International Symposium on Advances in Algal Research (AAR-2023)

Indian Institute of Technology Guwahati, Guwahati 781039, India

June 12-14, 2023

PROGRAM

12th June 2023			
08:30-10:00	**Registration and Breakfast**		
10:00-10:15	**Opening Session**		
10:15-11:25	**Technical Session I: Algal Cultivation and Harvesting Techniques** **Chairs: Archana Tiwari & Sabeela Beevi**		
10:15-10:30	IL001	Nitin Trivedi, Gujarat Biotechnology University	Marine Macroalgae: A Treasure House of Natural Products
10:30-10:45	IL002	Vandana Vinayak, Dr. Harisingh Gour Vishwavidyalaya, Sagar	Techniques to harvest value-added products from thick-walled microalgae
10:45-11:00	IL003	Vaibhav V. Goud, School of Energy Science and Engineering, IIT Guwahati	*Scenedesmus* sp. and *Limnothrix* sp. consortium as a novel strategy for efficient biomass harvesting with concurrent bioremediation of wastewater and biodiesel production
11:00-11:15	IL004	Ravindra Pal Singh, Gujarat Biotechnology University	Human gut commensal bacterial produce macroalgal glycan digesting enzyme and their industrial exploitation
11:15-11:25	PP001	Ankit Agarwalla, IIT Guwahati	Fabrication and characterization of low-cost kaolin based tubular ceramic membrane for microalgal harvesting
11:25-11:45	**Tea Break**		
11:45- 12:50	**Technical Session II: Omics/modelling & bioinformatics** **Chairs: Pavan Jutur & K Dheeban Chakravarthi**		
11:45-12:00	IL005	Krishna Mohan Poluri, Indian Institute of Technology Roorkee	Molecular Insights into Microalgae based Environment-Energy Paradigm using Integrated Omics Approaches
12:00-12:10	PP002	Riju De, BITS Pilani Goa Campus	Dynamic Optimization Strategies of Batch Hydrothermal Liquefaction of Microalgae for Optimal Biocrude Production
12:10-12:20	PP003	Pravin Ravichandran, St. Joseph's College of Engineering, Chennai	Blending of Algal and Non-edible oil for sustainable production of biodiesel using biochar catalyst – Optimization and Technoeconomic analysis
12:20-12:30	PP004	Chandrani Debnath, NIT Agartala	Evaluation and characterization of indigenous fungal strains from Ethnic drinks for bioethanol production
12:30-12:40	PP005	Daljit Borah, Tezpur University	Optoelectronic sensitivity based investigation on LED inspired microalgae cultivation
12:40-12:50	PP006	Vivek Dalvi, IIT Delhi	Strategies, Innovations and Uncharted Routes for Robust Algal Systems for Energy & Environmental Applications
13:00-14:00	**Lunch**		
14:00-16:15	**Technical Session III: Advanced Algal Biorefinery I** **Chairs: S. Venkata Mohan & Sivasubramanian Velmurugan**		
14:00-14:15	IL06	Sunita Varjani, City University of Hong Kong, Hong Kong (ONLINE mode)	Exploring the Untapped Potential of Photosynthetic Microorganisms: Recent Advances and Future Directions
14:15-14:30	IL007	Yen Wah Tong, National University of Singapore, Singapore (ONLINE mode)	Biorefinery Approach for Integrated Production of Protein and Biomethane from Chlorella vulgaris and Scenedesmus obliquus
14:30-14:45	IL008	Shashi Kant Bhatia, Konkuk University, Seoul (ONLINE mode)	Upcycling of Algal Biomass by Microbial Cell Factories
14:45-15:00	IL009	Sourish Bhattacharya, CSIR-CSMCRI, Bhavnagar, Gujarat	Sustainable process for microalgal based nutraceuticals through biorefinery model

