

One Day National Workshop
(A Part of Centenary Celebrations)

On

**“Wear, Corrosion and Biocompatibility of
Ta-coated 316L stainless steel for orthopedic
applications”**

Sponsored by Science and Engineering Research
Board (SERB), Govt. of India

November 10, 2022



Organized by

Department of Metallurgical Engineering
Indian Institute of Technology
(Banaras Hindu University)
Varanasi-221005
India

Venue

Conference Hall
Department of Metallurgical Engineering
IIT (BHU) Varanasi-221005

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Introduction:

With the advent of global population aging and degenerative joint diseases have become a global public health problem. Currently, the popular biomedical metals for bone repair applications include austenitic stainless steel, titanium alloys, and Co–Cr-based alloys. Austenitic stainless steels are the most commonly used for artificial implants. The wear resistance of 316L SS surface is not strong enough; a long-term wear will further aggravate the degeneration of surface properties. Therefore, improving the wear resistance, corrosion resistance and biocompatibility of 316L SS after coating is of great significance for its applications in the biomedical field. Tantalum (Ta) is an excellent biomedical metal material with good corrosion resistance and biocompatibility.

Who can attend?

Faculty members of Institutes/Universities / Engineering Colleges approved by AICTE working in the departments of Mechanical Engineering/ Metallurgical, Materials science, Ceramic Engineering, Physics, Chemistry /Mathematics and other allied departments related to the mentioned area are eligible to attend the course..

Registration Process

Fill in the required fields below the Google form link by **November 08, 2022**.

Registration Link:

<https://docs.google.com/forms/d/e/1FAIpQLSc6k6Y7fRsovJ0WQiwDqjDNHscOenVySE1VLHj9QpXc8doxDA/viewform?usp=sharing>

Registration fee: Nil

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OBJECTIVES:

The present course will be focused to successful development of Ta-coating on 316L stainless steel to improve wear resistance of 316L stainless steel, enhance the corrosion resistance, and biocompatibility behavior.