



Convention & Ecosystem

6th - 8th November 2023

The Westin Mumbai Garden City

Accelerating
**Industrial Sustainability
& Profitability**
through "Green &
Sustainable Chemistry"

industrial green chemistry

2025

IGCW
2023

IGCW 2021*

IGCW 2019

IGCW 2017

IGCW 2015

IGCW 2013

IGCW 2011

1950

2000

*IGCW-2021 edition was not organised due to the pandemic.

IGCW 2009

Co-organiser



Department of Chemicals & Petrochemicals
Ministry of Chemicals and Fertilizers
Government of India


Green Chemisree
Foundation

IGCW-2023 Partners

Co-organisers



Department of Chemicals & Petrochemicals
Ministry of Chemicals and Fertilizers
Government of India

Industry Partners

IGCW '23 Awards Partner



Green Chemistry Partners



CSR Partner



Technical Session Partners



Cause Partners



State PCB Conference Partner



Maharashtra Pollution Control Board
महाराष्ट्र प्रदूषण नियंत्रण मंडळ

Academia & Research Partner



Associate Partners



Media Partners



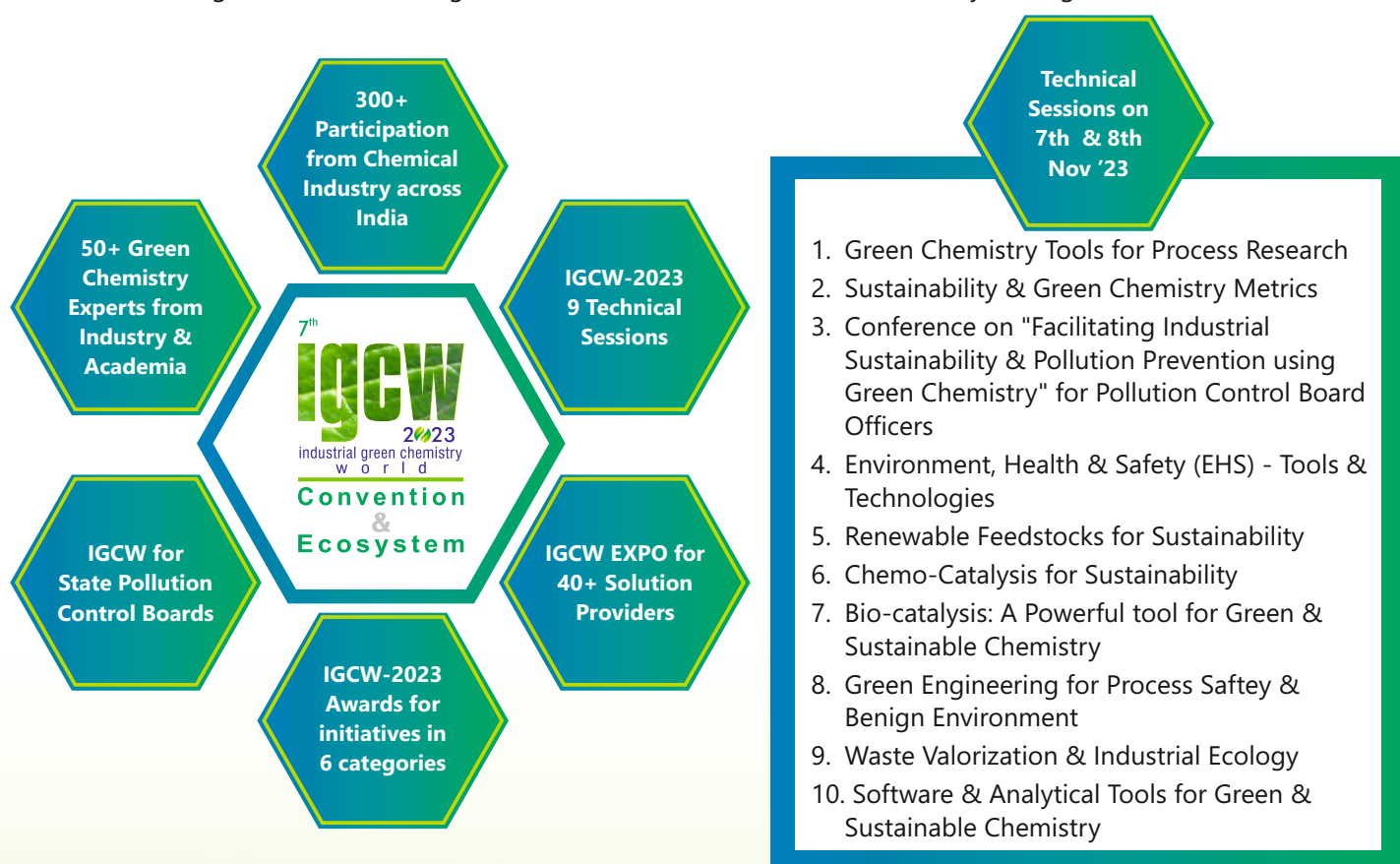
The 7th Industrial Green Chemistry World (IGCW-2023) - Convention & Ecosystem

6th - 8th November 2023

The IGCW-2023 will continue to serve as a platform for the chemical industry to explore diverse local and international success stories, models, tools, applications, and solutions for implementing "Green & Sustainable" manufacturing practices as a profit-centric approach to waste prevention and minimisation.

The objectives of 7th IGCW-2023:

- Facilitate learning from global green chemistry leaders and experts
- Bring together key stakeholders of Indian Chemical Industry including senior Govt. officials
- Provide a conducive ecosystem that can accelerate the implementation and industrialization of Green & Sustainable Chemistry
- Enable learning from Industry peers and practitioners of successful case-studies
- Invite subject-specific solutions and technology providers to showcase at IGCW EXPO
- Encourage collaborative initiatives by offering industrial networking platform to Researchers, Scientists, and Technocrats.
- Recognise and acknowledge initiatives in "Green & Sustainable Chemistry" through IGCW-2023 Awards



Expected Audience

	7 th Nov. '23 (Tuesday)	8 th Nov. '23 (Wednesday)
R&D Team, Process Research Team, Scale-up & Technology Transfer Team	Green Chemistry Tools for Process Research	Chemo-Catalysis for Sustainability
	Renewable Feedstock for Decarbonization & Sustainability	Software & Analytical Tools for Green & Sustainable Chemistry
Bio-Catalysis Team		Bio-Catalysis: A Powerful tool for Green & Sustainable Chemistry
Production Team, Process Engineering Team, Scale-up & Technology Transfer Team	Sustainability & Green Chemistry Metrics	Green Engineering for Process Safety & Benign Environment
EHS Team, Environment & Sustainability Team, Process Safety Team, Industrial Associations, CETPs, Govt & Regulatory Bodies	Environment, Health & Safety (EHS) – Tools & Technologies	Waste Valorisation & Industrial Ecology

Session Partner



TECHNICAL SESSION ON GREEN CHEMISTRY TOOLS FOR PROCESS RESEARCH

7th November 2023 | The Westin Mumbai Garden City

Expected Participants:

Senior Scientists (President, VP, GM, Manager, etc) from R&D, Analytical, Quality Control, Process Development

Objectives:

- To introduce and give demo of Solvent Selection Guide to choose greener alternative solvent.
- To introduce and give demo of Reagent Selection Guide as access to choosing greener reagents.
- To share DOZN and Process Mass Intensity (PMI) as a tools for measuring "Greenness" of process.
- To learn from other companies, Green & Sustainable Chemistry tools they have been using in Process Research.



