Preface

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Biographical notes: D. Nirmal is a Full Professor and Head of Electronics and communication Engineering, Karunya Institute of Technology and Sciences. He specialised in VLSI Design after his Bachelor of Engineering and received his PhD in Information and Communication Engineering from Anna University. His research interests include Nanoelectronics, GaN Technology, Device and Circuit Simulation – GSL, Sensors, HEMT, Beyond 5G, Nanoscale device design and modelling. He is a founding chair of IEEE Electron Device Society Coimbatore chapter, and a member of several committees in IEEE. He is a recipient of various awards, namely IEI-Young Engineer award, IETE Smt. Manorama Rathore memorial award 2022 from IETE, and Young Scientist Award 2019 from the Academy of Sciences. He has made more than 150+ peer-reviewed research publications and has three patents to his credit. He is also a Senior IEEE member.

Hui-Ming Wee is an Adjunct Chair Professor in the Department of Industrial and Systems Engineering, Chung Yuan Christian University, Taiwan. He has received his BS (honours) in Electrical and Electronics Engineering from Strathclyde University (UK), MEng. from Asian Institute of Technology (AIT), and PhD in Industrial Engineering from Cleveland State University, Ohio (USA). His papers have been cited in Google 11,199 times with an H-index of 57. In 2020, he is listed as top 2% scientists in Operations Research. He has trained 36 PhDs and 150 Master students globally, and is the Editor-in-Chief for the *Journal of Ubiquitous Computing and Communication Technologies*, Guest Editor for *Journal of Cloud Computing*, on 'Cloud Information Technologies in Education' and *International Journal of Lean Six*

Sigma, on "How Lean Six Sigma Improve Organizational Resilience post COVID-19.

Zubair Baig is a Senior Lecturer in Cyber Security with the School of Information Technology, Deakin University, Geelong, VIC, Australia. He is also the Co-Director of the Security and Privacy in IoT (SPYRiT) Research Lab and Division Lead, IoT, Critical Infrastructure and CPS Security, Centre for Cyber Security Research and Innovation (CSRI). He has authored/coauthored over 85 journal and conference papers and book chapters. His research interests are in the areas of cyber-security, the IoT, artificial intelligence, and optimisation algorithms. He is serving as an Editor for the *IET Wireless Sensor Systems Journal* and *PSU – A Review Journal*. He has served on numerous technical program committees of international conferences and has delivered more than 15 keynote talks on cyber-security.

The rise of micro/nanotechnologies in the last decades has led to an ever-growing attention to small structures, and the same trend has occurred in nanomaterials research. Nanomaterials are becoming more pervasive in nature as well as in various scientific and technical fields. The research progress in nano fabrication unravels new and unique electro-mechanical and optical properties with a wide range of applications in biomedical, bio-detection, and environmental applications. However, inspired not only by the nanostructures but also by the ingenuity in the process of nano modelling, nano sensors, nano structures and synthesis, nanomaterials have regained attention during recent times. In addition, the rise of new techniques like drug delivery systems, growth parameters analysis, optical characterisation, have brought about potential advances to the field in terms of nano processing, analysis and synthesis.

The present special issue highlights recent advances in nanomaterials in biomedical and environmental research. The goal of this issue is to gather contributions from different domains working on the development of nano materials and to promote interdisciplinary research around a class of nano materials. This issue reports the recent advances in nano modelling, nano sensors, nano structures and synthesis.

The selected papers are illustrative for the ever-increasing diversity in the field of nanomaterials and highlight the potential for new and state-of-the-art scientific approaches in biomedical and environmental applications.

We would like to express our sincere gratitude to all the authors for their timely manuscript submissions, continuous effort and contributions to this special issue.