

AICTE Training And Learning (ATAL) Academy
Faculty Development Program (FDP) on
“FUNDAMENTALS OF THIN FILM PREPARATION & CHARACTERIZATION TECHNIQUES”
19 – 30 September, 2022



Organized by
Department of Physics
Tripura University (A Central University)

About the FDP:

A thin film is a 2D nanomaterial and is composed of layers of materials ranging from fractions of a nanometer (monolayer) to several micrometers in thickness. The controlled synthesis of materials as thin films (a process referred to as deposition) is a fundamental step in many applications such as magnetic recording media, electronic semiconductor devices, Integrated passive devices, LEDs, and for both energy generation (e.g. thin-film solar cells) and storage (thin-film batteries). This FDP is planned to give an overview of the fundamentals of the thin film technology, including deposition techniques, structure and morphology, film properties, characterization techniques and applications. Thin Film Preparation techniques such Langmuir-Blodgett (LB) technique, Layer-by-Layer (LbL) Self assembled technique, Spin Coating, Self standing films, sputtering, vacuum deposition etc. will be discussed. Characterization techniques such as Optical characterizations (UV-Vis absorption, Both steady state and dynamic Fluorescence etc), Structural Characterizations using FESEM, AFM, BAM etc, will also be discussed. Hands on training on preparation of thin films preparations & characterizations will also be given.

Week 1 – Online (7:00 pm – 9:30 pm):						Week 2 – Offline (9:30 am – 4:30 pm):				
19.09.2022 Monday	20.09.2022 Tuesday	21.09.2022 Wednesday	22.09.2022 Thursday	23.09.2022 Friday	24.09.2022 Saturday	26.09.2022 Monday	27.09.2022 Tuesday	28.09.2022 Wednesday	29.09.2022 Thursday	30.09.2022 Friday
7:00 – 7:50 Session 1 (I)	7:00 – 7:50 Session 2 (I)	7:00 – 7:50 Session 3 (I)	7:00 – 7:50 Session 4 (I)	7:00 – 7:50 Session 5 (I)	7:00 – 7:50 Session 6 (I)	9:00 – 9:30 Inauguration	9:30 – 12:00 Session 8	9:30 – 12:00 Session 10	9:30 – 12:00 Session 12	9:30 – 12:00 Session 14
8:00 – 8:50 Session 1 (II)	8:00 – 8:50 Session 2 (II)	8:00 – 8:50 Session 3 (II)	8:00 – 8:50 Session 4 (II)	8:00 – 8:50 Session 5 (II)	8:00 – 8:50 Session 6 (II)	9:30 – 12:00 Session 7	12:00 – 1:00 Article 1 Discussion	12:00 – 1:00 Article 2 Discussion	12:00 – 1:00 MCQs	12:00 – 1:00 Visit Report (Team)
9:00 – 9:30 Session 1 Interactions	9:00 – 9:30 Session 2 Interactions	9:00 – 9:30 Session 3 Interactions	9:00 – 9:30 Session 4 Interactions	9:00 – 9:30 Session 5 Interactions	9:00 – 9:30 Week 1 MCQs	12:00 – 1:00 Lunch	1:00 – 2:00 Lunch	1:00 – 2:00 Lunch	1:00 – 2:00 Lunch	1:00 – 2:00 Lunch
All lectures of first week (19-24 Sept., 2022) will be ONLINE Hands on training / demonstration during 2 nd week (26-30 Sept., 2022) will be OFFLINE						1:00 – 2:00 Travel for Visit	2:00 – 4:30 Session 9	2:00 – 4:30 Session 11	2:00 – 4:30 Session 13	2:00 – 3:00 Reflection Journal
						2:00 – 4:00 Visit	4:30 – 5:00 Teaching Practice	4:30 – 5:00 Teaching Practice	4:30 – 5:00 Teaching Practice	3:00 – 4:00 Feedback
						4:00 – 5:00 Travel back				4:00 – 5:00 Valedictory

Registration guideline:

1. Visit the website <https://www.aicte-india.org/atal>
2. Register / sign up as instructed and log in.
3. After login click on “FDPs/CPDPs/Workshops” at the top left side of the page. To find our program you can filter by selecting “Month = September” and easily locate the FDP on “Fundamentals of Thin Film Preparation & Characterization techniques” to be organized by Tripura University.

No registration fee required for this program

Resource persons:



Prof. D. Bhattacharjee
Tripura University



Prof. P. K. Paul
Jadavpur University



Dr. B. Saha
NIT Agartala



Dr. Soumya Jyoti Ray
IIT Patna



Prof. S. A. Hussain
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Dr. M. Pal
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UGC has approved two-weeks FDP for promotion of Teachers, vide notification F3-1/2009 dated 30/06/2010.