Dr. Sudhir Nambiar, CSO,
Solara Active Pharma Sciences Ltd.

Session Mentors



Dr. Rakesh Gaonkar, VP-Research &
Technology, **Hikal Ltd.**

Timing	Speaker	Topic / Title of Presentation
8:30 - 9:30	Registration, Tea/Coffee, Networking, Visiting IGCW EXPO	
9:30 - 9:40	Welcome by Session Mentors - Acknowledgement, Self-Introduction & sharing work, Creating Context for the Session	
9:40 - 10:10	 Dr. Rakeshwar Bandichhor, VP & Head of Chemistry - API R&D, Dr. Reddys Laboratories and Vice-Chair, ACS-India Chapter	Green Chemistry tools for Process Research at Dr. Reddy's
10:10 - 10:40	 Dr. Ankur Jalan, Advisor - Chemistry, Eli Lilly & Company	Evaluate the Sustainability of Your Chemistry through Solvents Tools and Guides
10:40 - 11:10	 Dr. Bhanu Manjunath, Director, Research & Technology Centre, Syngenta Biosciences Ltd.	Green and Sustainable Chemistry: Green Chemistry Principles Applications in Agrochemical Research
11:10 - 12:00	Tea/Coffee Networking Break, Visiting IGCW EXPO	
12:00 - 12:30	 Dr. Harishchandra Jadhav, Assistant Director - Chemical Research, Lupin Ltd.	API case studies developed through application of green principles/technologies
12:30 - 13:00	 Dr. Rebecca Newton, Process Chemistry Team Leader, Sai Life Sciences Ltd	ACS GCIPR Tools for More Sustainable Chemistry – Reagent Guides
13:00 - 13:30	 Mr. Alex Mullen, Senior Product Environmental Specialist, AstraZeneca	Leveraging Life Cycle Assessment for the Production of Greener Medicines
13:30 - 14:45	Lunch Break, Visiting IGCW Expo.	
14:45 - 15:15	 Dr. Vilas Dahanukar, R&D Director, Proexp Pharma Pvt. Ltd.	Simple metrics to measure Greeness of our Products & Processes
15:15 - 15:45	 Dr. Andiappan Murugan, VP - API R&D, Troikka Pharmaceuticals Ltd.	How Green is My Chemistry - An R&D Perspective
15:45 - 16:15	 Dr. Richard Fox, Scientific Director, Bristol Myers Squibb (BMS)	Process Mass Intensity (PMI) Prediction Tool
16:15 : 16:45	 Dr. John Wasyluk, Associate Scientific Director, Bristol Myers Squibb (BMS)	Analytical Method Greeness Score (AMGS) Calculator
16:45 - 17:00	Industry & Academic Mentors for the Session	
16:45 - 17:00	Closing Remarks & Acknowledgements	
16:30 - 18:00	Tea/Coffee Break, Visiting IGCW EXPO	

Click here to Register for the Session: <https://www.industrialgreenchem.com/igcw23-online-and-offline-registration/>

TECHNICAL SESSION ON SUSTAINABILITY AND GREEN CHEMISTRY METRICS

7th November 2023 | The Westin Mumbai Garden City

Expected Participants:

Chief Sustainability Officer, President-EHS, VP-EHS, GM-EHS, EHS/Sustainability Professionals

Objectives:

1. To understand global dynamics with regards to Sustainability Metrics and its relevance for Chemical Industry.
2. To learn basics of Circular Economy, Circular Transition Indicators (CTI), Life Cycle Assessment (LCA), SBTi, etc.
3. To explore how MSMEs can integrate Sustainability Metrics.
4. To connect to potential solution providers offering diverse Sustainability services, products, digital tools, etc.

Session Mentors



Dr. Brajesh Kumar Dubey, Professor - Circular Engineering (Dept. of Civil Engg.) and Chairperson - School of Water Resources, **IIT-Kharagpur**



Dr. Ananda Sekar, Leader, LCA Global Centre of Excellence, **SABIC**

Timing	Speaker	Topic / Title of Presentation
08:30 - 09:30	Registration, Tea/Coffee, Networking, Visiting IGCW Expo	
09:30 - 09:40	Welcome by Session Mentors: Acknowledgement, Self-Introduction, Creating Context for the Session	
09:40 - 10:15	 Mr. Vivek Adhia, Climate & Sustainability, Boston Consulting Group	Keynote: Perspectives from G20 and global action on climate and circular economy
	 Mr. Mike Danielson, Technical Manager - Chemicals, Science Based Targets initiatives (SBTi)	
10:15 - 10:45	 Shweta Basu, Manager - Corporate Engagements & Partnerships, CDP	The Chemical Industry's Climate Commitment: SBTi & CDP in Action
	 Muskaan Kapoor, Engagement Officer - Disclosures & SBTi, CDP	
10:45 - 11:15	 Ms. Ashwini Hingne, Associate Program Director - Climate Program, World Resources Institute (WRI)	Introduction to Carbon Market Mechanism
11:15 - 12:00	Tea/Coffee Networking Break, Visiting IGCW Expo.	
	Panel Discussion: How are companies (including MSMEs) preparing responsibly for growing needs of market linked to Climate Circularity and other Sustainability and ESG imperatives?	
12:00 - 12:45	 Moderator: Mr. Ananda Sekar, Leader, LCA Global Centre of Excellence, SABIC	 Mr. Ramnath Vaidyanathan, AVP – Good & Green, Godrej Industries Limited and Associate Companies
	 Panel Member: Dr. Mrutunjay Chaubey, Global Vice President & Head-Sustainability, UPL Ltd.	
	 Mr. Rajesh Ponugupati, Chief Manager - CEHS, Piramal Pharma Solutions	
12:45 - 13:15	 Dr. Brajesh Kumar Dubey, Professor - Circular Engineering (Dept. of Civil Engg.) and Chairperson - School of Water Resources, IIT-Kharagpur	Life Cycle Assessment (LCA)
13:15 - 13:45	 Ms. Larissa van der Feen, Associate - Circular Economy, World Business Council for Sustainable Development (WBCSD)	Circular Economy & Circular Transition Indicators (CTI)
13:45 - 15:00	Lunch Break, Visiting IGCW Expo.	
15:00 - 15:05	Industry & Academic Mentors for the Session	
15:05 - 15:35	 Ms. Shaily Maloo, Co-founder, EiSqr Solutions Pvt. Ltd.	Strategic Approach to Sustainability facilitated with digital solutions
15:35 - 16:05	 Ms. Aromi Salot, Manager - Investor Services, GIST Impact	Assessing company performance beyond ESG through the lens of impact
16:05 - 16:25	 Mrs Jyoti Palekar, Founder, STEP Pvt. Ltd.	Supporting MSMEs to initiate their Sustainability Journey
16:25 - 16:55	 Dr. Nikhil Nitin Kamble, Analyst LCA and Carbon Management, Climate & Conservation Consortium	Life Cycle Assessment, Carbon Footprints and CCC
16:55 - 17:15	 Mr. Sunil Kumar, Head, SIPL Pvt. Ltd.	Driving sustainability through SimaPro
17:15 - 17:20	Closing Remarks & Acknowledgements by Session Mentors	
17:20 - 18:00	Tea/Coffee Break, Visiting IGCW Expo	

