



Contents lists available at ScienceDirect

Materials Today: Proceedings

journal homepage: www.elsevier.com/locate/matpr

International conference on advances in material science and chemistry (ICAMSC – 2020): Editorial

Naveen V. Kulkarni

Department of Chemistry, Amrita Vishwa Vidyapeetham, Amritapuri, Kerala 690525, India

International Conference on Advances in Material Science and Chemistry (ICAMSC – 2020) was organized online by the Department of Chemistry, Amrita Vishwa Vidyapeetham, Amritapuri, Kerala, India in association with Amrita Centre for Research and Development (ACRD), Amritapuri on August 10–12, 2020. ICAMSC – 2020 hosted more than 300 participants from around the globe with broad perspective of chemistry and materials research. This event was supported by the Royal Society of Chemistry, London, United Kingdom and RSC Advances, Materials Advances from the Royal Society of Chemistry, Journal of Materials Engineering and Performance from Springer and Materials Today: Proceedings from Elsevier were the publishing partners.

This three-day mega program covered a variety of topics in chemistry and material science research, including advanced energy materials, nano materials, nano technology, solar energy materials, porous materials, batteries, electrical and magnetic materials, carbon & graphene- based materials, polymers, ceramics and composite materials, functional materials, computational materials, chemical and bio sensors, organometallic compounds, coordination complexes, phytochemistry, natural product synthesis, metal organic frameworks (MOF), drug design, homogeneous, heterogeneous, organo & bio catalysis, peptide & protein synthesis, small molecule activation, environmental and green chemistry, advanced analytical techniques, biological application of organic and inorganic compounds, theoretical and computational chemistry as well as Ayurveda.

In total, seventeen plenary talks were delivered by the world-renowned scientists. The first day, Prof. Jing Li from Rutgers University, New Jersey, United States delivered a talk on “Highly luminescent hybrid phosphors for energy-efficient Lighting Technology.” Followed by Prof. E. D. Jemmis from Indian Institute of Science, Bangalore, India who talked on the topic “Benzene to borophene and everything in between.” Dr. K. V. Radhakrishnan from CSIR – National Institute for Interdisciplinary Science and Technology, Thiruvananthapuram discussed about “Bioprospecting of medicinal plants used in herbal formulations” and Prof. Bice S Martincigh from University of KwaZulu-Natal, Durban, South Africa discoursed a talk on “Nanotechnology for wastewater treat-

ment.” Prof. Sabu Thomas from M. G. University, Kottayam, India, delivered a talk on “Interfacial modification in nanocomposites to tailor functionalities” and Prof. Suresh C. Pillai from Institute of Technology, Sligo, Ireland talked about “New insights into solar and visible light active photocatalysis.” On the second day, Prof. Boris I. Kharisov from Universidad Autónoma de Nuevo León, Monterrey, Mexico delivered a talk on “MOF-derived nanocarbons: synthesis, properties, and applications.” Followed by Dr. A. Ajayaghosh from CSIR – National Institute for Interdisciplinary Science and Technology, Thiruvananthapuram, who talked on the topic “Stimuli responsive supramolecular functional materials.” Prof. R. S. Swathi from Indian Institutes of Science Education and Research, Thiruvananthapuram, India discussed about her work on “Continuum and atomistic modeling of carbon nanostructures.” Dr. V. Ganesh from CSIR- Central Electro Chemical Research Institute, Sekkalakottai, India delivered a talk on “Electrochemical biosensors for clinical diagnostics: multidisciplinary research perspectives.” And Prof. Amita (Pathak) Mahanty from Indian Institute of Technology, Kharagpur, India talked about “Inorganic nanostructure-based drug delivery systems for cancer therapeutics.” On the final day, Prof. W. D. Jones from University of Rochester, New York, United States delivered a talk on the topic “Why do weaker metal-carbon bonds lead to more stable complexes? what's going on?” Followed by Prof. M. Padmanabhan, from Amrita Vishwa Vidyapeetham, Amritapuri, India, who talked about “Metallogels: A rich source for diverse functional materials.” Prof. V. Suresh from National University Singapore, Singapore discoursed on the topic “Plastics: A boon or a curse?” Prof. A. B. Halgeri from Poornaprajna Institute of Scientific Research, Bangalore, India delivered a talk on “Development of novel mesoporous catalysts for conversion of biomass into fuels and chemicals.” Dr. Maya Jacob John from Council for Scientific and Industrial Research, Pretoria, South Africa discussed on the topic “Bio-based composite materials for a circular Economy.” Prof. P. V. Aravind from University of Groningen, Netherlands delivered a talk on “A comparison of steam reforming concepts in solid oxide fuel cell systems.”

