaborative work under the aegis of UGC-DAE CSR. For the year **2019-'20**, research proposals are invited from Universities/academic institutions in the following areas:

Materials Science – Single crystal Synthesis, Thin films, Nano-materials, Soft condensed matter, Superconductivity & Magnetism, Defects & Ion beam modification, Materials modeling

Metallurgy - Advanced structural materials, Structure-Property Correlations, Corrosion and Coatings, Non-Destructive Evaluation, Mechanical properties, Welding.

Materials Chemistry - Thermochemical properties of alloys and ceramics, Synthesis and characterization of materials for chemical sensors, Novel extractants and resins, Phase diagram studies, Synthesis and characterization of glasses containing rare earths, Ultratrace analysis.

Apart from the above, any other interesting area of research will also be considered. Collaborative research schemes may be proposed for a period of upto 3 years. Financial provision would include support of one project fellow/student, travel support as per CSR rules, (limited eligible train fare) for visiting Kalpakkam for measurements, etc. and limited funds towards consumables and contingencies. Subsidized accommodation for the project student will be provided, subject to availability, during their stay at Kalpakkam for collaborative research.

Proposals may be submitted on or before **June 15, 2019**. The application form is available on the website: www.csr.res.in. The proposals will be shortlisted based on the merit of the research proposals and will be called for detailed presentation during **June/July 2019**. Preference will be given to those Universities/educational institutes, who have not been supported so far under long term CRS. Duly filled application forms should be submitted (electronically / hard copy-Soft copies will be considered subject to receipt of hard copies) to:

Dr. N.V. Chandra Shekar,
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Via Kokilamedu Gate, KOKILAMEDU-603 104, T.N
Tel: [044-2748 0500](tel:044-27480500) Ext. 21918 or 21919(off) URL: www.csr.res.in Email: nvcshekar@csr.res.in