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TECHNICAL SESSION ON ENVIRONMENT, HEALTH & SAFETY - TOOLS & TECHNOLOGIES

7th November 2023 | The Westin Mumbai Garden City

Expected Participants:

Chief Sustainability Officer, Head-EHS, VP-EHS, GM-EHS, GM-Production, EHS Professionals, etc

Objectives:

- To introduce EHS Systems - Basics, Its Relevance, How to set-it up, Frameworks.
- Discuss relevant topics like Sustainability Reporting Tools, Supply Chain Sustainability, Process & Plant Safety, etc
- Engage in discussion on Safety Leadership & Culture in an organization - Perspectives of large companies & MSMEs.
- To introduce tools in the domain of EHS and connect to potential solution providers in the market.

Session Mentors



Prof. Anju Singh, Professor Sustainability Management, **National Institute of Industrial Engineering, IIM-Mumbai**



Mr. Mahesh Chandak, Head of HSE - South Asia and HSE Business Partner for Crop Science, **Bayer**

Timing	Speaker	Topic / Title of Presentation
08:30 - 09:30	Registration, Tea/Coffee, Networking, Visiting IGCW Expo	
09:30 - 09:40	Welcome by Session Mentors: Acknowledgement, Self-Introduction, Creating Context for the Session	
09:40 - 10:15	 Dr. Pradip Panigrahi, Head - Corporate Sustainability, Larsen & Toubro Ltd.	Sustainability Reporting Tools
10:15 - 10:45	 Mr. Mahesh Chandak, Head of HSE - South Asia and HSE Business Partner for Crop Science, Bayer	Forward looking EHS Management Systems - The Journey from Good to Great
10:45 - 11:30	Tea/Coffee Networking Break, Visiting IGCW Expo.	
11:30 - 12:00	 Mr. Deepak Naik, Corporate HSE & Sustainability Head, Navin Fluorine International Ltd.	Supply Chain Sustainability
12:00 - 12:30	 Mr. Vidiyala Ravi, Head - Process Safety, PI Industries Ltd.	Ensuring Process Safety: Harnessing the Power of Process Safety Information
Panel Discussion on Safety Leadership & Culture		
12:30 - 13:15	 Moderator: Mr. Mahesh Chandak, Bayer	 Mr. Suresh Tanwar, Head of Audit & Consultancy, British Safety Council India LLP
	 Panel Members: Mr. Ajay Kumar Gupta, Executive Director, Aarti Industries Ltd.	
	 Mr. Rahul Raman, Principal Engineer, Kaypear Consulting	
13:15 - 14:30	Lunch Break, Visiting IGCW Expo.	
14:30 - 15:00	 Mr. Rahul Raman, Principal Engineer, Kaypear Consulting	Review of incidents between 2010 to 2022 for the chemical process industry
15:00 - 15:30	 Mr. Chandan Tiwari, Director - Subscriber Development, Benchmark Gensuite	Advanced Tech Strategies for EHS Leaders
15:30 - 16:00	 Mr. Sarvotham Pejavar, Promoter, Zecomy	Digital Platform for Waste Management
16:00 - 16:20	 Mr. Avinash Bhusanurmth, Lead Technical Services & Product Application Specialist for Zeeweed South Asia Region, Veolia Water Technologies & Solutions	Techtalk on Veolia's Nanofiltration and Ultra High Pressure Membranes for Process applications and Optimization of ZLD
16:20 - 16:40	 Dr. Vanita Prasad, Founder, Revy Environmental Solutions	Providing Economical and Sustainable Solutions for waste management and wastewater treatment.
16:40 - 17:00		Presentation - Solution Provider 3
17:00 - 17:10	Closing Remarks & Acknowledgements by Session Mentors	
17:10 - 18:00	Tea/Coffee Break, Visiting IGCW Expo	

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TECHNICAL SESSION ON RENEWABLE FEEDSTOCKS FOR DECARBONIZATION & SUSTAINABILITY

7th November 2023 | The Westin Mumbai Garden City

Expected Participants:

Chief Sustainability Officer, VP or GM - Technology, Senior Scientists, Supply Chain & Sustainability Professionals

Objectives:

- To explore potential of chemicals & energy from Biomass and get a sense of government policies on the same.
- To learn about diverse technological developments to obtain chemicals from biomass & other renewable feedstock.
- To create an understanding of carbon recycling and decarbonisation and its potential in today's context.
- To connect with diverse solution providers (digital solutions, supply chain solutions, etc) in this domain.

Session Mentors



Dr. Avatar Matharu, Senior Lecturer, Deputy Director of the **Green Chemistry Centre of Excellence (GCCE), UK**



Dr. Sangeeta Srivastava, Executive Director, **Godavari Biorefineries Ltd.**



Dr. Sasisanker Padmanabhan, Sr. Principal Scientist, **Praj Industries**

Timing	Speaker	Topic / Title of Presentation
08:30 - 09:30	Registration, Tea/Coffee, Networking, Visiting IGCW Expo	
09:30 - 09:45	Welcome by Session Mentors: Acknowledgement, Self-Introduction & sharing work, Creating Context for the Session	
09:45 - 10:15	 Dr. John Warner, Co-founder, Beyond Benign	Keynote: Innovation with Biomaterials: Nature's Mechanisms in the Human Built World
10:15 - 10:45	 Mr. Sandeep Chaturvedi, Chairman, Biodiesel Association of India	Future of Renewable Feedstocks in India, changing Government policies & prospects
10:45 - 11:15	 Dr. A. J. Varma, Former Chairman, Department of Polymer Science & Engineering, CSIR-National Chemical Laboratory	Multiple products and zero waste stream from the processing of lignocellulose biomass: Key to Sustainability & Economics
11:15 - 12:00	Tea/Coffee Networking Break, Visiting IGCW Expo.	
12:00 - 12:30	 Dr. Sasisanker Padmanabhan, Sr. Principal Scientist, Praj Industries	Utilization of all Carbon Components in Processing of Agri-based Feedstock: Moving Towards Second Generation Biorefineries
12:30 - 13:00	 Dr. Avatar Matharu, Senior Lecturer, Deputy Director, Green Chemistry Centre of Excellence (GCCE)	Chemicals from unavoidable food supply chain wastes
13:00 - 13:30	 Dr. Prashant Dhakephalkar, Director, Agharkar Research Institute (ARI)	Platform molecules & materials from Biomass
13:30 - 15:00	Lunch Break, Visiting IGCW Expo.	
15:00 - 15:30	 Dr. Preeti Jain, Global Director (Policy, Chemicals & Carbon Solutions), LanzaTech	Carbon Recycling for Sustainable Fuels & Chemicals
15:30 - 16:00	 Lt. Col. Monish Ahuja, Promoter & MD, Punjab Renewable Energy Systems Pvt. Ltd.	Bio-Energy and Biomass Supply Chain solutions through innovative business models
16:00 - 16:30	 Dr. Prakash D. Vaidya, Professor, Dept. of Chemical Engineering, Institute of Chemical Technology (ICT)	Improved hydrogen production technologies based on reforming of biofeeds
16:30 - 16:50	 Mr. Raj Tanna, Managing Director, Schutzen Care Pvt. Ltd.	Valorising Waste to produce Biobased & Biodegradable value added products
16:50 - 17:10	 Dr. K. I. Suresh, Chief Scientist, Material Science & Technology Division, CSIR-National Institute for Interdisciplinary Science and Technology (CSIR-NIIST)	Aqueous Polyurethane Dispersions Modified using Renewable Cardanol Polyols: Opportunities and Challenges
17:10 - 17:15	Closing Remarks & Acknowledgements by Conference Mentors	
17:15- 18:00	Tea/Coffee Break, Visiting IGCW Expo	

