

**AI-Mat Frontier Workshop on:
Recent Development on Photocatalysis and Electrocatalysis Applications**

January 18, 2024

Venue: CCMS, R212

Talks	Topic	Speaker	Time
Opening Remarks			
1	Brief introduction of the purpose and objectives of the workshop	Prof. Li-Chyong Chen	12:15 – 12:20
Keynote lecture (1hour including Q&A)			
2	Harnessing Sustainable Green Hydrogen: Exploring Materials for Electrochemical Water Splitting	Prof. Indrajit Shown	12:20- 13:20
Break			13:20-13:30
AML invited talks (10 min each, including Q&A)			
3	Unveiling the mechanistic reaction pathway of photocatalytic CO ₂ reduction over 2D ZnIn ₂ S ₄	Dr. Amr Sabbah	13:30- 13:40
4	Constructing B–N–P Bonds in Ultrathin Holey g- C ₃ N ₄ for Regulating the Local Chemical Environment in Photocatalytic CO ₂ Reduction to CO	Dr. Mahmoud Kamal	13:40- 13:50
5	Reactant Chemisorption Induced Band Bending in MoS ₂ for Enhancing Photocatalytic Performance of CO ₂ Reduction CO ₂ adsorption processes on and geometricals structures of 2D transition metal dichalcogenide	Chih-Yang Huang	13:50- 14:00
6	Fluorine ion implanted SnS ₂ thin film for selective photocatalytic CO ₂ -to-CO conversion	Tadios Tesfaye	14:00- 14:10
7	ZnIn ₂ S ₄ based Heterostructure for Photocatalytic CO ₂ reduction	N. Q. Thang	14:10- 14:20
8	Chlorine doped CuO in Electrochemical CO ₂ reduction	Dr. Dhayaprabu Prabu	14:20– 14:30
9	Porous Ni-N-C Single Atom Catalyst for Electrochemical CO ₂ Reduction Reaction	Mengestu	14:30– 14:40
10	Engineering coordination in Ni-N-C catalysts controls CO ₂ electroreduction	Osama Nasr	14:40– 14:50
11	Interplay of non-Vicinal S-dopant with Ni Single Atom in N-incorporated carbon nanofiber for electrocatalytic CO ₂ Reduction	Varad Modak	14:50- 15:00
Summary and Closing Remarks			