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Special Issue: Selected extended papers from the 2nd International Conference on Nanoscience and Nanotechnology (ICNAN2019)

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The 2nd International Conference on Nanoscience and Nanotechnology (ICNAN 2019) was organised by the Centre for Nanotechnology Research, Vellore Institute of Technology, Vellore, Tamil Nadu, India. The centre had organised its 2nd international conference to bring together Indian and international communities working in the field of nanoscale science and technology to discuss new and exciting advances in the field. The conference covered broad themes in this area to accommodate a wide range of interests and to facilitate interdisciplinary collaboration/interaction in both academia and industry.

The organising committee of ICNAN 2019 received papers on green chemistry, cancer therapy, drug delivery, cytotoxicity food processing and several other biological applications. All papers were checked for originality and were subject to the regular peer review process and those for publication in this Special Issue of *IET Nanobiotechnology* were selected based on quality, originality and suitability to the scope of the journal. This Special Issue covers an exclusive class of research areas that incorporate microbiology, biochemistry, cell biology, molecular biology and biomaterials to solve the problems with an interdisciplinary approach. Of specific interest, the content of this issue focuses on the future perspectives of the development of nanobiotechnology by using the nanoscale properties of nanomaterials.

The Special Issue is an excellent platform through which ICNAN 2019 can disseminate technical information to a wide spectrum of audience. We extend our sincere thanks to the Editor-in-Chief of *IET Nanobiotechnology*, Professor Ronald Pethig, for his support throughout the editorial process. We thank all the reviewers for their valuable time and efforts in critically reviewing the manuscripts. We also thank the authors who submitted their papers to ICNAN 2019 and we hope this Special Issue will motivate an interest in this area and we aim to promote further research in this field.

Guest Editor Biographies

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Dr. A. Nirmala Grace is Professor and Director at the Centre for Nanotechnology Research, VIT, Vellore, India. She received her Ph.D. degree in chemistry/nanotechnology from the University of Madras, India. She worked as a postdoctoral/senior research fellow at the Korea Institute of Energy Research, South Korea on Renewable Energy. Her current research interests are on various niche areas of nanotechnology like hybrid nanomaterials, synthesis, applications in energy sector, renewable energy, energy storage, fuel cells, batteries, photoelectrocatalysis, H2 production; environmental, photocatalysis and adsorbents for organic and a few others. She has more than 90 international peer reviewed publications, has authored two book chapters and many conference publications.

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Dr. R. Vimala is Associate Professor at the Centre for Nanotechnology Research, VIT, Vellore, India. She received her Ph.D. degree in environmental biotechnology from Vellore Institute of Technology, Vellore, India. Her current research interests include various niche areas of nanotechnology like nanomaterials: synthesis, characterisation and application for remediation of environmental pollution, photocatalysis, nanomaterials for antifouling strategies, nanomaterial mediated drug delivery; bioremediation: adsorbents for removal of organic and inorganic pollutants for aqueous environment. She has published more than 50 research papers in national and international peer reviewed journals.

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Krishnamoorthi Chintagumpala has received his PhD degree in Physics from Indian Institute of Technology Madras, Chennai. After graduation he worked as Scientist at GE Global Research and Technology Center, Bengaluru and as Research Fellow at National University of Singapore, Singapore. Currently he is working as Associate Professor of Physics at Center for Nanotechnology Research, Vellore Institute of Technology, Vellore, India. He has researched on magnetoresistance, magnetocaloric, magnetic hyperthermia, dilute magnetic semiconductors, electrochemical and physical sensors. Current research interests focus on development of various magnetic nanomaterials and wearable physical sensors for biomedical and touch screen applications.

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George Jacob is Assistant Professor (Senior) at the Centre for Nanotechnology Research, VIT, Vellore, India. He is currently doing his PhD. in nanomaterials after his masters in nanotechnology from Vellore Institute of Technology, Vellore, India. His current research interests are in various areas of nanotechnology like plasmonics material and its applications in bio sensors, graphene plasmonics, simulation of graphene plasmonics and plasmonic structures; plasmonic lithography; scanning probe microscopy based nanomaterial characterisations, SPM based nanolithography and nanopatterning; fabrication of nanomaterial and graphite composites for battery applications.