15:00-15:15	IL010	Monika Prakash Rai, Amity University	Photocatalytic nanomaterial GO@g-C_3N_4 stimulated biomass and lipid production in *Chlorosarcinopsis* sp. $MASO_4$: A nano-bio hybrid approach
15:15-15:30	IL011	K Dheeban Chakravarthi, TERI-Deakin Nano Biotechnology Centre, TERI	Integrated Production of Algal Biofuels and Biocommodities
15:30-15:45	IL012	Baskar Gurunathan, St. Joseph's College of Engineering	Biofuels Production from Marine Macroalgae – A Biorefinery Approach
15:45-16:00	IL013	Karthik Rajendran, SRM University-AP	Microalgae based nutrient recovery for a sustainable circular economy: A perspective from Energy, Economy, and Environment
16:00-16:15	IL014	Sanjeev Mishra, SSS National Institute of Bio-Energy, Kapurthala	Microalgal biorefinery model for simultaneous wastewater treatment and production of biodiesel, bioethanol, and hydrochar
16:15-16:30	**Tea Break**		
16:30-17:40	**Technical Session IV: Advanced Algal Biorefinery II** **Chairs: Borja Valverde Pérez & Debraj Bhattacharyya**		
16:30-16:40	PP007	J. Santhosh, CSIR-IICT Hyderabad	Acidogenesis of food waste for biohydrogen production integrated with algal biorefinery
16:40-16:50	PP008	Nikhil Kadalag, Institute of Chemical Technology Mumbai	Integrated One-Pot Process for Simultaneous Biomass and High-Value Biochemical Production in *Phaeodactylum tricornutum*
16:50-17:00	PP009	Amit Singh, IIT Roorkee	Waste algae to biomethane for reducing greenhouse emissions from eutrophic lake
17:00-17:10	PP010	Boda Ravi Kiran, CSIR-IICT Hyderabad	Modulating nutrient regimes to augment photosystems and metabolite synthesis in microalgae
17:10-17:20	PP011	Khushal Mehta, SRM University-AP	Exogenous supply of growth modulator to uncouple growth with energy reserve compound accumulation in *Scenedesmus* spp. under various long-term stress conditions and to acquire an integrated biorefinery approach
17:20-17:30	PP012	Priya Bisht, IIT Roorkee	Valorization of aqueous phase derived from hydrothermal liquefaction of algal biomass
17:30-17:40	PP013	Rahul Kumar, IIT Delhi	Indoor air purification using non-activated microalgal biochar with diatom embedment for removal of particulate matter, formaldehydes, and total volatile organic compounds
17:40-18:20	**Technical Session V: Carbon Dioxide Sequestration** **Chairs: Mohan Raj Subramanian & Garlapati Vijay Kumar**		
17:40-17:50	PP014	Satyanarayana Reddy Battula, IIT Kharagpur	Design and operation of a pilot-scale integrated system sparged with flue-gas CO_2 generated in situ for microalgal cultivation in an algal-biorefinery
17:50-18:00	PP015	Maya S Nair, NIT Calicut	Algal Sheets: A Sustainable - Green Technology for Carbon Capture
18:00-18:10	PP016	Gourav Kumar, International Centre for Genetic Engineering and Biotechnology, New Delhi	Enrichment of Tocopherol Yields Employing CO_2 Supplementation and Nitrate Limitation in Microalgae *Monoraphidium* sp.
18:10-18:20	PP017	Deepesh Singh Chauhan, IIT Guwahati	Nutrient and light availability syncretic effects on microalgal CO_2 biomitigation and bioenergy production
19:30-Onwards	**Dinner**		

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13th June 2023			
08:00-09:00	**Breakfast**		
	Technical Session VI: Wastewater/Heterotrophic cultivation **Chairs: Baskar Gurunathan & Temjensangba Imchen**		
09:00-09:15	IL015	Irini Angelidaki, Denmark Technical University, Copenhagen	Microalgae as tool for wastewater treatment with simultaneous high value production
09:15-09:30	IL016	Nilotpala Pradhan, CSIR-IMMT, Bhubaneswar	Microalgal CO_2 Sequestration and biomass generation using 30,000 L Raceway pond
09:30-09:45	IL017	Pavan Jutur, International Centre for Genetic Engineering and Biotechnology, New Delhi	Valorization of Carbon Dioxide (CO_2) for Producing Biomass, Biofuels, and Biorenewables (B3) in Microalgae: A Circular Bioeconomy Perspective
09:45-10:00	IL018	Gunjan Prakash, Institute of Chemical Technology Mumbai	Genetic and molecular biology interventions as a promising strategy for the production of high-value chemical production from microalgae
10:00-11:00	**Technical Session VII: Wastewater/Heterotrophic cultivation I** **Chairs: Nilotpala Pradhan & Ashokkumar Veeramuthu**		
10:00-10:15	IL019	Debraj Bhattacharyya, IIT Hyderabad	Wastewater Treatment Using Algal-bacterial Hybrid Systems
10:15-10:30	IL020	S Venkata Mohan, CSIR-IICT	Microalgal Biorefinery – Closed Loop Approach for Fuels and Chemicals
10:30-10:40	PP018	Pooja Singh, IIT Guwahati	Hydrothermal liquefaction of *Monoraphidium* sp. KMC4 grown on dairy wastewater for bio-oil production
10:40-10:50	PP019	Raj Kumar Oruganti, IIT Hyderabad	Algal-bacterial trickling photobioreactor for domestic wastewater treatment: organic matter and nutrient removal
10:50-11:00	PP020	Subhasmita Panigrahi, CSIR-IMMT, Bhubaneswar	application of extracellular polymeric substances in metal extraction produced by cyanobacteria grown in wastewater
11:00-11:20	**Tea Break**		
	Technical Session VIII: Wastewater/Heterotrophic cultivation II **Chairs: Gunjan Prakash & Krishna Mohan Poluri**		
11:20-11:35	IL021	Xuan-Thanh Bui, Ho Chi Minh City University of Technology, Vietnam (ONLINE mode)	Algal biomass production and pollutants removal by a moving bed membrane photobioreactor
11:35-11:50	IL022	Garlapati Vijay Kumar, Jaypee University of Information Technology	Phycoremediation of X-ray developer solution towards silver removal using waste as a nutrient media of *Desmodesmus armatus*
11:50-12:05	IL023	Mona Sharma, Central University of Haryana	Photobiological hydrogen production and bioremediation of contaminants using cyanobacteria: an integrated approach
12:05-12:20	PP021	Satya Sundar Mohanty, IIT Guwahati	Microalgae mediated biodegradation of pharmaceuticals: An insight into removal kinetics, co-metabolism, and transformation products
12:20-12:30	PP022	Lakhan Kumar, Delhi University	Synthesizing biogenic silver nanoparticles from *Graesiella emersonii* and assessing their antibacterial and decolorization of dye-contaminated water efficiency
13:00-14:00	**Lunch**		