Contributory talks (oral presentations) were organized in seven different subcategories. Inorganic chemistry (IC) stream was chaired by Prof. A. Sakthivel, Central University Kerala, Kasaragod, India; Electrochemistry (EC) stream was chaired by Prof. Leena R.,

E-mail addresses: dr.naveenvk@gmail.com, naveenvkulkarni@am.amrita.edu

<https://doi.org/10.1016/j.matpr.2021.03.047>

2214-7853/© 2021 Elsevier Ltd. All rights reserved.

Selection and peer-review under responsibility of the scientific committee of the International Conference on Advances in Material Science and Chemistry – 2020.

Cochin University of Science & Technology, Kochi, India; Organic and biomolecular chemistry (OBM) stream was chaired by Prof. Jeyakumar Kandasamy, Indian Institute of Technology, Banaras Hindu University, Varanasi, India; Nano-materials (NM) stream was chaired by Prof. Bini George, Central University of Kerala, Kasaragod, India; Theoretical and computational chemistry (TCC) stream was chaired by Prof. R. S. Swathi, Indian Institutes of Science Education and Research, Thiruvananthapuram, India; Green chemistry (GC) stream was chaired by Prof. G. Sivasubramanian, Amrita Vishwa Vidyapeetham, Coimbatore, India and Materials Science (MS) stream was chaired by Dr. P. Sudarsanam, CSIR-National Chemical Laboratory Pune, India. In total 134 participants presented their work, in each stream 'Best paper' award was bestowed. Ms. Arya Vasanth from Amrita Vishwa Vidyapeetham, Kochi, India (MS); Mr. Kempanna S. Kanakikodi from Poornaprajna Institute of Scientific Research, Bangalore, India (OBM); Ms. Reshma V. Nair from KSCSTE-Jawaharlal Nehru Tropical Botanic Garden & Research Institute, Palode, India (GC); Mr. Nilanjan Chakrabarty from National Institute of Technology Durgapur, India (EC); Mr. P. Sravan Das from University of Calicut, Kozhikode, India (IC); Ms. T. M. Mamatha from Amrita Vishwa Vidyapeetham, Bengaluru, India (TCC) and Ms. Saisree S. from Indian Institute of Space Science and Technology, Thiruvananthapuram, India (NM) were declared winners in the respective streams.

By the grace of Amma, Her Holiness, Mata Amritandamayi Devi, the Chancellor of Amrita Vishwa Vidyapeetham, the conference was a great success. We humbly thank her for all the inspiration, motivation, love and support.

We would like to thank all the eminent speakers for their valuable time and informative talks. Active involvement of all the participants in every phase of the program is much appreciated and greatly acknowledged.

Thanks are due to the prominent academicians and scientists of our scientific advisory committee, Prof. Moris S. Eisen, Israel Institute of Technology - Technion, Haifa, Israel; Prof. H. V. Rasika Dias, University of Texas Arlington, Arlington, United States; Prof. Oxana V. Kharissova, Universidad Autónoma de Nuevo León, Monterrey, Mexico; Prof. A. G. Samuelson, Indian Institute of Science Bengaluru, India; Prof. M. V. Rajasekharan, University of Hyderabad, Hyderabad, India; Prof. Kuruvilla Joseph, Indian Institute of Space Science and Technology, Thiruvananthapuram, India; Prof. C. T. Aravind Kumar, Mahatma Gandhi University, Kottayam, India; Prof. Pattayil Joy, CSIR-National Chemical Laboratory Pune, India; Prof. Girish Kumar, Cochin University of Science & Technology, Kochi, India; Prof. Shanthi Nair, Amrita Vishwa Vidyapeetham, Kochi, India; Prof. Asoke Banerji, Amrita Vishwa Vidyapeetham, Amritapuri, India; Prof. Rajakumar Balla, Indian Institute of Technology Madras, Chennai, India; Prof. V. K. Revankar, Karnatak University, Dharwad, India; Prof. A. Sakthivel, Central University of Kerala, Kasaragod, India; Prof. S. M. A. Shibli, Kerala University, Thiruvananthapuram, India; Dr. S. Nagarajan, Central University of Tamil Nadu, Kandalancherry, India and Prof. Shantanu Bhowmik, Amrita Vishwa Vidyapeetham, Coimbatore, India for their valuable guidance.

We extend our gratitude to Dr. P. Venkat Rangan, Vice Chancellor, Amrita Vishwa Vidyapeetham; Br. Devidasa Chaitanya, Director, Amrita Vishwa Vidyapeetham Amritapuri; Dr. Balakrishnan Shankar, Dean, Faculty of Humanities & Social Sciences, Amrita Vishwa Vidyapeetham Amritapuri; Dr. Bipin Nair, Dean, Faculty of Sciences, Amrita Vishwa Vidyapeetham Amritapuri; Dr. V. M. Nandakumaran, Principal, Amrita School of Arts and Sciences, Amrita Vishwa Vidyapeetham Amritapuri; Br. B. Sairam (Head) and Staff of Department of Information & Communication Technology Services, Amrita Vishwa Vidyapeetham Amritapuri; Dr. Shyam Diwakar, Director, Amrita Mind Brain Center, Amritapuri; Sri. S. Gurumurthy (Finance Officer) and Staff of Accounts Department,

Amrita Vishwa Vidyapeetham Amritapuri, Staff of Amrita Centre for Research and Development, Amritapuri and Web Team (Staff of Amrita Office of Communications) for their continuous encouragement and support.

