

# IGCW Symposium: 9i Theme Approach

IGCW Symposium is the flagship event of the IGCW Convention where nine concurrent events will take place at the 5th Industrial Green Chemistry World on the 5th and 6th October, 2017 at Ramada Powai, Hotel & Convention Centre, Mumbai.

IGCW is a platform where global Green Chemistry experts share their insights, knowledge, expertise and experiences and senior executives of large & multinational companies share their Green Chemistry & Engineering (GC&E) based strategies, tools, technologies & best practices.

The IGCW-Symposium is designed around the **9i Theme approach**.

## Theme 1 – IGNITION

The theme of Ignition brings to the fore, hard realities and uncomfortable facts that we need to confront, with regards to pollution & the environment, igniting the consciousness of senior decision makers of the chemical industry in the audience. It touches

IGCW - 2017 Symposium, DAY I, 5th Oct. 2017, Thursday			
9:30 to 10:30am Inauguration 5th IGCW 2017 Convention & Ecosystem			
INAUGURAL SPEAKERS			
	<b>Rajeev Kapoor</b> , IAS Secretary, Dept. of Chemicals & Petrochemicals (DCPC), Ministry of Chemicals & Fertilisers, Govt. of India		<b>Prof. Ashutosh Sharma</b> , Secretary, Dept. of Science & Technology, Ministry of Science & Technology, Govt. of India
	<b>Dr. Rajiv Sharma</b> , IAS Secretary, Science & Engg. Research Board, Dept. of Science and Technology, Govt. of India		<b>Sanjay Sethi</b> , IAS, CEO, Maharashtra Industrial Development Corporation (MIDC), Govt. of Maharashtra
	<b>Ajay Narayan Jha</b> , IAS, Secretary, Ministry of Environment, Forests & Climate Change (MEFCC), Govt. of India		<b>R. Gopalkrishnan</b> , Former Director, TATA Sons, Author and Corporate Advisor
TIMINGS	THEME	SPEAKER	TITLE
10:30 - 11:15	Keynote	Dr. John Warner, Co-founder, 12 Principles of Green Chemistry; President, CTO, The Warner Babcock Institute for Green Chemistry, USA	Green Chemistry: Inventing a Circular Economy 
11:15 - 11:30 Tea break & Inauguration IGCW -2017 EXPO			
11:30 - 12:00	Ignition	R. Gopalkrishnan, Former Director, TATA Sons, Author, Speaker, Corporate Leader, India	How can smart people stop doing silly things? 
12:00 - 12:30	Ignition	Dr. David Constable, Science Director, American Chemical Society-Green Chemistry Institute, USA	Innovation: We won't get from here to there without it! 
12:30 - 13:00	Ignition	Rafael Cayuela, Chief Economist, Corporate Strategy & Int. Gov. Affairs, The Dow Chemical Company, Switzerland	The Chemical Industry under the 4th Industrial Revolution – Sustainable, Digital and Citizens One 
13:00 - 14:00 Lunch, networking & visit to IGCW EXPO			
14:00 - 14:20	Inspiration	Srini Srinivasan, Managing Director, Pfizer Global Supply and R&D, India	Green for good – every step counts 
14:20 - 14:50	Inspiration	Dr. Julien HITCE, L'Oréal R&I – Advanced Research, L'Oréal, France	Innovation from Renewable Resources at L'Oréal: Expanding the Chemist's Toolbox 
14:50 - 15:20	Inspiration	Jeffrey Whitford, Head of Corporate Responsibility and Branding, Merck KGaA, Germany	Taking Green Chemistry from a Fad to a Fixture at Merck 
15:20 - 15:50 Tea break & visit to IGCW EXPO			
15:50 - 16:20	Initiation	Dr. Julia Rowe, Group Sustainability Manager, Johnson Matthey, plc, UK	How our Sustainability journey has been good for business: the first decade 
16:20 - 16:40	Initiation	Dr. Ingrid Mergelsberg, Director-Process Chemistry MSD, USA	State-of-the-Art Approaches to Sustainable Commercial Manufacturing Processes in the Pharmaceutical Industry 
16:40 - 17:10	Initiation	Dr. Ashutosh Agarwal, CSO, Jubilant Life Sciences Ltd., India	Implementing Green and Sustainable Initiatives at Jubilant Life Sciences 
17:10 - 17:30	Initiation	Kumaresan Rajendran, South Asia Business Head, Clariant Chemicals India Ltd. India	Ecotain – Clariant's approach to Sustainability 
17:30 - 18:30	High Tea & visit to IGCW EXPO		18:30 - 20:30 SERB-IGCW Awards Evening, followed by Networking & Dinner

upon the environmental impact of the rapidly growing volumes of chemicals being manufactured and the consequences of continuing to maintain status quo and conduct business-as-usual. The speakers in this session also ignite possibilities that the field of GC&E has to offer and the potential difference it can make.

