



BMS

INSTITUTE OF TECHNOLOGY AND MANAGEMENT

Avalahalli, Doddaballapur Main Road, Bengaluru – 560064

DEPARTMENT OF PHYSICS

Event Name	Open course
Topic	Thin film technology and opto-electronic devices
Date	16 th – 20 th June 2020
Highlights of the event	Preparation, characterization and applications of thin films for sensing and photonic applications. Fundamentals of photonics and optoelectronic devices for Lasers communication and fiber communication
Number of students Participated	06
Day wise session details	<p>Day 1:</p> <ul style="list-style-type: none">• Preparation and characterization of thin film for LPG and humidity sensor applications.• Advanced 2D hybrid materials for optical/electronic/ energy storage applications <p>Day 2 :</p> <ul style="list-style-type: none">• Spectroscopy methods to probe 2-D materials applications• Promising materials for solar cells. <p>Day 3:</p> <ul style="list-style-type: none">• Basics of Photonics• Lasers in Communication <p>Day 4:</p> <ul style="list-style-type: none">• MEMS to MOEMS/NOEMS• Thin film preparation techniques, properties and applications. <p>Day 5:</p> <ul style="list-style-type: none">• Optoelectronic devices and Optical Fibre Communication• Thin film preparation techniques, properties and applications.

Department Vision

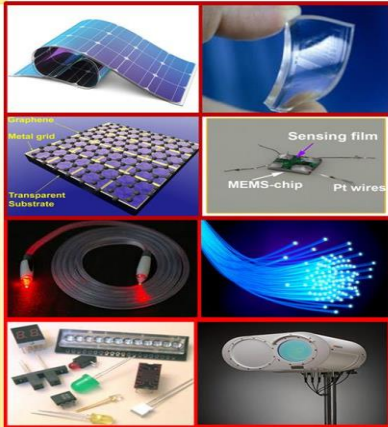
To impart sound fundamentals and concepts in Physics which helps students to nurture scientific temperament and creativity in the field of engineering.

Department Mission

To provide sound knowledge in applied Physics through innovative techniques and scientific methodology. To motivate students to pursue scientific analysis and develop problem solving ability in the field of engineering.

Theme of the open course

Thin films are generally used to improve the surface properties of solids. Transmission, reflection, absorption, hardness, abrasion resistance, corrosion, permeation and electrical behaviour are only some of the properties of a bulk material surface that can be improved by using a thin film. Optoelectronic devices are electrical-to-optical or optical-to-electrical transducers, or instruments that use such devices in their operation.



Topics	Resource Persons
Thin films – methods of preparation, Properties and applications of thin films	Dr.R.Lokesh Associate Professor, Department of Physics, BMSIT&M
Preparation and characterization of thin film for sensing applications.	Dr.N.Dhananjaya Associate Professor & HoD, Department of Physics, BMSIT&M
Advanced 2-D Materials – New thin film Technology Horizons, Applications of 2-D Materials - Optical/electronic /bio sensors, energy storage.	Dr.C.Kavitha Assistant Professor, Department of Physics, BMSIT&M
Lasers and optoelectronics, Optical fiber communication systems	Mrs.Yashaswini Assistant Professor, Department of Physics, BMSIT&M
Basics of Photonics – path way to optoelectronic devices. Preparation of thin films using spin coating unit useful in thin film devices	Dr. Daruka Prasad, Assistant Professor, Department of Physics, BMSIT&M
(Lab session)	

Registration Fee : Rs.100/-
Internet Banking /NEFT details: HoD Physics, BMSIT&M, Allahabad bank, Avalahalli branch, Bengaluru – 560064.
SB A/c No: 21096732072, IFSC: ALLA0212019

Coordinator

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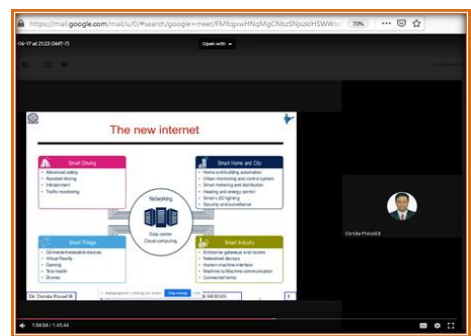
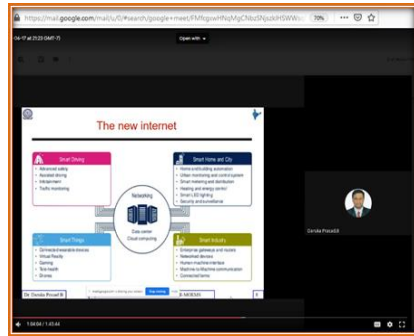
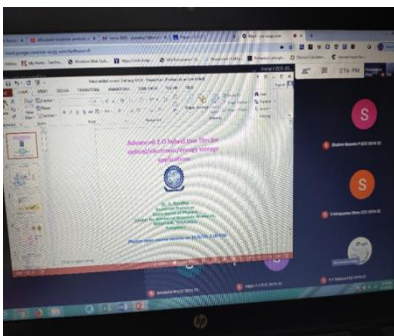
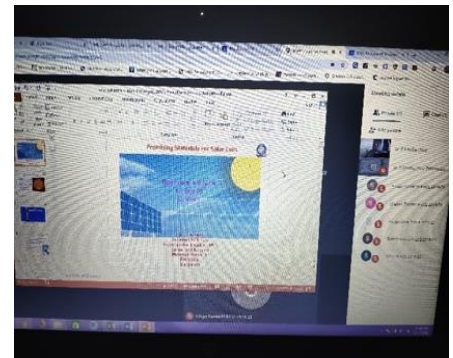
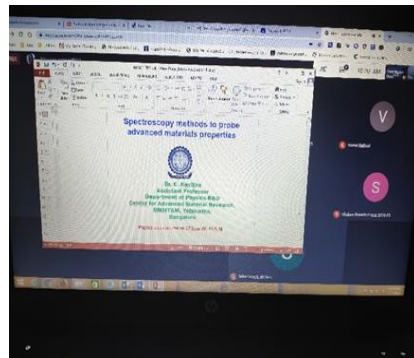
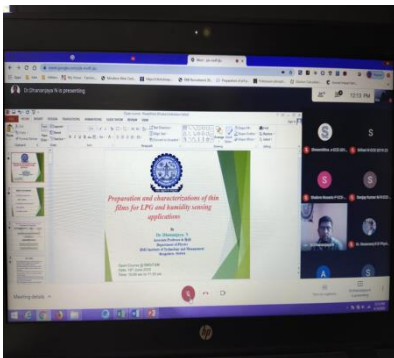
Yelahanka, Bengaluru-560064

Open Course - June 2020
Thin film Technology and Opto-electronic devices



Date: 16-20 June 2020

Organized by
 Department of Physics
 B M S Institute of
 Technology & Management
 Doddaballapur Main Road, Avalahalli,
 Yelahanka, Bengaluru- 560 064,



MEMS- Contd.,

- Components between 1 and 100 μm in size
- Devices generally range in size from 20 μm to a millimeter
- Components arranged in arrays (e.g., digital micromirror devices) can be more than 1000 mm²
- Central unit that processes data (an integrated circuit chip such as microprocessor) and several components that interact with the surroundings

MEMS microcantilever resonating inside a scanning electron microscope

Geometric sensor

