

BIO-CCU 2026 30 October – 1 November 2026 IISER Mohali — Technical Program Venue: Lecture Hall 7 (LH7), Lecture Hall Complex (LHC)	
Time	Event / speaker / talk title
Friday, 30 October 2026	
10:00 – 12:00	Registration and Tea
12:00 – 12:30	Inaugural ceremony
12:30 – 13:30	Lunch
13:45 – 15:20	Session 1: Algal Biofactories for CO ₂ Capture and Conversion
13:45 – 13:50	Session brief by chairs (Prof. Pinaki Sar & Dr. Mohanakrishna Gunda)
13:50 – 14:20	Keynote: Dr. Shashi Kumar (ICGEB, Delhi) Carbon capture using microalgae and sustainability
14:20 – 14:40	Invited: Dr. Shireesh Srivastava (ICGEB, Delhi) Developing a native marine cyanobacterium for Carbon capture from flue gases
14:40 – 15:00	Invited: Dr. Sourja Ghosh (CSIR-Central Glass and Ceramic Research Institute, Kolkata) Membrane-based sustainable process for microalgal carbon capture and bioenergy production
15:00 – 15:20	Industry talk: Dr. M Adhi Visvanathan (Pinnacle Biosciences India Private Limited) Turning Carbon into Livelihoods: Algae-Powered Biomanufacturing for Green Jobs and Reduced Synthetic Nitrogen Dependency Moderator: Prof. Meenu Chhabra
15:20 – 15:50	Tea break
15:50 – 17:20	Session 2: Microbial Electrosynthesis/Electro-Biological CO ₂ Conversion and Integrated Processes - I
15:50 – 15:55	Session brief by chairs (Dr. Gunjan Prakash & Dr. Sourish Bhattacharya)
15:55 – 16:25	Keynote: Dr. S. Venkata Mohan (CSIR-NEERI, Nagpur) Microbial Catalyzed CO ₂ Reduction to Chemicals and Fuels
16:25– 16:45	Invited: Dr. Mohammad Zain Khan (Aligarh Muslim University, Aligarh) Bioelectrochemical Valorization of Carbon Dioxide to Renewable Biofuels using Microbial Electrolysis Cells
16:45 – 17:00	Interdisciplinary Talk: Dr. Jampala Annie Modestra (CSIR-NEERI) Electro-fermentation driven upcycling of plastic waste to sustainable biobased products: Towards a circular bioeconomy
17:00 - 17:20	Industry talk: Mr. Anandh Mathew (Caliche Private Limited, Guwahati) Unlocking Biotechnology: Non-GMO Microbial Carbon Capture and Industrial Upscaling Moderator: Prof. Debasish Das
17:20 - 17:40	Special Talk by Dr. Neelima Alam (Department of Science and Technology, Government of India)
17:40 – 18:00	Tea and networking
18:00 – 18:30	Special interdisciplinary talk: Prof. Sebastian Peter (JNCASR, Bengaluru) Carbon Recycling for Sustainable Energy - Fundamental Chemistry to Green Technologies Moderator: Dr. Sunil A. Patil
19:30 – 21:00	Dinner
Saturday, 31 October 2026	
07:30 – 08:50	Breakfast
09:00 – 10:30	Session 3: Microbial Electrosynthesis/Electro-Biological CO ₂ Conversion and Integrated Processes - II
09:00 – 09:05	Session brief by chairs (Dr. Shashi Kumar & Dr. Om Prakash)
09:05 – 09:35	Keynote: Prof. Dr. M.M. Ghangrekar (NIT Puducherry) Engineering Microbial Electrosynthesis for Sustainable CO ₂ Valorisation
09:35 – 09:55	Invited: Dr. Mohanakrishna Gunda (SRM University, Chennai) Microbial electrosynthesis: Role of biocathodes in Carbon Dioxide conversion to organics
09:55 – 10:15	Invited: Dr. Gokuladoss Velvizhi (VIT, Vellore) Biological sequestration of CO ₂ to value-added products towards a circular economy approach
10:15 - 10:30	Interdisciplinary Talk: Dr. Ravineet Yadav (IISER Mohali) Integrating Bioprocesses for Value-added Chemicals Production from CO ₂
10:30 – 10:50	Special Talk by Dr. Balendra Singh (Department of Biotechnology, Government of India) CO ₂ : A Pipeline Feedstock for Biomanuafcturing
10:50 – 11:20	Tea break
11:20 – 12:50	Session 4: Engineering Algal Biorefineries for Sustainable CO ₂ Utilization
11:20 – 11:25	Session brief by chairs (Prof. Dr. M.M. Ghangrekar & Dr. Mandar Deshmukh)
11:25 – 11:55	Keynote: Prof. Pramod P Wangikar (IIT Bombay) Metabolic engineering and flux analysis of cyanobacteria for the production of chemicals from carbon dioxide