### Theme 2 – INSPIRATION

Speakers on this theme share their organization's commitment towards sustainability & Green Chemistry, some of the GC&E based tools & technologies they have been implementing, the outcomes they have obtained and impact it has made on the triple bottom line of people, plant and profit. This acts as a source of inspiration for the delegates from other participating companies. The theme of Inspiration also includes sharing of successful case studies of implemen-

## IGCW - 2017 Symposium

6th Oct. 2017, Friday



TIMINGS	THEME	SPEAKER	TITLE
9:30 - 10:00	Keynote	Prof. Girish Sahni, Director General, Council of Scientific & Industrial Research (CSIR), India	
10:00 - 10:30	Identification	Nitesh Mehta, Co-founder & Director, Green ChemisTree Foundation, India Dr. Surendra Bhatia, Sapec Agro SA-Director-Sapec Agro India	Identifying Challenging Chemistries in India – Priority for our R&D  
10:30 - 11:00	Invention	Prof. Chao -Jun Li, Professor (E.B. Eddy Chair), Canada Research Chair (Tier I) in Green/Organic Chemistry, Dept. of Chemistry, McGill, Canada	Exploration of new reactivities towards future chemical sustainability 
11:00 - 11:30	Tea break		
11:30 - 12:00	Invention	Dr. Mark Dorfman, Biomimicry Chemist, Biomimicry 3.8, USA	From Biomimetic Idea to Prototype: Key Factors for Success 
12:00 - 12:30	Innovation	Dr. Pascal METIVIER, R&I Science and Technology Director, Solvay, Belgium	Embedding sustainability within research & innovation 
12:30 - 13:00	Innovation	Dr. Sandeep Mohanty, Director-Process Innovation, Dr. Reddy's Laboratories Ltd., India	Radical approach to simplicity in process design 
13:00 - 14:00	Lunch break, visit to IGCW EXPO		
14:00 - 14:30	Implementation	Dr. Ashok Menon, Global Technology Leader, Life Cycle Assessment, Corporate Sustainability Div. SABIC India Pvt. Ltd.	Business value of Life Cycle Assessment 
14:30 - 15:00	Implementation	Dr. P. L. Srinivas, Head, API R&D- Bangalore, Cipla Ltd., India	
15:00 - 15:30	Industrialization	Prof. Oliver Kappe, Professor of Chemistry at the University of Graz; Key Researcher at the Research Center Pharmaceutical Engineering GmbH (RCPE), Austria	The Use of Continuous Flow Technology for the Synthesis of Active Pharmaceutical Ingredients 
15:30 - 16:00	Lunch break, visit to IGCW EXPO		
16:00 - 16:30	Industrialization	Dr. Anuj Mittal, VP R&D, PI Industries Ltd., India	Process Control: Key to achieve Remove, Reduce and Recycle 
16:30 - 17:00	Impact	Ravi Raghvan, Editor, Chemical Weekly, India	Future of Chemical Industry - Impact of green chemistry & engineering 
17:00 - 17:15	Acknowledgement		



tation of GC&E and the tangible and intangible returns that it has generated for the organization; in short, the business case for Green Chemistry.

### Theme 3 – INITIATION

Organizations that have initiated their journey of implementing Green Chemistry internally and have already covered some distance in that direction in the last couple of years, will share their insights and experiences on this theme. Senior executives from these organizations present how they have initiated implementation of GC&E based principles & practices, the results accomplished, the challenges they have faced on their journey and their overall experience. They also share some of their strategies, the GC&E based tools & solutions they are exploring and their best practices.

### Theme 4 – IDENTIFICATION

Senior visionaries & leaders from the scientific community share their understanding & insights on various realities, leading to identification of priorities for the research community, based on the needs of the industry, society, our country and our planet. This creates a context for R&D Heads of various participating companies, for their future research work. Since, they have the responsibility of charting the course for their organization's research

focus, this would also enable them, to identify research priorities and channelize resources in a purposeful direction.

### Theme 5 – INVENTION

The theme on Invention presents recent inventions and progress made on the research frontiers of Green Chemistry. Green Chemistry thinkers,

pioneers and researchers will present their work on creating new paradigms that would forever transform the way those chemistries are done and have an impact on reducing the environmental footprint of such processes. The speakers presenting on this theme will also share their "Invention Journey", which could include challenges faced, how they were overcome, and insights into the process of inventing a GC&E based solution.

### Theme 6 – INNOVATION

Organizations known for bringing innovations to the market place will share their products and solutions in this theme. Along with a successful case study of how they brought about that innovation, the speakers will also share their innovation journey, which may include their experiences, challenges faced during the process of innovating, insights into the process of innovation and strategies or tools used to accelerate the innovation process.

### Theme 7 – IMPLEMENTATION

The theme of "Implementation" includes sharing from organizations who have been implementing or making an attempt to implement GC&E based tools, practices or solutions within their organization. Speakers will share their strategies, insights, experiences and learnings along their journey to explore

the application of GC&E principles to their products and processes and the outcome their team has accomplished.

### Theme 8 – INDUSTRIALISATION

Organizations that have successfully commercialized a GC&E based technology or solution will share their stories and case studies in this theme. They will share the challenges faced during scale-up and commercialization phase, lessons learnt, insights obtained and finally the tangible and intangible impacts that the solution made in terms of reducing the environmental footprint & financial savings, as compared to conventional technologies.

### Theme 9 – IMPACT

On the theme of "Impact", the speakers will consolidate the overall two days of deliberations and try to present an objective, bird's eye view of the situation of the industry, the trends, and how they see things moving in the coming years. This enables the industry to recognize various realities and the urgent need to act. Based on their experience, they will also share what has been working and what has not, with



regard to how the chemical industry is operating when it comes to environmental issues. The theme provokes the question: What happens if we continue along this path? How does the future look like, if we explore Green?

Internationally renowned practitioners listed will speak on the various 9i themes. The titles of the speakers gives a flavour of the width and the depth of the areas covered.