

Ability of a nation to harness nature as well as to cope up with the challenges posed by it is determined by its knowledge of materials and its ability to develop and produce them for various applications. Advanced Materials are at the heart of many technological developments that touch our lives. Electronic materials for communication and information technology, biomaterials for better health care, sensors for intelligent environment, energy materials for renewable energy and environment, light alloys for better transportation, materials for strategic applications and more. India has its own unique set of resource and technological challenges. Therefore, it is proposed to issue a call for proposal for advance materials comprising of following subdomains and any other innovation in field of materials:

(a) Structural Materials: - The engineering materials are divided into two themes: Structural and functional. As India is developing rapidly, the requirements of quality structural materials are on the rise. High level of demands is placed on various sectors including steel, cement, light metals and alloys, etc. This, in turn, requires quality raw materials and availability of power at affordable price. At the same time, there is a need for newer structural materials such as advanced composites and particulate materials. These will include steel, light alloys, Advanced Composite Materials, Particulate Materials, Ultrahigh Temperature Materials etc.

(b) Functional Materials: - In addition to structural materials, electronic, opto-electronic, energy and functional materials are needed for variety of applications such as electronics, photovoltaics, communication and information technology, sensors, etc. They are equally critical for the devolvment and security of the nation. These shall include Electronic Materials, Energy Materials, Optoelectronic Materials and Devices, Smart Materials, Earth Abundant Element Based Functional Materials and technical textiles.

(c) Emerging Materials: - While there has been tremendous improvement in engineering materials over decades, materials scientists and engineers have been coming up with newer and better materials every few years. Therefore, a theme on emerging materials has been included. These shall include: - Nanomaterials, Biomaterials and Devices, Polymeric and Soft Materials, Glassy and Amorphous Materials, Bio-Inspired and Patterned Functional Materials.

**However, the call is not limited to these areas only.*

The funding shall be as per TDB guidelines. For any query, please contact scientist1@tdb.gov.in

Last Date for application submission: **05th February, 2022.**