

## REGISTRATION FORM

Name

Contact No.

Company Name

Company Address

Cheque/DD No.

### Details of Additional Participants

Name/

Contact No.

Email

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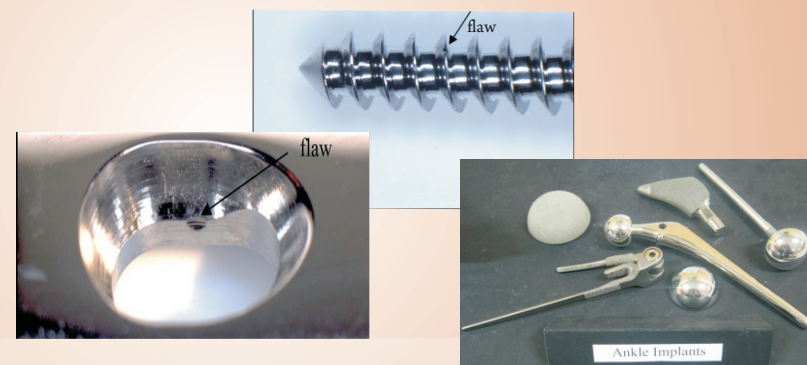
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# One day Workshop on Corrosion Control in Biomedical Devices

August 19 (Saturday), 2017



in association with  
Department of Analytical Chemistry, University of Madras  
Department of Chemistry, Anna University



at School of Chemical Sciences Auditorium  
University of Madras, Guindy Campus,  
Chennai 600 025

## ABOUT THE WORKSHOP

Biomaterials and their applications as implant devices and artificial organs are widely recognized as an emerging area for material scientists, biotechnologists, chemists, engineers and medical professionals. Such materials are synthetically produced outside the human body and once found suitable, are placed as human implants. Surgical management with implant devices is one of the major workable solutions as the pain has to be alleviated and patients have to resume their physical activities.

The growing number of implant surgeries coupled with parallel increase in the revision surgeries of hip and knee implants has brought to focus the need to predict and understand the causes of failures of implant materials. The electrochemical and mechanical properties play a critical role in determining the life span of an implant. The onset of any one form of corrosion, effects the mechanical properties of the implant leading to removal of the implant. The present article deals with the need for orthopaedic and dental implants, the metals and alloys currently used and their electrochemical corrosion and mechanical behaviour under invitro conditions. Surface engineering of metals and alloys with coatings offer an ideal solution to enhance the implant performance invivo with superior osseointegration and blood compatibility. Therefore, we must educate our academic, scientific, dentists and physicians on how to ensure that medical devices are well-protected against corrosion. If we do not take adequate measures in this regard, then the future India will have to face an expensive challenge on revision surgery and trauma care.

This course is designed to bring together students and researchers from various fields in this multidisciplinary areas involving Engineers (Biomedical, Mechanical, Chemical, Metallurgy, Electrical and Electronics) / Chemists and Materials Scientists with biologists/Biotechnologists along with Clinicians (Orthopaedic, Dental, Ophthalmic, Vascular and Cardiac surgeons). An appropriate binding of research ideas/expertise ensures a comprehensive understanding of the corrosion processes and ways to develop corrosion resistant of biocompatible materials. In particular, sufficient reading materials will be provided to enable further learning and be able to teach elective courses and practice the use of corrosion resistant materials to overcome failures/good engineering/corrosion control/practices.

The lecture sessions will cover the following topics with a blend of research- and practice- oriented viewpoints by eminent experts from Academic, Research institutions and Hospitals covering the following topics

- Corrosion of implants
- Testing and characterization of implants
- Nanobioceramic coatings
- Biodegradable Mg alloys
- Biomechanical evaluation implants
- Surface modification and surface engineering
- Graphene and bioglasses
- Case studies by physicians
- Biological evaluation

## Registration Fee

Industry personnel –	Rs. 4,000/-
Faculty and researchers/scientists –	Rs. 3,000/-
Full-time MD/ME/MTech/PhD students –	Rs. 2,500/-
MBBS/BDS/M.Sc/M.Phil/BE/BTech students –	Rs. 1,000/-

D/D or cheque should be drawn in favour of “NIIS South Zone” payable at Kalpakkam and send to the following address along with the registration form on or before August 4, 2017

Mr T.D. Sundarakshan  
Manager, NIGIS South Zone  
New No.3, First Floor, Potter's Street, Saidapet,  
Chennai 600 015, Tamil Nadu  
Phone: 044-48516160 Mobile: 94445 63160  
Email: [nacesz15@gmail.com](mailto:nacesz15@gmail.com)

In case of online transfer, scanned copy / digital output of the proof of e-transaction should be emailed to the above email id, along with the registration form. Details for online transfer are given below.

Name of the Account	: NIIS South Zone
Account No.	: 10503337031
Nature of Account	: Current
Bank Name & Branch	: State Bank of India DAE Township, Kalpakkam 603 102, Tamilnadu
IFS Code	: SBIN0002219
MICR Code	: 600002211

At the end of the program, all participants will receive a 'Certificate of Participation'.

## Coordinators

### Dr. N. Rajendran

Professor of Chemistry, Director, Centre for International Affairs,  
Anna University, CEG Campus, Guindy, Chennai 600 025

### Dr. K. Ravichandran

Associate Professor & Head in-charge, Department of Analytical Chemistry,  
University of Madras, Guindy Campus, Chennai 600 025

### Dr. T. M. Sridhar

Assistant Professor, Department of Analytical Chemistry, University of Madras,  
Guindy Campus, Chennai 600 025