

Editorial – Proceedings of the International e-Conference on Green Chemistry and Engineering towards Sustainable Development-An Industrial Perspective †

Jigisha K. Parikh ^{1,*}, Meghal A. Desai ¹, Sanjay R. Patel ¹, Girirajsinh C. Jadeja ¹, S.K. Sundar ¹

¹ Department of Chemical Engineering, Sardar Vallabhbhai National Institute of Technology, Surat-395007, Gujarat, India., jkp@ched.svnit.ac.in; mad@ched.svnit.ac.in; srp@ched.svnit.ac.in; jgc@ched.svnit.ac.in; sundarsk@ched.svnit.ac.in

* Correspondence: jkp@ched.svnit.ac.in;

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This issue of proceedings is a collection of the abstracts of papers presented at the International e-Conference on Green Chemistry and Engineering towards Sustainable Development-An Industrial Perspective held during 16-18th June 2021 at Sardar Vallabhbhai National Institute of Technology, Surat, Gujarat, India.

The theme for the 2021 conference is based on the 2030 Agenda for Sustainable Development, adopted by all the member states of the United Nations in 2015, which provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all the countries - developed as well as developing - in a global partnership. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests.

Out of 17 SDGs, Clean water and sanitation, Affordable and clean energy, Industry, innovation and infrastructure, Responsible consumption and production required to focus on greener aspects as the final outcome must be attained using the zero or minimum environmental impact, energy efficiency, benign chemicals (raw materials, solvents, and products) with economic feasibility.

This reflects the role of technology and engineering in creating an integrated closed-loop economy for a sustainable future. Concepts of Green Chemistry and Green Engineering have to be imbibed in any process/product/system to achieve the goal of sustainable development ultimately.

In order to highlight the importance of this approach and to facilitate critical discussions, the theme of this conference focussed on:

- Green Processes in Pharmaceutical and Chemical Industries
- Functional Foods and Nutraceuticals
- Petroleum Refining and Petrochemicals
- Green and Sustainable Chemistry in Environment
- Eco-friendly Polymeric Materials
- Green Nanotechnology
- Process Intensification Techniques in Green Chemistry and Engineering
- Waste to Wealth
- Renewable Energy and Clean Energy
- Future Trends in Green Chemistry and Engineering

These are intended to challenge the green chemistry and engineering communities to move towards systems thinking approach that will help create a more sustainable future.

The conference was designed as one of the global events to share an insight into the latest developments in Green Chemistry and Engineering, which brought together all the stakeholders from academia, research, industry, and society. Renowned Speakers from several continents delivered

Keynote Sessions on diverse topics related to sustainable development. There was an equally excellent response from the prestigious industrial organizations who presented the case studies pertaining to their specific industries. There was an overwhelming response from the scientific community, and about 100 papers from national and international institutes were presented and discussed through 12 thematic sessions spanning the breadth and depth of green and sustainable chemistry and engineering. Thereby, this conference has served as *a leading forum of academic and industrial advances in green technology and sustainability*.

Keywords: Catalysis; Environment; Green Chemistry and Engineering; Process Intensification

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Keynote Speakers

Prof. Dr. A. Hornung CEng FICHEM FRSC,
Univ.-Prof. Dr. rer. nat. Prof. em. Dipl.-Ing.,
Senior Expert Bioeconomy,
Fraunhofer UMSICHT,
Sulzbach-Rosenberg, Germany.

Dr. Chris Van den Eede,
Senior Research Director, Metabolism & Safety,
Zoetis, Zaventem, Belgium.

Gino Loosveldt,
Director Global Environment, Health and Safety – EMEA,
Zoetis, Zaventem, Belgium.

Dr. Ajay K. Dalai, FCIC, FRSC (Canada), FRSC (UK),
Distinguished Professor of Chemical Engineering,
Canada Research Chair in Bio-Energy and Environmentally Friendly Chemical
Processing,
Department of Chemical and Biological Engineering,
University of Saskatchewan.

Dr. Kenji Hara,
Professor, Ph. D; the Chair of International Committee,
Department of Applied Chemistry, School of Engineering,
Tokyo University of Technology, Japan.

Dr. Vikram M Pattarkine, PhD, BCEEM,
Chief Executive Officer,
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Dr. Ameya Diwan,
Assistant Manager - Technical (Nylon BU),
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