Indian Institute of Technology Kanpur
Kanpur- 208016

INTRODUCTION

An intensive course on Micro & Nano-Fabrication will be conducted between 16th to 20th March 2015, sponsored by the Continuing Education Program of IIT Kanpur. The program will be specifically useful for persons who are concerned with training/teaching, research and industrial applications of micro/nano fabrication, micro-machining, nano-characterization and nano-finishing. The course is also designed for catering to the needs of scientists from R & D labs and practicing engineers from industry.

OBJECTIVE

In recent years, rapid advances in technology have given rise to miniaturized and light weight products with increased and more powerful functionality. Such trend of size reduction poses demand for enhanced precision of manufactured products not only in terms of size and shape, but also the quality of the machining. The technologies include various lithographic techniques, electric discharge machining, laser machining, electrochemical machining and focused ion beam milling. These technologies involve different physical mechanisms, yield different results, and are applicable in different situations. The present workshop will introduce various techniques for micro- and nano-fabrication, highlight various applications and metrological methods for measuring the structures. Emphasis will be placed on physical principles and the primary objective of imparting working knowledge in the above mentioned areas will be achieved through laboratory sessions and visits to specialized centers.

COURSE CONTENTS

Lectures will cover the following topics:

- Introduction to nanoscience & nanotechnology
- Micro-machining & structuring
- Laser micro machining
- Lithographic techniques
- Nano-structuring by bottom-up processes
- Chemical and nano-finishing processes
- Metrological techniques for micro-/nano-structures
- Microscopy: optical/SEM/TEM/AFM
- Spectroscopy/Ellipsometry
- Meta materials & plasmonic surfaces

Lectures will be delivered by experts in the respective areas working at IIT Kanpur and other reputed institutions.

COURSE FEE

University / Academic Institutions

There is no course fee for engineering/science teachers from University / Academic Institutions / AICTE recognised colleges. Participants will be paid o and fro train fare (III AC) via shortest route (strictly on the production of ticket) and free boarding and lodging in the guest house/hostels at IIT Kanpur. The applications should reach the course coordinators latest by 25th Jan. 2015, giving the information as shown in the proforma. The Participants are required to get their applications duly recommended by the Head of the Institution/Department. The candidates should have BE/B.Tech or M.Sc. degree in Physics/Material Science/Photonics. Candidates with P.hD. and/or M.E./M.Tech. (Mechanical/Production/ Electrical/ MaterialScience/ Chemical/ Instrumentation/ Physics) will be preferred. The selected candidates will be required to send a refundable caution deposit of Rs.1000 to ensure their commitment for participation in the above course. This amount will be refunded only to those candidates who attend the course (Please do not send the demand Draft until you receive a confirmation of your selection by email.)

PARTICIPANTS FROM INDUSTRY/ R & D LABS

Private and public sector companies and other organizations are welcome to depute their executives, managers and engineers to participate in the course. The sponsoring organizations are required to pay a registration fee of Rs.7500 per participant. The participants will have to make their own arrangements for travel. Boarding and lodging can be arranged on payment basis in the guest house/hostels at IIT Kanpur based upon prior request and availability.

The list of selected candidates will be displayed on the web-page of the workshop (www.iitk.ac.in/fabrication)

MODE OF PAYMENT

The registration fee or caution deposit should be sent by demand draft payable at the "State Bank of India, IIT Kanpur Branch and drawn in favor of **"MICRO & NANO FABRICATION – 2015".**

IMPORTANT DATES

Receipt of Application: 25th Jan. 2015
List of selected Candidates: 31st Jan., 2015
Duration of the Workshop: March 16th to 20th March, 2015

ADDRESS FOR CORRESPONDENCE

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Course Website: www.iitk.ac.in/fabrication

Short Course on Micro & Nano Fabrication – 2015

16th - 20th March 2015

Indian Institute of Technology Kanpur

Registration form is available at
http://www.iitk.ac.in/fabrication/Registration/Registration.htm
and requires the following information (not hand written)

Name: _____
Position: _____
Department: _____
Institution/Organization: _____
Address: _____
_____
E-mail Address*: _____
Mobile No.: _____ Telephone No.: _____

Educational Background (starting from U.G.)

Degree	Specialization	Institute/ University	% Of Mark	Year of Passing
B.Tech./ B.E.				
M.Tech./ M.E./ M.Sc.				
M.Phil./ Ph.D.				

Areas of Research
_____
_____

Payment details
Demand Draft No.: _____ Dated: _____
Amount in Rs. _____ Drawn at: _____
Sponsored by _____
Name: _____
Designation: _____
Organization: _____

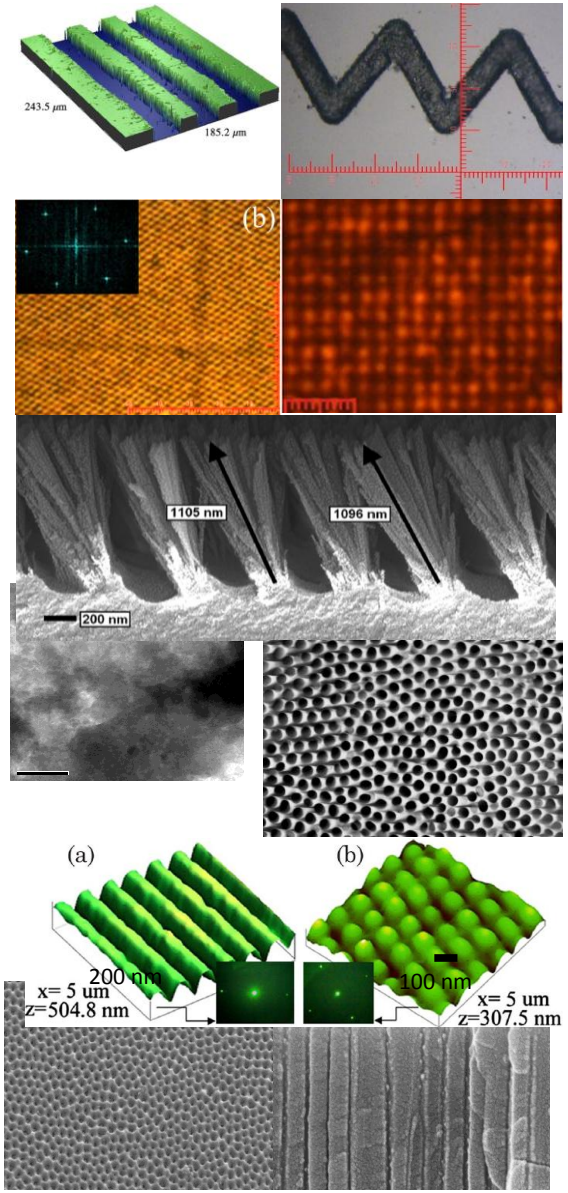
Signature of applicant:

Recommendation:

Signature of Head
(Department/Head of the Institution/Organization)

*** Mandatory**

Note: Correspondence will be done through e -mail, but application's hard copy is also required.



Short course on

Micro & Nano Fabrication 2015

16th - 20th March 2015

for Teachers, Practicing Engineers and Scientists

Sponsored by

All India Council for Technical Education, New Delhi
(Under the Continuing Education Program, IIT Kanpur)

Coordinators
Prof. J. Ramkumar
Prof. S. Anantha Ramakrishna

Department of Mechanical Engineering
&
Department of Physics

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