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Co-organiser



CONFERENCE ON "FACILITATING INDUSTRIAL SUSTAINABILITY & POLLUTION PREVENTION THROUGH GREEN CHEMISTRY"

7th November 2023 | The Westin Mumbai Garden City

Expected Participants:

Govt. & Regulatory Bodies working in the domain of Environment (E.g. CPCB, State PCBs, MIDC, NEERI, Etc)

Objectives:

- To facilitate Capacity Building of State Pollution Control Board Officers & other Government & Regulatory Bodies.
- To introduce concepts Resource Efficiency & Circular Economy & how it contributes to Pollution Prevention.
- To facilitate State PCBs "learning from each other's initiatives"
- To connect to 30 Environment Solution Providers exhibiting at IGCW-Expo.
- To discuss possibilities of collaboration with Industry and Industrial Associations to facilitate Prevention of Pollution.

Session Mentors



Dr. Ajay Deshpande, Adjunct Professor, Centre for Policy Studies, **IIT-Bombay**



Dr. Atul Vaidya, Director, **CSIR-NEERI**

Timing	Speaker	Topic / Title of Presentation
08:30 - 09:30	Registration, Tea/Coffee, Networking, Visiting IGCW Expo	
09:30 - 09:45	Welcome by Mentors: Acknowledgement, Self-Introduction, Creating Context for the Conference	
09:45 - 10:30	 Prof. Paul Anastas, Director, Centre for Green Chemistry & Engineering at Yale, USA	Keynote: Balancing act of Regulator & Facilitator - Learnings from US EPA
10:30 - 11:00	 Mr. Devang Thaker, Member Secretary, Gujarat Pollution Control Board (GPCB)	Gujarat's Journey towards framing state-level Circular Economy Policy
11:00 - 12:00	Tea/Coffee Networking Break, Visiting IGCW Expo.	
12:00 - 12:35	 Dr. Prasad Modak, MD, Environment Management Centre & Director, Ekonnect Knowledge Foundation	Can we regulate industrial pollution through standards based on resource efficiency?
12:35 - 13:15	 Dr. Atul Vaidya, Director, CSIR-NEERI	Hazardous Waste Management Rules
13:15 - 13:25	 Dr. Pranav Tripathi, Deputy Director - Sustainability, Indian Chemical Council (ICC)	Responsible Care: A Path to Improve Safety and Sustainability in Chemical Industry
13:25 - 13:45		2 Presentations by Industry / Industry Association on "Industry Initiatives"
13:45 - 15:00	Lunch Break, Visiting IGCW Expo.	
15:00 - 15:30	 Dr. Rahul Nabar, Associate Professor, Chemical Engineering Dept., IIT-Bombay	An overview of recent Global regulatory and policy developments in Sustainability and Environmental protection
Panel Discussion: Management of Environmental Pollution of MSME based on Clustering & Industrial Ecology Approach		
15:30 - 16:30	 Moderator: Mr. Mahesh Patil, Chairman, Goa State Pollution Control Board (GSPCB) and Expert Member, GCZMA	 Dr. Avinash Dhakane, IAS, Member Secretary, Maharashtra Pollution Control Board (MPCB) TBC  Dr. Bharat Jain, Member Secretary, Gujarat Cleaner Production Center (GCPC)
	 MoEF Representative Mr. Vinod Babu, Division Head & Director - Waste Management, Central Pollution Control Board (CPCB) (Invited)	
	 Dr. Vipin Sharma, IAS, CEO, Maharashtra Industrial Development Corporation (MIDC) TBC	
	 Mr. Rajen K. Mariwala, President, Indian Chemical Council (ICC) , (Invited)	
16:30 - 17:15	 Sharing of Innovative Initiatives by senior representatives of State Pollution Control Boards (By Invitation) • Dr. Vijay Singh, Former Chief Environmental Engineer, Rajasthan State Pollution Control Board (RSPCB) • Gujarat Pollution Control Board (GPCB) • Tamil Nadu State Pollution Control Board (TNSPCB)	• Goa State Pollution Control Board (GSPCB) • Andhra Pradesh Pollution Control Board (APPCB) • Telangana State Pollution Control Board (TSPCB)
17:15 - 17:30	Closing Remarks & Acknowledgements by Conference Mentors	
17:00 - 18:00	Tea/Coffee Break, Visiting IGCW Expo	



TECHNICAL SESSION ON CHEMO-CATALYSIS FOR SUSTAINABILITY

8th November 2023 | The Westin Mumbai Garden City

Expected Participants:

President-R&D, VP-R&D, GM-R&D, GM-Process Development, Senior Scientists-Process Research

Objectives:

- To learn innovative methodologies to conduct synthetic organic chemistry in Water.
- To explore new frontiers of Catalysis like single atom, micellar catalysis, nano catalysts, etc.
- Petrochemical Industry has pioneered Catalytic Processes - Pharma & Fine Chemicals Industry can learn from them.
- To connect with Solution Providers in the domain of sustainable metal catalysis, precious metal catalysts recovery, etc.

