BIO-CCU 2026 Technical Programme
Venue: Lecture Hall 7 (LH7), Lecture Hall Complex (LHC), IISER Mohali
| 30 October – 1 November 2026 |

Time	Event / speaker / talk title
Friday, 30 October 2026	
10:00 – 12:00	Registration and Tea
12:05 – 12:30	**Inaugural ceremony**
12:40 – 13:40	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
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. Shashi Kumar & Dr. Sourish Bhattacharya)**
15:55 – 16:25	Keynote: **Prof. Dr. M.M. Ghangrekar** (NIT Puducherry) Engineering Microbial Electrosynthesis for Sustainable CO_2 Valorisation
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 carbon capture for plastic waste upcycling into sustainable biobased products
17:00 - 17:20	Industry talk: **Mr. Anandh Mathew** (Caliche Private Limited, Guwahati) Unlocking Biotechnology: Non-GMO Microbial Carbon Capture and Industrial Upscaling
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: A Journey from 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 – 10:15	**Session 3: Engineering Algal Biorefineries for Sustainable CO_2 Utilization**
09:00 – 09:05	Session brief by chairs **(Prof. Dr. M.M. Ghangrekar & Dr. Mandar Deshmukh)**
09:05 – 09:35	Keynote: **Prof. Pramod P Wangikar** (IIT Bombay) Metabolic engineering and flux analysis of cyanobacteria for the production of chemicals from carbon dioxide
09:35 – 09:55	Invited: **Dr. Pannaga Pavan Jutur** (ICGEB, Delhi) Sustained Biological Carbon Capture and Resource Recovery via Metabolic Optimization in Photosynthetic Microalgae
09:55 – 10:15	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
10:15 – 10:35	**Special Talk by Dr. Balendra Singh (Department of Biotechnology, Government of India)** **CO_2 : A Pipeline Feedstock for Biomanuafcturing**
10:35– 11:05	Tea break
11:05 – 12:35	**Session 4: Microbial Electrosynthesis/Electro-Biological CO_2 Conversion and Integrated Processes - II**
11:05 – 11:10	Session brief by chairs **(Prof. Pramod Wangikar & Dr. Om Prakash)**
11:10 – 11:40	Keynote: **Prof. Pinaki Sar** (IIT Kharagpur) Thermophilic Acetogens from Deep Rocky Biosphere : Molecular Insights and Potential Application in CO_2 Valorization
11:40 – 12:00	Invited: **Dr. Mohanakrishna Gunda** (SRM University - AP, Amaravati) Microbial electrosynthesis: Role of biocathodes in Carbon Dioxide conversion to organics
12:00 – 12:20	Invited: **Dr. Gokuladoss Velvizhi** (VIT, Vellore) Biological sequestration of CO_2 to value-added products towards a circular economy approach
12:20 – 12:35	Interdisciplinary talk: **Dr. Ravineet Yadav** (IISER Mohali) Integrating Bioprocesses for value-added Chemical Production from Carbon dioxide
12:40 – 13:40	Lunch
13:40 – 15:00	**Session 5: Gas Fermentation for Carbon Recycling and Sustainable Biomanufacturing**
13:40 – 13:45	Session brief by chairs **(Dr. Gunjan Prakash & Dr. Ranjan Phukan)**
13:45 – 14:05	Invited: **Dr. Om Prakash** (Symbiosis International University, Pune) Hydrogenotrophic Methanogens: Bridging Carbon Capture and Renewable Energy
14:05 – 14:20	Faculty Talk: **Dr. Anshuman A. Khardenavis** (CSIR-NEERI, Nagpur) Coupling Hydrogenotrophy and Methanotrophy for Biological Carbon Capture, Utilization and Storage (BioCCUS): From Atmospheric CO_2 to Sustainable Platform Chemicals
14:20 – 14:35	Interdisciplinary Talk: **Dr. Kopperi Harishankar** (Center for Study of Science, Technology and Policy, Bengarluru) From Carbon Capture to Climate Benefit: Potential Bio-CCU Pathway for India's Circular Carbon Economy
14:35 – 15:00	Industry talk: **Sukhraj Soni** (Spray Engineering Devices Limited, Mohali) Fueling the Future: Unlocking Net-Negative Emissions with Scalable Low-Carbon Biofuels
15:00 – 16:30	**Poster presentations and Tea break**
16:30 – 17:35	**Session 6: Microbially Induced Carbon Mineralization and Enzymatic CO_2 Conversion**
16:30 – 16:35	Session brief by chairs **(Dr. Shireesh Srivastava & Dr. Pannaga Pavan Jutur)**
16:35 – 16:55	Invited: **Dr. Ranjan Phukan** (Dibrugarh University, Dibrugarh) MICP-Enhanced Accelerated Carbonation Technology for Carbon Capture in Drill Cuttings
16:55 – 17:15	Invited: **Dr. Mandar Deshmukh** (CSIR-CCMB, Hyderabad) Reengineering SazCA for high fidelity in CO_2 assimilation
17:15 – 17:35	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
17:40 – 18:10	**Special interdisciplinary: 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
9:00 - 9:30	**Special interdisciplinary talk: Prof. Rajnish Kumar (IIT Madras)** **Understanding decarbonisation and net zero** **Moderator: Dr. Sunil A. Patil**
9:30 – 10:30	**Select student oral presentations (selected from the best posters)**
10:30 - 11:00	Tea break
11:00 – 13:05	**Session 7: Sustainability, Modelling, TEA, LCA and Scale-Up of Bio-CCU Processes**
11:00 – 11:05	Session brief by chairs **(Chair: Prof. Dr. M.M. Ghangrekar & Dr. Paltu Kumar Dhal)**
11:05 – 11:35	Keynote: **Dr. S. Venkata Mohan** (CSIR-NEERI, Nagpur) Microbial Catalyzed CO_2 Reduction to Chemicals and Fuels
11:35 – 11:55	Invited: **Dr. Sourish Bhattacharya** (CSIR-CSMCRI, Bhavnagar) Algae-based CO_2 sequestration from flue gases with co-production of high value products
11:55 – 12:10	Faculty Talk: **Dr. Asad Sahir** (IIT Ropar) A Hybrid Modelling Framework: Integrating Machine Learning Models for Anaerobic Digestion of Lignocellulosic Biomass
12:10 - 12:25	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
12:25 - 12:55	Keynote: **Prof. M. Sudhakara Reddy** (Thapar Institute of Engineering & Technology, Patiala) Microbial Induced Carbonate Precipitation and its Applications in Civil and Environmental Engineering
12:55 – 13:15	**Closing Ceremony (Presentation Awards and Concluding Remarks)**
13:15 – 14:30	Lunch