14:00-15:30	**Technical Session IX: High Value Products from Algal Biorefinery I** **Chairs: Irini Angelidaki & Vaibhav V Goud**		
14:00-14:15	IL025	Kit Wayne Chew, Nanyang Technological University (ONLINE mode)	Microalgae with artificial intelligence: A perspective on biotechnology for bioproducts
14:15-14:30	IL026	Archana Tiwari, Amity Institute of Biotechnology, Noida	Valorization of agricultural wastewater for generation of high value products from freshwater diatom *Nitzschia* sp.
14:30-14:45	IL027	Ashokkumar Veeramuthu, Saveetha Institute of Medical and Technical Sciences, TN	Astaxanthin from microalgae and residues for solid biofuel production
14:45-15:00	IL028	Borja Valverde Pérez, Technical University of Denmark, Copenhagen	Valorization of industrial wastewater into microalgal biomass – focusing on microbial contamination control and biomass harvesting
15:00-15:15	IL029	Debashish Das, IIT Guwahati	Microalgae, a potential platform for biofuels and value-added products: Process engineering perspective
15:15-15:30	IL030	Sabeela Beevi, Institute of Bioresources and Sustainable Development (IBSD), Imphal	Sustainable microalgal biomass production in biorefinery wastewater for high value bioproducts and circular bioeconomy
15:30-15:45	IL031	Sivasubramanian Velmurugan, NIT Calicut	Algal pigments: A promising alternative in nutraceutical studies and food industry
15:45-16:00	IL032	Temjensangba Imchen, CSIR-National Institute of Oceanography, Goa	Efficiency of nitrate uptake and its impact on microalgae biomass
16:00-16:15	IL033	Pau Loke Show, University of Nottingham, Malaysia (ONLINE mode)	Innovation and Research Trend in Algal Technology
16:15-16:30	IL034	Mohit Singh Rana, E3BIOCLEANTECH PVT. LTD.	Algae-based circular bioeconomy for wastewater treatment and resource recovery
16:30-16:50	**Tea Break**		
	Technical Session IX: High Value Products from Algal Biorefinery II **Chairs: Ravindra Pal Singh & Nitin Trivedi**		
16:50-17:00	PP023	Poonam Kumari, CSIR-IICT Hyderabad	Critical Factors Influence on Photosynthetic Catalysed Polyhydroxyalkanoate Production
17:00-17:10	PP024	Jayshri Khadilkar, Institute of Chemical Technology Mumbai	Towards the sustainable production of vegan Eicosapentaenoic Acid (EPA): year around cultivation of *Nannochloropsis oculata* and scale up under tropical environment.
17:10-17:20	PP025	Abdalah Makaranga, International Centre for Genetic Engineering and Biotechnology	Dynamic metabolic crosstalk between microalgae *Chlorella saccharophila* and its new symbiotic bacteria improves lutein production without compromising growth
17:20-17:30	PP026	Debidatta Barik, CSIR-IMMT, Bhubaneswar	Screening of microalgal strain for enhanced biomass production with simultaneous carbon dioxide sequestration
17:30-17:40	PP027	John Kiran Katari, IIT Guwahati	Extraction, purification, characterization and bioactivity evaluation of high purity C-phycocyanin from *Spirulina* sp. NCIM 5143
17:45-18:15	**Closing Session**		
19:30 Onwards	**Dinner**		