## Report of National Conference on

## Advances in Chemical Sciences and Sustainable Development

## **Department of Chemistry**

Department of Chemistry, VPM's B. N. Bandodkar College of Science, Thane in collaboration with Department of Chemistry, The Institute of Science, Dr. Homi Bhabha State University, Mumbai conducted a two-day National Conference on *Advances in Chemical Sciences and Sustainable Development* on April 9 & 10, 2021. The aim of this conference was to bring together scientists, professors, researchers and research scholars to exchange and share their experiences to highlight the recent developments in the field of sustainable chemistry.

Day 1 April 9 2021

The program was inaugurated virtually at the hands of Chief Guest **Dr. Anthony Melvin Crasto** followed by virtual tour of both the institutes.

**Dr. D.R.** Ambavadekar, Head and Vice-Principal of VPM's B. N. Bandodkar College of Science, Thane and Convener, who welcomed the participants, guests and provided information about Bandodkar College of science (Autonomous) Thane-1.

It was followed by **Dr. Jairam M. Khobragade**, Director of The Institute of Science, Mumbai who informed the participants about the glorious past of The Institute of Science.

This was then proceeded by Convener in Chief and Chair of the conference, **Capt.(Dr). Moses Kolet,** I/C Principal, VPMs B N Bandodkar College of Science, (Autonomous) Thane. Sir was virtually lightened the lamp on the photo of Dr V N Bedekar and addressed the gathering. He also greeted to all virtual delegates and congratulated to organising committee, convener and Co-convener. He also appreciated cooperation and collaboration extended by Dr. Homi Baba State University, The Institute of Science, Mumbai. Sir enlightened about the journey of college and motivated all participants.

By virtual offering garland to Late Dr. V N Bedekar, **Opening Remark** of National Conference was delivered by **Dr. A S. Goswami-Giri, Co-convener, Associate** professor in Chemistry and IQAC Coordinator, VPMs B N Bandodkar College of Science, (Autonomous) Thane. She explained that college conducts two preparatory workshops before any conference for the young buddies'. These workshop assist to inculcate scientific values and analytical thinking among the students. She said, our management leadership believes in our brain which has a capacity for learning that is virtually limitless which makes every human a potential genius. Hence to fulfil it college drives various activities. She also explained thrust areas in chemical sciences which is the theme of the conference.

The paper to be presented in the conference in the ISBN proceeding soft format was released at the hand of Chief Guest **Dr. Anthony Melvin Crasto**, Principal Scientist at Glenmark Pharmaceuticals Ltd. Sir stressed on the importance of green chemistry for sustainable development.

The keynote address of conference was delivered by **Prof. Sanjio S. Zade**, Professor of Chemical Sciences (DCS) at IISER, Kolkata. He stress 0n *Thiophene containing ladder-type next-gen organic semiconductors*. He said about molecular shape, orbital engineering and crustal engineering. Synthesis of Teatra-substituted thiophene and its changing equivalence differ in production. He stress upon - Stille coupling. He also informed about Pi conjugated system in organic electronic devices and general use of organic semiconductors.

The role of chemistry in the field of nanotechnology was explained by Prof. Vivek Polshettiwar, Associate Professor in the Department of Chemical Sciences at TIFR, Mumbai. He delivered a talk on the topic: *Nanochemistry for Sustainable Development*. He explained the challenges of 21<sup>st</sup> century which can be solved by using "Carbon Capture and Conversion to Chemicals" I He gave example of

Haber-Bosch ammonia synthesis ,earth energy budget, climate change due to excessive CO2 level which most serious problem. He exhibited modelling of high surface area porous material.

Dr. Amit Zodge, R & D, Manager of Spice King Holland (SKH), Netherlands delivered a talk on topic: *The Green Solvent-Supercritical CO2 technology for Sustainable Chemistry*. Role of CO2 in bio extraction, Super Critical Fluid (SFC) *He* explained the Resolution of alpha methoxyphenyl acetic acid with R-ethyl cyclohexylethyl amine amines and its distereoisomeric properties are same and outcome of it for the development of semiconductors. He also stressed on the single crystal study and its outcome.

The paper presentation session encompassed with 11 scientific research papers;

**Day was conclude with Dr. Gayatri Barabde,** Convener and Head of the Chemistry department at The Institute of Science, Mumbai as the Convener concluded the conference and wished the participants for their future research.

Day 2, April 10 2021

The program was started with talk of Dr. Muralidhar N. Ingale, Director of Reynish Pharmachem Pvt. Ltd, Vadodhara. He focused on - Strategic approaches for optimizing performance and streamlining operations to foster quality and growth for the chemical industry.

**Prof. Rajendra N. Shirsat**, Professor of Physical Chemistry, Department of Chemistry, Goa University. He delivered a talk on the topic - *Topography of Molecular Electrostatic Potential*.

Third session was a poster presentation. Dr. Raju Mane was chairperson for this session. Participants put forward poster presentations on various topics related to sustainable chemistry

The Valedictory function was ceremoniously conducted by **Prof. A.D. Sawant**, Former Vice Chancellor, University of Rajasthan, Jaipur; Former Joint Director of Higher Education, Mumbai; Former Pro Vice Chancellor, University of Mumbai

Total 93 participants in the online conference. Youtube views were on day -1 : 9th April 2021 – was 994;day -1 and on second day 10th April 2021 was – 585.

The conference served as a common platform for participation of experts from Industry, Academia and Research organizations who provided insights into the current scenario and technological advancements in green chemistry.

Vote of thanks was given by Dr. Vikas M. Bangade. National Conference was concluded with Glimpses of the conference, followed by National anthem.

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