Special thanks to Dr. Mangalam Ramanathan (Chairperson), Faculty members, Staff, Research and Post-Graduate students of Department of Chemistry, Amrita Vishwa Vidyapeetham, Amritapuri for their staunch support and untiring efforts.

Assiduous work of the ICAMSC2020 organizing committee, Dr. Naveen Kulkarni, Department of Chemistry, Amrita Vishwa Vidyapeetham, Amritapuri (Organizing Chair); Dr. Smitha Chandran, Department of Chemistry, Amrita Vishwa Vidyapeetham, Amritapuri (Convener); Dr. Sreedha Sambhudevan, Department of Chemistry, Amrita Vishwa Vidyapeetham, Amritapuri (Scientific Program Committee Chair); Mrs. Divya Mohan R., Department of Chemistry, Amrita Vishwa Vidyapeetham, Amritapuri (Publicity Committee Chair); Dr. Beena S. Department of Chemistry, Amrita Vishwa Vidyapeetham, Amritapuri (Technical Committee Chair) and Dr. Athira Krishnan, Department of Chemistry, Amrita Vishwa Vidyapeetham, Amritapuri (Registration Committee Chair) is much obliged.

Prof. Russell J. Cox, Editor-in-chief and Ms. Garima Sharma, Deputy Editor, RSC Advances, Royal Society of Chemistry, London, United Kingdom; Prof. Rajiv Asthana, Editor-in-chief, Journal of Materials Engineering and Performance and Ms. Anita Lekhwani, Executive Editor, Materials Science and Engineering Journals, Springer, New York, United States are acknowledged for their cooperation and support.

We are grateful to Dr. Stewart Bland, Executive Publisher; Mr. Colin Williams, Conference Proceedings Team and the technical staff of Materials Today: Proceedings at Elsevier, Kidlington, United Kingdom for their continuous help and support.

Among the articles submitted to the proceedings, Forty-two manuscripts have been recommended for publication in the current collection of Materials Today: Proceedings (ICAMSC2020). We believe that, the review and research articles of this collection will surely make their mark in the literature and contribute towards the development of their respective area of research. We acknowledge all the authors for their contributions and timely revisions. We are also indebted to all the reviewers for their time, efforts and valuable comments.

Finally, the determined work of fellow guest editors of this collection, Prof. Boris I. Kharisov, Universidad Autónoma de Nuevo León, Monterrey, Mexico; Prof. A. Sakthivel, Central University of Kerala, Kasaragod, India; Prof. M. Padmanabhan, Department of Chemistry, Amrita Vishwa Vidyapeetham, Amritapuri, India; Dr. Zeena S. Pillai, Department of Chemistry, Amrita Vishwa Vidyapeetham, Amritapuri, India; Dr. Smitha Chandran S. Department of Chemistry, Amrita Vishwa Vidyapeetham, Amritapuri, India; Dr. Beena S. Department of Chemistry, Amrita Vishwa Vidyapeetham, Amritapuri, India and Dr. Sreedha Sambhudevan Department of Chemistry, Amrita Vishwa Vidyapeetham, Amritapuri, India is much appreciated. Thanks to their efforts and support, which made my role and responsibilities as Managing Guest Editor, relatively easy to accomplish.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Further reading

- [1] Conference website: <https://www.amrita.edu/event/international-conference-advances-material-science-and-chemistry-icams-2020>.

- [2] About Amrita Vishwa Vidyapeetham, Amritapuri: <https://www.amrita.edu/campus/amritapuri>.
- [3] ICAMSC2020 in Materials Today website: <https://www.materialstoday.com/materials-chemistry/events/international-icamsc-2020/>.
- [4] ICAMSC2020 in RSC website: <https://www.rsc.org/events/detail/45053/international-conference-on-advances-in-material-science-and-chemistry-icamsc-2020>.
- [5] RSC Advances Call for papers: <https://www.amrita.edu/print/rsc-advances-international-conference-advances-material-science-and-chemistry-icamsc-2020>.
- [6] ICAMSC2020 Main Event YouTube link: <https://www.youtube.com/watch?v=gkHxPhrzX4E&list=PLinZb2RhFChdMOi-WqxBO8AiS7y06wzox>.