



**NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA**

**Webinar  
on**

## **Opportunities in Bioceramic Materials in Orthopedic, Dental and Tissue Engineering Application (OBMODTEA 2020)**

**25-29 September, 2020**

**[Registration form]**

1. Name:
  2. Position:
  3. Department:
  4. Institution/Organization:
  5. Address:
  6. E-mail Address:
  7. Mobile No.:
- Accommodation Required: Yes / No

Date:

Place:

**Signature of the Applicant**

Forwarded through Head Dept./Institution.

### **ABOUT NIT ROURKELA**

National Institute of technology, Rourkela is one of the premier center for teaching, research and industrial consultancy. The institute has 22 academic departments. The campus is situated in the green environment.

Rourkela is located in the north-western tip of the Indian state Odisha at the heart of a rich mineral belt. It is surrounded by a rose of hills and encircled by rivers. One of the largest steel plants of the steel authority of India limited is situated here.

**DEPARTMENT OF CERAMIC ENGINEERING:** The Ceramic Engineering department at NIT Rourkela has specialized faculties in all important areas of ceramic engineering such as Industrial ceramics, Electroceramics, Bio & Nano ceramics, Traditional ceramics, Structural Ceramics and Advanced Ceramics. The department has well equipped laboratories and the academic and research activities in the department focus on the frontier areas of ceramic engineering.

### **IMPORTANT DATES:**

Receipt of applications : **September 22, 2020.**

Course duration: **Sept 25 to Sept 29, 2020.**

**Webinar on**

## **Opportunities in Bioceramic Materials in Orthopedic, Dental and Tissue Engineering Application(OBMODTEA 2020)**

**25-29 SEPTEMBER, 2020**

**Sponsored by**

**Department of Ceramic Engineering**



**Prof. Sudip Dasgupta**

**Organized by**

**Department of Ceramic Engineering  
National Institute of Technology Rourkela  
Odisha-769008, India**

## INTRODUCTION:

Bioceramics became an accepted group of materials for medical applications, mainly for implants in orthopaedics, maxillofacial surgery and for dental implants. The medical community has accepted the bioceramics after a number of clinical tests. In the proposed webinar, the biological, chemical and mechanical evaluations of bioceramics will be discussed from the standpoint of cytotoxicity, tissue irritability, bioceramics-tissue interface, cell adhesion to biomaterial surface, interaction with body fluid, its mechanical strength and wear resistance.

This course will be organized by the Ceramic Engineering Department, NIT Rourkela during 25-29 September, 2020. The goal of this workshop is to explore the insights of advanced synthesis and processing for bioceramic materials to find solutions for emerging challenges in orthopaedic, dental and tissue engineering applications.

## TOPICS TO BE COVERED:

- ❖ Overview of bioceramic materials and its application areas in orthopaedic and dental sites
- ❖ Opportunities for development of new functionalities in bioceramic materials.
- ❖ Exploring possible ways to improve the performances of bioceramics in orthopaedic and dental sites

## SCOPE OF THE PROGRAMME:

This webinar offers a unique opportunity to acquire comprehensive knowledge and strengthen skills in current state-of-art research in the field of application of modern bioceramic materials for orthopaedic and dental disorders and diseases. This will provide a forum for discussion on theoretical as well as practical aspects of advanced and upcoming biomaterial fabrication and processing technologies, exchanging research ideas, exploring challenges and possible solutions and future scope of the research. Eminent experts from Jadavpur University and CSIR laboratories will be invited to deliver the expert lectures on various topics related to the workshop. Scope of the course is to introduce fundamentals of bioceramic materials properties, processing, analysis, interpretation of possible outcome related to its clinical applications. Also the scope is to familiarize the audience with the use of bio nanoceramics to create new functionalities when interacting with biological molecules or structures. Understanding the limitations of the existing biomaterials, finding new ways to improve the performances of bioceramic materials for orthopaedic and dental applications will be the main focus of the course. The course is designed for academia (Students and faculty) and industry persons interested in harnessing new processing technologies for fabrication of next generation biomaterials for orthopaedic and dental sites.

## REGISTRATION

Registration form is available on website.

Website: [www.nitrkl.ac.in](http://www.nitrkl.ac.in)

Registration starts: **22<sup>nd</sup> September 2020**  
Last date of Registration: **24<sup>th</sup> September, 2020**

**A Scanned Copy of signed registration form  
may be sent by e-mail.  
dasguptas@nitrkl.ac.in**

**Address for Correspondence:**

**Dr. Sudip Dasgupta**

**(Coordinator: OBMODTEA 2020)**

**Department of Ceramic Engineering,  
NIT Rourkela,  
Odisha- 769008, India  
Mobile no.: 8117874976  
E-mail: dasguptas@nitrkl.ac.in**