GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF SCIENCE AND TECHNOLOGY
(Technology Mission Division)

Call for Multi-Institutional Centres on
"*Materials for Energy Conservation and Storage Platform*" *(MECSP)* - 2017

Background

Deadline for Full Proposals: **01 November 2017**	
Duration: 5 years	**Project cost: 10 Crore**

Materials for Energy Conservation and Storage (MECSP), a theme based initiative to support research and development for entire spectrum of energy conservation and storage technologies from early stage research to technology breakthroughs in materials, systems and scalable technologies to maximise resource use efficiency. This initiative supports feasibility assessment of fresh ideas/ concepts, including various emerging and disruptive technologies, for their potential conversion into useful technology/ product.

Aim

The purpose of this call is to underpin recognised centres of energy materials research, to encourage those centres to link with new research groups working in complementary areas and to link centres into a coordinated national network. The ultimate aim of this call is to create a strengthened energy materials research community that covers the full breadth of energy research areas and that is strongly linked both nationally and internationally.

This call is for applications for proposals to set up multi-institutional research centres for energy materials. The successful centres will be required to work together forming a national network of energy materials research groups (The network must involve a minimum of five academic / research institutions preferably with user's participation) with the intent of forming a coherent Indian community of energy materials researchers. The prioritisation panel will be asked to support centres that will be focussing on different areas.

Thrust Area

Applications should show that the proposed centre has a breadth of materials research capability, that the applicants have capability in multiple energy technology areas, and that they are keen to engage with other energy materials research groups in India. Research programmes that are described in the application should be multidisciplinary and interdisciplinary, seeking to link theoretical and applied research, focussing on real world problems. Applications should address multiple research 'themes', few examples of research streams are given below.

Suggested research ‘themes’

- Novel photochemical materials systems.
- Multifunctional materials for energy applications.
- Materials for energy conversion and storage.
- Materials modelling and characterisation.
- Structural and coating materials.
- Smart materials for energy applications.
- New electrochemical and catalytically active and thermoelectrically materials.
- Optimized ceramic-based composites and new metallic alloys for the highest thermo mechanical loading conditions.

Please note that these examples are for illustrative purposes only.

Applications should include support for networking as well as a defined programme of research. The successful centres will be asked to create and contribute to a national ‘materials for energy network’ that includes all the successful centres as well as groups outside the centres. Flexible funding to support emerging research areas may be included but should be a minor part of the proposal, and a robust system for allocating the flexible funding to research activities must be described in the case for support.

Equipment

Researchers are requested to make use of existing facilities and equipment, including those hosted at other universities. If equipment is needed as part of the research proposal, applicants must follow DST’s norm for requesting equipment.

Eligibility

This call invites proposals from Indian applicants in multidisciplinary consortium only. The consortium must involve a minimum of five academic / research institutions to submit a proposal for multi-institutional research centres. Indian applicants are advised to interact with Scientists from public as well as private sector and academic/ research institutions for formulating the proposal. Applications are to be submitted by consortia of Faculties/Scientists working in regular position in recognised Academic Organisation/Public funded R&D institution/Laboratories etc. Participation of industry is desirable. The roles and responsibilities of each partner should be clearly delineated in the proposal. The industrial partner should have proven standing and R&D capability in the area of Energy Materials.

Proposal Submission

Please submit the complete proposal in an Envelope marked “Call for Multi-Institutional Centres on “Materials for Energy Conservation and Storage Platform” (MECSP)-2017 / PI Name)". 3 hard copies of complete project proposal in prescribed format with all enclosures (1 marked original + 2 hard copies) with a soft copy of complete proposal and of Executive Summary in MS word and PDF in Pen Drive are to be addressed to: Dr. Ranjith Krishna Pai, Scientist 'D' / Principal Scientific Officer, Room no: 13-C, Block - 1, Technology Mission Division, Department of Science and Technology (DST), Ministry of Science and Technology, Government of India, Technology Bhavan, New Mehrauli Road, New Delhi -

110016 before 5 pm of the closing date of the call.

Soft copy of Project Proposal is to be e-mailed (Subject Captioned: Call for Multi-Institutional Centres on “Materials for Energy Conservation and Storage Platform “MECSP-2017 / PI Name” to ranjith.krishnapai@gov.in on or before the 5 pm on the closing date.

National Importance
Clearly articulate statement of the national importance of the proposed research.