11:55 – 12:15	Invited: Dr. Pannaga Pavan Jutur (ICGEB, Delhi) Sustained Biological Carbon Capture and Resource Recovery via Metabolic Optimization in Photosynthetic Microalgae
12:15 – 12:35	Invited: Dr. Gunjan Prakash (Institute of Chemical Technology, Mumbai) Hybrid Carbon Delivery Strategies Combining Gaseous CO ₂ and Bicarbonate for Enhanced Carbon Capture in Microalgae
12:35 – 12:50	Faculty Talk: Dr. J. Joseph (Noorul Islam Centre for Higher Education, Tamil Nadu) Intelligent Seaweed-Based Coatings for Atmospheric CO ₂ Capture, Smart Monitoring, and Carbon Utilization
12:50 – 13:50	Lunch
14:00 – 15:15	Session 5: Gas Fermentation for Carbon Recycling and Sustainable Biomanufacturing
14:00 – 14:05	Session brief by chairs (Dr. Shireesh Srivastava & Dr. Ranjan Phukan)
14:05 – 14:35	Keynote: Prof. Pinaki Sar (IIT Kharagpur) Thermophilic Acetogens from Deep Rocky Biosphere : Molecular Insights and Potential Application in CO ₂ Valorization
14:35 – 14:55	Invited: Dr. Om Prakash (Symbiosis International University, Pune) Hydrogenotrophic Methanogens: Bridging Carbon Capture and Renewable Energy
14:55 – 15:15	Industry talk: Dr. Rajeev Kumar S (String Bio, Bengaluru) Redefining Manufacturing: From Methane to Market Moderator: Dr. Ranjan Phukan
15:15 – 16:45	Poster presentations and Tea break
16:50 – 17:55	Session 6: Microbially Induced Carbon Mineralization and Enzymatic CO ₂ Conversion
16:50 – 16:55	Session brief by chairs (Prof. Pramod Wangikar & Dr. Pannaga Pavan Jutur)
16:55 – 17:15	Invited: Dr. Ranjan Phukan (Dibrugarh University, Assam) MICP-Enhanced Accelerated Carbonation Technology for Carbon Capture in Drill Cuttings
17:15 – 17:35	Invited: Dr. Mandar Deshmukh (CSIR-CCMB, Hyderabad) Reengineering SazCA for high fidelity in CO ₂ assimilation
17:35 – 17:55	Invited: Dr. Paltu Kumar Dhal (Jadavpur University, Kolkata) Enhanced Microbial CO ₂ Sequestration and Phosphogypsum Biotransformation for Sustainable Calcite Biomanufacturing via a Novel Heterotrophic Carbonic Anhydrase-Mediated MICP Process
18:00 – 18:30	Special interdisciplinary talk: Prof. Vivek Polshettiwar (TIFR, Mumbai) Beyond Photosynthesis: Artificial Light-Driven CO ₂ Utilization Moderator: Dr. Sunil A. Patil
19:00 – 21:30	Cultural Evening and Gala Dinner
Sunday, 1 November 2026	
07:30 – 08:50	Breakfast
09:00 – 11:00	Session 7: Sustainability, Modelling, TEA, LCA and Scale-Up of Bio-CCU Processes
09:00 – 09:05	Session brief by chairs (Chair: Dr. S. Venkata Mohan & Dr. Paltu Kumar Dhal)
09:05 – 09:35	Keynote: Prof. Debasish Das (IIT Guwahati) Biological Route to Convert Methane and Carbon Dioxide into Methanol
09:35 – 09:55	Invited: Dr. Sourish Bhattacharya (CSIR-CSMCRI, Bhavnagar) Algae-based CO ₂ sequestration from flue gases with co-production of high value products
09:55 – 10:10	Faculty Talk: Dr. Girivyankatesh Hippargi (CSIR-NEERI, Nagpur) Silk-Derived Amino Acid For CO ₂ Capture Applications
10:10 – 10:25	Faculty Talk: Dr. Asad Sahir (IIT Ropar) A Hybrid Modelling Framework: Integrating Machine Learning Models for Anaerobic Digestion of Lignocellulosic Biomass
10:25 – 10:40	Interdisciplinary Talk: Dr. Kopperi Harishankar (Center for Study of Science, Technology and Policy, Bengaluru) From Carbon Capture to Climate Benefit: Potential Bio-CCU Pathway for India's Circular Carbon Economy
10:40 - 11:00	Invited: Prof. Meenu Chhabra (IIT Jodhpur) Carbon capture from petrol-engine flue gas: Algae-based sequestration with integrated microbial fuel cells
11:00 – 11:30	Tea break
11:30 – 12:30	Select student oral presentations (selected from the best posters)
12:30 - 13:00	Special interdisciplinary talk: Prof. Rajnish Kumar (IIT Madras) Understanding decarbonisation and net zero Moderator: Dr. Sunil A. Patil
13:00 – 13:30	Closing ceremony
13:30 – 14:30	Lunch