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EDITORIAL

NATURAL SCIENCES AND ENGINEERING FOR SUSTAINABLE DEVELOPMENT (NSED 2024)



Motivated by the widely discussed topic of Sustainable Development and sustainable development goals (SDGs) of the United Nations, in the context of Clean Energy and Environmental issues, the Centre for Organic Spintronics and

Optoelectronics Devices (COSOD), in association with Department of Physics, Kazi Nazrul University, Asansol organized a two days International Conference on Natural Sciences and Engineering for Sustainable Development (NSED2024) on 6th and 7th March 2024 our aim was to gather visionaries, academicians, researchers, industry experts, and students to share and exchange views on this topic.

Conference NSED2024 was covered with four broad divisions like i) Physical Science Division(PSD), ii) Biological Science Division (BSD), iii) Earth and Environmental Science Division (EED) and iv) Engineering and Emerging Technology Division (ETD). Experts, researchers, professionals from academia, research, industry and policymakers across the globe actively participated and interacted to showcase latest research and technological developments and to cultivate recent trends, activities, strategies and challenges for global requirements. There is an assemblage of inspirational keynote addresses.

Prof. Nibir K. Dhar, Professor and Director of Virginia Microelectronics Centre, Department of Electrical and Computer Engineering, Virginia Commonwealth University, USA; Prof. Mukti M. Rana, Professor of Engineering, Division of Physical and Computational Sciences & Director and Principal Investigator, Optical Science Centre for Applied Research (OSCAR), Delaware State University, USA, Prof. Ajoy Kumar Ray, Padma Shri and former Director IEST Shibpur, Prof. Arghya Taraphder Professor, Department of Physics, IIT Kharagpur and many more distinguished speakers were physically present at the conference.

Participants assembled from different states of India such as, West Bengal, Tripura, Odisha, Tamil Nadu, Madhya Pradesh, Uttarakhand, Uttar Pradesh, Maharashtra, Meghalaya, Jharkhand etc. Research papers from different countries, rather it can be said from different continents, such as Japan, South Korea, Vietnam, China, Israel, Algeria, Spain, USA were presented in this conference. The conference had around 130 registered abstracts. NSED2024 was structured with some appropriate events. There are keynote and invited lectures from leading experts in the related fields, as well as contributory papers presentations. Also, special sessions, like Drone Surveying and Mapping by Prof. Basudeb Bhatta, Professor, Jadavpur University and Industry Talk by Representatives of HHV Advanced Technologies Pvt. Ltd. made the conference very fruitful and attractive. NSED 2024 received sponsorship from *Sushama Electronics*, Garia, Kolkata, *AICT Pvt Ltd* Durgapur, *HHV Advanced Technologies*,

Bengaluru, and *AIEMP*, Asansol. Overall, it can definitely be said that the NSESD2024 provided an opportunity for networking with researchers and gaining new and novel research ideas. A special thanks goes to Professor Sudhendu Mandal, Editor-in-Chief of *Science and Culture* journal for publishing a special issue of *Science and*

Culture comprising of few selected research papers presented in the International Conference NSESD 2024. □

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ABOUT GUEST EDITORS

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Dr. JITENDRA NATH ROY received M Sc and Ph D degree in Physics from Vidyasagar University, India. He is the recipient of *University Silver Medal*. Dr. Roy received Senior Research Fellowship from Council of Scientific and Industrial Research (Government of India). Prof. Roy is also the recipient of *International Sardar Patel Award* from Sardar Vallabhbhai Patel Foundation, India for significant contribution in physical science. Prof. Roy received Barnoporichay Samman 2022. Dr. Roy has more than 20 years of experience in teaching, research and administration in central (NIT Agartala) and state government Institute. During his stay at NIT Agartala he hold the position as Head, Department of Physics, Dean (students' welfare) and member of Senate etc. Presently Dr. Roy is working as a Professor in the Department of Physics and acting as *Coordinator of Centre for Organic Spintronics and Optoelectronic*

Devices at Kazi Nazrul University, Asansol, WB, India. He is the former Dean, Faculty Council for Post Graduate Studies in Science, Technology. Prof Roy has already published more than 155 research papers in peer reviewed journals and conference proceedings. He is the co-author of two books and *one book chapter*. Dr. Roy received research grant from *AICTE, DST, BRNS (Govt of India)*. Dr. Roy is member of many International Advisory Committees, Technical Program Committees in various countries, acted as Panel Editor, Reviewer for reputed journals. He is a *Fellow* member of *Optical Society of India*. Prof. Roy has produced *11 PhD students* in different topics of Applied Optics, Photonics and Optoelectronics. Prof. J.N. Roy has been listed in world's top 2% scientist by Stanford University, USA in 2020, 2021 and 2022.

Dr. Puja Dey



Dr. PUJA DEY received M Sc and Ph D degree in Physics from University of North Bengal, India and Indian Institute of Technology Kharagpur, India, respectively. Dr. Dey received Institute Research Scholarship from I. I. T. Kharagpur and Senior Research Fellowship from *Council of Scientific and Industrial Research (CSIR)*, Government of India. Dr. Dey has also received *Centre National de la Recherche Scientifique (CNRS)* Post-Doctoral Fellowship from CNRS, Strasbourg, France. Dr. Dey has overall 14 years of experience in teaching, research and administration. Presently, Dr. Dey is working as an Associate Professor in the Department of Physics and acting as *Joint-Coordinator of Centre for Organic Spintronics and Optoelectronic Devices* at Kazi Nazrul University, Asansol, WB, India. She has already published more than *55 research papers* in peer reviewed journals and conference proceedings.

She is co-author of *two books*. Dr. Dey received research grants from *Department of Science and Technology (DST) India*, Board of Research in Nuclear Sciences (BRNS), *Department of Atomic Energy, Govt of India* and UGC-DAE CSR Indore. Dr. Dey is the Reviewer of many reputed journals. Dr. Dey is actively involved in research activities in different topics, such as Spintronics, Multifunctional Materials, Nanomaterials, Optoelectronics and Opto-Spintronics and giving Ph. D. guidance to *6 PhD students*.

Note by the Editor-in-Chief, *Science and Culture*: This issue has been sponsored by the Department of Physics, Kazi Nazrul University, Asansol, West Bengal.