Session Mentors



Prof. Lakshmi Kantam, Dr. B. P. Godrej
Distinguished Professor, **Institute of Chemical Technology (ICT)**



Dr. Raksh Vir Jasra, Sr. Vice President -
R&D, **Reliance Industries Ltd.**

Timing	Speaker	Topic / Title of Presentation
08:30 - 09:30	Registration, Tea/Coffee, Networking, Visiting IGCW-EXPO	
09:30 - 09:45	Welcome by Session Mentors: Acknowledgement, Self-Introduction, Creating Context for the Session	
09:45 - 10:15	 Prof. Bruce H. Lipschutz, Distinguished Professor - Dept. of Chemistry, University of California, Santa Barbara	Keynote: Transitioning Synthetic Organic Chemistry to Water; It's Our Future!
10:15 - 10:45	 Dr. Bharat Newalkar, Chief General Manager (R&D), Bharat Petroleum Corporation Ltd.	Catalysts & Catalytic Processes - What Pharma, Speciality Fine Chemicals can learn from Petroleum/Petrochemical Industry?
10:45 - 11:15	 Prof. Lakshmi Kantam, Dr. B. P. Godrej Distinguished Professor of Green Chemistry & Sustainability Engg, Institute of Chemical Technology (ICT) (TBC)	Successful commercialization of Catalytic Processes.
11:15 - 12:00	Tea/Coffee Networking Break, Visiting IGCW-EXPO	
12:00 - 12:30	 Mr. Jayesh Ashar, Director - Operations, Vinati Organics Ltd.	Industrial Case Study on successful commercialization of Catalytic Processes
12:30 - 13:00	 Dr. Vasudev Rao Gandhi, Group Leader - Process Chemistry & Technology Transfer, UPL Ltd.	Catalysts & Catalytic Processes being explored by UPL for Economical & Environmental Competitiveness
13:00 - 13:30	 Dr. Sachin Rawalekar, Assistant General Manager - R&D, Hindustan Platinum Ltd.	Efficient, recyclable, and re-processable precious group metal-based catalyst for organic transformations
13:30 - 14:45	Lunch Break, Visiting IGCW-EXPO	
14:45 - 15:10	 Prof. Manoj Gawande, Associate Professor, Department of Industrial and Engineering Chemistry, Institute of Chemical Technology, Mumbai-Marathwada Campus	Single-Atom and NanoCatalysts: A Sustainable and Cost-Effective Pathway for the Organic Transformations
15:10 - 15:35	 Prof. Venkata Krishnan, Professor, School of Chemical Sciences, IIT-Mandi	Nickel Phosphide Anchored on Carbonaceous Supports for Transfer Hydrogenation of Nitroarenes and Quinolines under Base-free, Molecular Hydrogen-free Conditions
15:35 - 16:00	 Dr. Manish Mishra, Professor, Dept. of Chemistry, Sardar Patel University	Micellar Catalysis for Sustainable Chemical Synthesis
16:00 - 16:25	 Dr. Surendra Singh, Assistant Professor, Dept. of Chemistry, Delhi University	Chiral Mn(III) Salen Complexes as Recyclable Homogenous Catalysts for Organic Transformations
16:25 - 16:45	 Dr. Anil Kumar Sinha, Chief Scientist & Head - Biofuels, CSIR-Indian Institute of Petroleum (IIP)	Catalytic Process for Liquid Sustainable Aviation and Automotive Fuels from lipids
16:45 - 17:05	 Mr. Gunvant Patel, MD, Rhodium Master	Recovery of Homogeneous & Heterogeneous Precious Metal Catalysts
17:05 - 17:25	 Ms. Ashwini Kothe, R&D Head, Newreka GreenSynth Technologies Pvt. Ltd.	Sustainable Metal Catalysis for Nitro/Nitroso/Dinitro Group Reduction
17:25 - 17:30	Industry & Academic Mentors for the Session	
17:30 - 18:00	Tea/Coffee Break, Visiting IGCW-EXPO	

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TECHNICAL SESSION ON BIOCATALYSIS: A POWERFUL TOOL FOR GREEN & SUSTAINABLE CHEMISTRY

8th November 2023 | The Westin Mumbai Garden City

Expected Participants:

President-R&D, VP-R&D, GM-R&D, GM-Process Development, Senior Scientists

Objectives:

- To introduce the basics and fundamentals of Bio-Catalysts & Bio-Catalytic Processes.
- To explore the diversity of existing and potential applications of Bio-Catalysis.
- To share successful industrial case studies and challenges faced during development & commercialization.
- To connect Industry Participants to experts and solution providers offering Bio-Catalytic solutions.

Session Mentors



Prof. Santosh Noronha,
Assistant Professor, Dept.
of Chemical Engineering,
IIT-Bombay



Dr. Shamlan
Reshamwala, Assistant
Professor, **Center of
Energy Biosciences, ICT**



Dr. Mofazzal Husain,
Associate Director,
Bio R&D, **Lupin Ltd.**

Timing	Speaker	Topic / Title of Presentation
08:30 - 09:30	Registration, Tea/Coffee, Networking, Visiting IGCW Expo	
09:30 - 09:40	Welcome by Session Mentors: Acknowledgement, Self-Introduction & sharing work, Creating Context for the Session	
09:40 - 10:10	 Dr. Shamlan Reshamwala, Assistant Professor, Center of Energy Biosciences, ICT	An Introduction to Bio-Catalysis
Technical Session 1: Use of Enzymes as Bio-catalysis		
10:10 - 10:40	 Dr. Shams Yazdani, Group Leader - Microbial Engineering, International Centre for Genetic Engineering & Biotechnology (ICGEB)	Development of Engineered Microbes and Enzymes to Convert Agricultural Residues into Valuable Products
10:40 - 11:10	 Mr. Nagaraj Maddur, Principal Scientist Advanced Enzymes Technologies Ltd.	Sustainable Industrial Green Chemistry applications using Biocatalytic Enzymes
11:10 - 12:00	Tea/Coffee Networking Break, Visiting IGCW Expo.	
Technical Session 2: Whole-cell mediated Bio-catalysis		
12:00 - 12:30	 Dr. Amulya Panda, Associate Director, Panacea Biotec	Bioacatalysis using Inclusion Bodies
12:30 - 13:00	 Dr. Somashekhar, Senior Manager (Bio-Catalysis), Metrochem API Pvt. Ltd.	Gluconobacter oxydans as a Catalyst in API synthesis
13:00 - 13:30	 Dr. Saravanan, CSO, Shasunmed Life-Sciences Pvt. Ltd.	Case Studies on Industrial perspective: Bio-reduction of Aromatic Ketones by Fungi
13:30 - 14:15	Lunch Break, Visiting IGCW Expo.	
14:15 - 14:45	 Dr. Pravin Kumar, Founder, Chairman & CSO, KCat Enzymatic Pvt. Ltd.	7D-GRID-AI Technology: A Technology that translates Enzymes from a Computer to Business with limited lab experiments
14:45 - 15:15	 Dr. Manpeet Singh, CBDO, Ikesia Biologics	Unlocking the power of Bio-Catalysis: Revolutionizing Chemical Process and Green Chemistry
15:15 - 16:15	Panel Discussion (All Speakers) on Bio-Catalysis: Trends and Challenges	
16:15 - 16:30	Industry & Academic Mentors for the Session	Closing Remarks & Acknowledgements
16:30 - 18:00	Tea/Coffee Break, Visiting IGCW Expo	

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TECHNICAL SESSION ON GREEN ENGINEERING FOR PROCESS SAFETY & BENIGN ENVIRONMENT

8th November 2023 | The Westin Mumbai Garden City

Expected Participants:

CTO, Director-Technical, President-R&D, GM-Tech Transfer, GM-Production, Senior Scientists & Engineers

Objectives:

- To introduce the 12 Principles of Green Engineering and how it impacts Safety and Environment.
- To discuss potential of Flow Chemistry, new advancements and challenges in implementation.
- To explore new frontiers of synthesis like Mechano-Chemistry.
- To connect with diverse solution providers in the domain of Green Engineering.



