



Chemistry and Physics of Materials Unit (CPMU)
Unit Day – 4th September 2021
Venue – AMRL Conference Hall (Hybrid-Online)



Session 1 - 10:00 –11:15

10:00 – 10.05	Welcome - Prof. Ranjan Datta
10:05 – 10.15	Unit overview - Prof. A. Sundaresan , Chair, CPMU
10:15 – 10.20	Remarks - Prof. G. U. Kulkarni , President JNCASR
10:20 – 10:25	Remarks - Prof. C.N.R. Rao , FRS

CPMU Alumni Materials Lecture

	Chair: Prof. K. S. Narayan
10:25 – 11:15	Crystal engineering of adaptive smart materials: from mechanical bending to self-healing - Prof. Chilla Malla Reddy , IISER Kolkata

11:15 – 11:45 : **Coffee Break**

Session 2 - 11:45 -12:55

	Chair : Prof. Subir K Das
11:45 – 12:00	Guardians at the gate modulating gas uptake Prof. S. Balasubramanian
12:00 – 12:15	Super-resolution imaging via transiently interacting molecules Prof. Sarit S Agasti
	Chair : Prof. Subi J. George
12:15 – 12:25	Understanding HEWL protein aggregation in an alkaline environment using Raman spectroscopy - Divya C.
12:25 – 12:35	Layered Nanocomposites of Polymer-Functionalized Reduced Graphene Oxide and Borocarbonitride with MoS ₂ and MoSe ₂ and Their Hydrogen Evolution Reaction Activity - Swaraj Sarvottam
12:35 – 12:45	Investigation of Nafion assisted enhancement of hydrogen evolution reaction over Pt loaded carbon - Soumita Chakraborty
12:45 – 12:55	An atomistic view of solvent free protein liquids: the case of Lipase A - Sudarshan Behera

12:55 – 2:00 : **Lunch Break**

Session 3 - 2.00 – 3.30

Chair: Prof. T. K. Maji

2:00 – 2:10

A cost effective PDLC smart window for energy saving smart building -
Dr. Indrajit Mondal

2:10 – 2:20

Image simulation in HRTEM considering atom as an electrostatic interferometer - **Dr. Usha Bhat**

2:20 – 2:30

Strain induced tunability of metal-insulator transition in Chromium Nitride thin films - **Bidesh Biswas**

2:30 – 2:40

Glassy dynamics in granular active ellipsoids - **Pragya Arora**

2:40 – 2:50

Investigating Polaronic behaviour in caesium lead halide perovskites nanocrystals through photo induced Raman mode - **Priyanka Jain**

Chair : Prof. Bivas Saha

2:50 – 3:00

Magnetoelectric effect in the honeycomb-lattice antiferromagnet $\text{BaNi}_2(\text{PO}_4)_2$ -
Swarnamayee Mishra

3:00 – 3:10

Integrated hybrid printed devices - **Sumukh Purohit**

3:10 – 3:20

Artificial photosynthesis based on heterogeneous molecular catalyst onto MOF –
Sanchita Karmakar

3:20 – 3:30

Fingerprinting of protein misfolding and aggregation via host-guest mediated chemical nose sensor - **Soumen Pradhan**

3:30 – 3:35

Vote of Thanks

3:35 – 4:00

High Tea: snacks pick up

4:00 – 4:30

Cultural Program