Dr. Amol Kulkarni,
Scientist, Chemical
Engineering & Process
Development, **CSIR-NCL**



Session Mentors

Dr. Sandeep Jain,
Sr. Director - Special
Technologies,
PI Industries Ltd.



Dr. Suhas Jawlekar, Associate Director
- Process Engineering, Polymorph
development & New technology,
Dr. Reddy's Laboratories Ltd.

Timing	Speaker	Topic / Title of Presentation
08:30 - 09:30	Registration, Tea/Coffee, Networking, Visiting IGCW Expo	
09:30 - 09:40	Industry & Academic Mentors for the Session	Welcome, Acknowledgement, Self-Introduction & sharing work, Creating Context for the workshop
09:40 - 10:15	 Prof. Paul Anastas, Director, Centre for Green Chemistry & Engineering at Yale	Keynote: Introducing the 12 Principles of Green Engineering
10:15 - 10:45	 Mr. Ninad Loke, Tech Lead - Process Engineering, Dr. Reddy's Labs Ltd.	Enabling technologies in API process development – Green Chemistry metrics
10:45 - 11:15	 Mr. Hari Bukya, GM - Process Safety, Hetero Group	Understanding Process Safety and Process Case Studies
11:15 - 12:00	Tea/Coffee Networking Break, Visiting IGCW Expo.	
	Panel Discussion on Flow Chemistry	
12:00 - 12:45	<p>Moderator:  Dr. Suhas Jawlekar, Associate Director - Process Engineering, Polymorph Development & New technology, Dr. Reddy's Laboratories Ltd.</p> <p>Panel Members:  Dr. Subhash Dhar, Head of Plant Technology, Deepak Nitrite Ltd.</p> <p> Dr. Chandrakanth Gadipelly, Head of Flow Reactors, Amar Equipment Pvt. Ltd.</p> <p> Dr. Gopal Kasat, Global Director Mixing Science Practice, Tridiagonal Software Pvt. Ltd.</p> <p> Dr. Uttamkumar Joshi, Application & Market Development Consultant, Tridiagonal Software Pvt. Ltd.</p> <p> Dr. Sanket Salgaonkar, Principal Engineer, Mettler-Toledo International Inc.</p>	<p> Mr. Bhavik Shah, Lead - Process Engineering & Flow Chemistry, UPL Ltd.</p> <p> Mr. Krut Patel, Director, Shimmer Chemicals Pvt. Ltd.</p>
12:45 - 13:15		Right first-time GREEN scale-up using MixIT
13:15 - 13:45		Green engineering & process sustainability through non isothermal calorimetry studies
13:45 - 15:00	Lunch Break, Visiting IGCW Expo.	
15:00 - 15:05	Industry & Academic Mentors for the Session	Creating context for Solution Providers
15:05 - 15:25	 Mr. Ankit Vyas, CMO, Standard Engineers	Green Engineered Mixing & Agitation Solutions
15:25 - 15:45	 Mr. Chandrakant Sethia, Manager AFR India, Corning Reactor Technologies	Continuous manufacturing through Inherently Safer & Sustainable Technology
15:45 - 16:05	 Dr. Makrand Pimlapure, MD, MakSpeed Technologies Pvt. Ltd.	"MakSpeed Flow Chemistry Systems: A Case for Green Chemistry Advancements"
16:05 - 16:25	 Mr. Abhijeet Kulkarni, MD & CEO, Proburgeon Pvt. Ltd.	Flow Technology for Efficient Processes
16:25 - 16:45	 Mr. Vilobh Shete, Chemical Research & Process Engineer, HEL Group	Vent sizing for Integration of Process Safety & Green Chemistry
16:45 - 17:00	Closing Remarks & Acknowledgements by Session Mentors	
17:00 - 18:00	Tea/Coffee Break, Visiting IGCW Expo	

*Please note that this is a Tentative Agenda, and there might be changes in the topic/title and overall flow of the presentations.

Click here to Register for the Session: <https://www.industrialgreenchem.com/igcw23-online-and-offline-registration/>

TECHNICAL SESSION ON WASTE VALORIZATION & INDUSTRIAL ECOLOGY

8th November 2023 | The Westin Mumbai Garden City

Expected Participants:

Chief Sustainability Officer, President/VP-EHS, GM-EHS, Production & EHS Professionals, CETPs, Industrial Corporations, etc

Objectives:

- To explore Waste Valorization and Industrial Symbiosis as powerful tools to achieve Circular Economy.
- To learn from successful case studies of Industries/Industry Clusters on innovative methods to manage waste.
- To connect with Solution Providers offering diverse solutions for recovery or processing of wastes from Chemical Industry.
- To expand awareness about alternatives to recycle e-waste, plastic & packaging wastes, etc.

Session Mentors



Ms. Jyoti Palekar, Co-founder & Managing Director, **STEP Pvt. Ltd.**



Mr. Ulhas Parlikar, Global Consultant - Waste Management, Circular Economy, **Policy Advocacy & Co-processing**

Timing	Speaker	Topic / Title of Presentation
08:30 - 09:30	Registration, Tea/Coffee, Networking, Visiting IGCW Expo	
09:30 - 09:40	Welcome by Session Mentors: Acknowledgement, Self-Introduction, Creating Context for the Session	
09:40 - 10:10	 Dr. Prasad Modak, MD, Environment Management Centre (EMC)	Keynote: Waste Valorization & Industrial Ecology
10:10 - 10:40	 Ms. P. Bineesha, Executive Director, International Institute of Waste Management (IIWM)	Industrial Ecology / Industrial Eco-parks
10:40 - 11:10	 Dr. Bharat Jain, Member Secretary, Gujarat Cleaner Production Centre (GCPC)	Novel Spent Acid & other case studies of Waste Valorisation & Industrial Ecology in Gujarat
11:10 - 12:00	Tea/Coffee Networking Break, Visiting IGCW Expo.	
12:00 - 12:30	 Dr. A. Gokulram, Manager Operations and Applied Research, Anant School for Climate Action	Industrial symbiosis in India - an exploration of an Indian industrial estate
12:30 - 13:00	 Dr. Avatar Matharu, Dy. Director, Green Chemistry Centre of Excellence, University of York	Converting food & other wastes to valuable chemicals & resources
13:00 - 13:30	 Mr. Kannan Vairavan, Senior Counsellor, CII - Sohrabji Godrej Green Business Centre	Alternative fuel and raw material mapping for cement kiln co-processing
13:30 - 14:45	Lunch Break, Visiting IGCW Expo.	
14:45 - 15:15	 Mr. Ashish Kumar Mishra, Regional Operations Head - South East, Geoclean, Adani Cement	A new paradigm for waste management: Geoclean's expertise
	 Ms. Parul Nanda, Head of Strategic Sourcing & Solutions, Geoclean, Adani Cement	
15:15 - 15:35	 Vikram Dhumal, Business Head, Geist Research - Division of Z-Tech India Pvt. Ltd.	Achieving Sustainability By Waste Valorization
15:35 - 15:55	 Dr. Payal Nandurkar, Founder, WE The Recycling Company	Circular economy in E-waste to promote sustainability.
15:55 - 16:15	 Mr. Anish Malpani, Founder, Ashaya Recyclers Pvt. Ltd.	Making Sunglasses From Packets Of Chips Using Chemo-Mechanical Recycling
16:15 - 16:35	 Mr. Aniket Gavvas, BDM & Sustainability, The Shakti Plastics Industries	Recycling of different kinds of plastics
16:35 - 16:55	 Mr. Priyesh Bhatti, CEO, Green Gene Enviro Protection & Infrastructure Pvt. Ltd. (GEPIL)	Waste aggregation and pre-processing
16:55 - 17:15	 Dr. S. Adimuthy, Sr. Principal Scientist, Natural Products & Green Chemistry Division, CSIR-Central Salt & Marine Chemicals Research Institute (CSMCRI)	Recovery of value added products from the industrial waste effluents and green processes
17:15 - 17:20	Closing Remarks & Acknowledgements by Session Mentors	
17:20 - 18:00	Tea/Coffee Break, Visiting IGCW Expo	

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Click here to Register for the Session: <https://www.industrialgreenchem.com/igcw23-online-and-offline-registration/>

TECHNICAL SESSION ON SOFTWARE & ANALYTICAL TOOLS FOR GREEN & SUSTAINABLE CHEMISTRY

8th November 2023 | The Westin Mumbai Garden City

Expected Participants:

Senior Scientists (President, VP, GM, Manager, etc) from R&D, Analytical, Quality Control, Process Development

Objectives:

- To learn how large Pharma & Fine Chemical companies drive Green Chemistry using software & analytical tools
- To explore Computational Chemistry, Artificial Intelligence & Machine Learning as tools for Sustainable Chemistry.
- To introduce innovative software tools like Synthia, SciFinder-N, ASKCOS, etc that facilitate Process Research.
- To connect to solution providers offering innovative software & analytical tools that enable Green Chemistry.



Dr. Rakeshwar Bandichhor, Head, Chemistry - API
- Process R&D, **Dr. Reddys Ltd.**

Session Mentors



Dr. Kaustav Chakraborty, Team Leader,
Laboratory of Advanced Polymer & Organic
Chemistry, **Solvay Specialty India Pvt. Ltd.**

Timing	Speaker	Topic / Title of Presentation
08:30 - 09:30	Registration, Tea/Coffee, Networking, Visiting IGCW Expo	
09:30 - 09:40	Welcome by Mentors: Acknowledgement, Self-Introduction, Creating Context for the Conference	
09:40 - 10:10	 Dr. Rakeshwar Bandichhor, VP & Head of Chemistry - API R&D, Dr. Reddys Laboratories and Vice-Chair, ACS-India Chapter	Software & Analytical Tools at Dr. Reddy's to drive Innovative Green Chemistry Solutions in Process Research
10:10 - 10:45	 Dr. Gautam Samanta, Director, AGS Pharma Consulting	Design of Experiment (DoE)/Process Analytical Technologies (PAT) as a Complementary tool for Green and Sustainable Chemistry
10:45 - 11:15	 Mr. Avinash Shinde, General Manager (SHE & Instrumentation) Global, Galaxy Surfactants Ltd.	Process Automation to drive safety and lower environmental footprint
11:00 - 12:00	Tea/Coffee Networking Break, Visiting IGCW Expo.	
12:00 - 12:35	 Mrs. Sreelatha Thonthula, Manager Phytochemistry, Advanced Research, Loreal India Pvt. Ltd.	Reverse Iontophoresis-A green analytical tool for quantification of metabolites from botanicals
12:35 - 13:10	 Mr. K. K. Bhagchandani, Chief Business Officer, Axcess Tech Systems Pvt. Ltd.	Enhancing efficiency of Chemistry research with informed decision-making and utilizing Artificial Intelligence/Machine Learning
13:10 - 13:40	 Mr. Sachin Gupta, VP – Digital Innovation & Transformation and Sales, ITRadiant Solutions Inc.	Achieve both environmental and financial sustainability goals leveraging business software with embedded Artificial Intelligence
13:40 - 15:00	Lunch Break, Visiting IGCW Expo.	
15:00 - 15:30	 Mr. Kapil Aggarwal, Director - India, South Asia & GCC, Revvity Signals Software Inc	Empowering Sustainability: The Role of Digitization in Green Chemistry R&D
15:30 - 16:00	 Dr. Ewa Gajewska, Head of Product Management - SYNTHIA™ R&D, Merck Group	Introduction to SYNTHIA™ Retrosynthesis Software Tool
16:00 - 16:30	 Dr. Nabin Sarkar, Application Specialist, American Chemical Society (ACS)	SciFinder [®] - A powerful tool for process research
16:30 - 17:00	 Prof. Connor Coley, Assistant Professor, Dept. of Chemical Engineering, Dept. of Electrical Engineering & Computer Sciences, Massachusetts Institute of Technology (MIT)	ASKCOS - Software tool for retrosynthesis and prediction of feasible synthetic routes
17:00 - 17:10	Closing Remarks & Acknowledgements by Conference Mentors	
17:10 - 18:00	Tea/Coffee Break, Visiting IGCW Expo	

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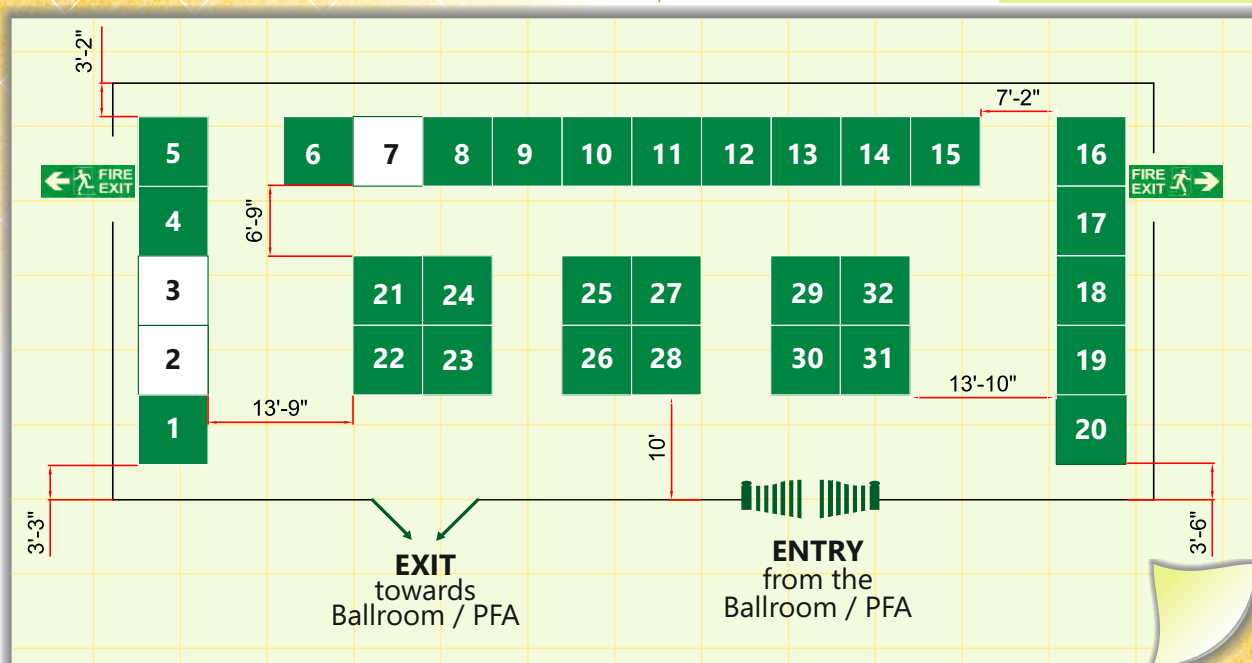
THE 7TH INDUSTRIAL GREEN CHEMISTRY WORLD (IGCW-2023) CONVENTION & ECOSYSTEM

6th - 8th November 2023

The Westin Mumbai Garden City

IGCW-2023
EXPO

EXPO FLOOR PLAN



Stall No.	Exhibitor
1	MakSpeed Technologies Pvt. Ltd.
2	
3	
4 & 5	LabGuard India Pvt Ltd
6	HEL India Pvt. Ltd.
7	
8 & 9	ICT Mumbai
10 & 11	Newreka Green Synth Technologies Pvt. Ltd.
12	Climate & Conservation Consortium
13	Rhodium Master
14	Environalgae
15	Geist Research Pvt. Ltd.
16 & 17	ISC3
16 & 17	REVY Environmental Solutions Pvt. Ltd.
16 & 17	Ashaya Recyclers Pvt. Ltd.

Stall No.	Exhibitor
16 & 17	Schutzen Care Pvt. Ltd.
16 & 17	Bunko Junko
16 & 17	We The Recycle company
18 & 19	Pure Water & Veolia
20	Standard Engineers
21 & 24	Revity Signals Software Inc
22	Kcat Enzymetic Pvt. Ltd.
23	Proburgeon Pvt. Ltd.
25	Clean Chem Laboratoris LLP
26	Advanced Enzymes Technologies Pvt. Ltd.
27	Excel Industries Ltd.
28	Corning
29 & 30	CSIR Institute
31 & 32	CSIR Institute

Participation Capacities



Contribute as Expert, Mentor, Speaker

Submit abstract for case-study presentation



Get your GC&E initiatives globally recognised

Submit your success case-study for IGCW 2023 Awards



Convey your company's commitment and leadership in GC&E implementation by partnership with the IGCW-2023 convention

Contribute as a sponsor & leverage from branding opportunities



Showcase your GC&E based Technology/Product/ Service solutions

Participate in IGCW 2023 Expo



Expand your technical understanding of the subject, learn from industry peers, align your company's sustainability goals with GC&E implementation strategies

Participate as a delegate

To know more about any of the above Partnership/Participation opportunities, write to

krishna.padia@industrialgreenchem.com

OR

connect@industrialgreenchem.com

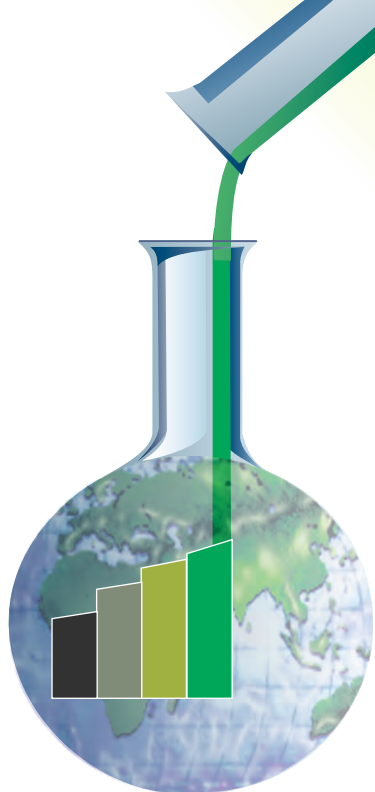
Participation Contribution in INR

Sponsorship Categories	<ul style="list-style-type: none"> Sustainability Partner: 10 Lacs IGCW-2023 Awards Partner: 8 Lacs Green Chemistry / Green Engineering Partner: 7.5 Lacs Technical Session Partner: 5 Lacs Cause Partner: 3 Lacs <p>For details write to krishna.padia@industrialgreenchem.com</p>
Exhibition Fees	<ul style="list-style-type: none"> Premium Booth (4x2 SqM) : 2 Lacs + Taxes Standard Booth (2x2 SqM) : 1.25 Lacs + Taxes <p>For details write to prakash.dussa@industrialgreenchem.com</p>

Convention Details	Industry	Academia	Students
Technical Session Day 1, 7th Nov.	₹ 12,500 + Taxes	₹ 9,375 + Taxes	₹ 6,250 + Taxes
Technical Session Day 2, 8th Nov.	₹ 12,500 + Taxes	₹ 9,375 + Taxes	₹ 6,250 + Taxes
Full Convention (7th & 8th including Awards Evening on 6th)	₹ 25,000 + Taxes	₹ 18,750 + Taxes	₹ 12,500 + Taxes

For registration click here :-

<https://www.industrialgreenchem.com/igcw23-online-and-offline-registration/>



7th
IGCW
2023
industrial green chemistry
w o r l d

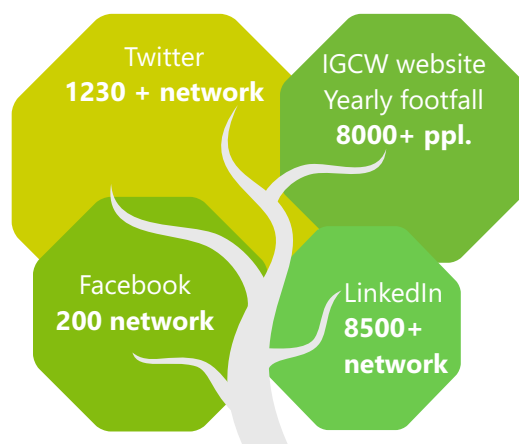
**Convention
&
Ecosystem**

6th - 8th November 2023

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IGCW Reach-out as on 10th July 2023

Organiser:


Green ChemisTree
Foundation

Green ChemisTree Foundation

C/o Newreka *GreenoSynth*[™] Technologies Pvt. Ltd.
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