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EDITORIAL

Editorial notes for the ESPR special issue on Green technology and Industrial Revolution 4.0 for a greener future

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As the world faces unprecedented environmental challenges, it is increasingly clear that green technology is one of the most effective ways to protect our planet's natural resources and address pressing environmental problems. Furthermore, the integration of sustainability with Industry Revolution 4.0 has the potential to revolutionize the entire environmental and chemical engineering industry. The theme of this special issue highlights the need to embed green technology and Industry 4.0 into sustainable development goals, with a particular emphasis on meeting the needs of the bottom billions in the community. Articles published in this issue offer valuable insights into how green technology can be harnessed to promote sustainable development, and how Industry 4.0 can be leveraged to drive innovation and change.

The guest editors of this special issue, Assoc. Prof. Dr. Low Siew Chun, Dr. Dai-Viet N. Vo, Prof. Dr. Bassim H. Hameed, and Assoc. Prof. Ts. Dr. Sunarti bt Abd Rahman from Malaysia, Vietnam, and Qatar, have worked diligently to bring together a diverse range of papers that address some of the most pressing environmental challenges of our time. The papers in this issue span a wide range of topics, including sustainable energy systems, circular economy, green supply chain management, sustainable urban planning, and many others. In this special issue, we have received 59 articles, which are research and review articles. All these articles were peer-reviewed by at least 2 independent reviewers, and only high-quality articles were considered for revision. This special issue brings together 26 high-quality articles from different countries, showcasing the latest research and technological developments in green technology and Industry Revolution 4.0, with a particular emphasis on meeting the needs of the bottom billions in the community.

We, the guest editors, would like to thank the editor-in-chief of the ESPR journal, the editorial assistant, and all the supporting staff for giving this opportunity. We would also like to extend our sincere thanks to all the contributors and reviewers who have made this special issue possible. We hope that the papers in this issue will inspire further research and innovation in this important field.

Sincerely,

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Dr. Siew Chun Low is an Associate Professor at the School of Chemical Engineering at Universiti Sains Malaysia. Her research focuses on wastewater treatment and the development of membrane-based separation system. She is particularly interested in understanding the fundamental transport phenomena across the membrane and using membrane technique to control the environmental pollution issues. Thus far, she has published 9 book chapters, more than 140 peer-reviewed journals papers with h-index of 26, i10-index of 78, and received more than 3000 cumulative citations according to Google Scholar. Dr. Low also participated in more than 30 conference proceedings, including 4 keynote speeches and 8 invited lectures. As regards to academic responsibility, she served as Subject Editor for ASM Science Journal and ASEAN Engineering Journal as well as Guest Editor for 8 Special Issues in WoS-indexed and Scopus-indexed journals. Through her expertise in membrane separation technology, she has advised/co-advised 32 postgraduate students (22 Ph.D. and 10 M.Sc.). Based on her good research recognition, Dr. Low was awarded as the Top Research Scientist in Malaysia for year 2022.

Dr. Dai-Viet N. Vo is the Deputy Director of Institute of Applied Technology and Sustainable Development, Nguyen Tat Thanh University in Ho Chi Minh City, Vietnam. He completed his Ph.D. in Chemical Engineering from The University of New South Wales, Sydney, Australia, in 2011 under the supervision of Prof. Adesoji A. Adesina. Dr. Vo's research areas are the production of green synthetic fuels using biomass-derived syngas from various reforming processes. He has published more than 400 peer-reviewed journals and several edited books. Dr. Vo currently serves as the Assistant Subject Editor for the International Journal of Hydrogen Energy, Associate Editor of Environmental Chemistry Letters, Applied Nanoscience, and Chemical Papers.

Dr. Bassim H. Hameed is a Professor of Chemical Engineering at Qatar University with expertise in Catalytic Reaction Engineering and Adsorption Technology. His research focuses on developing innovative nanoporous materials for energy and environmental applications. Before joining Qatar University, he was a full professor at the School of Chemical Engineering, University of Science Malaysia, where he worked for 20 years. He has a strong record of research engagement and collaboration, having secured and completed 15 research projects as Lead Principal Investigator and 9 as Principal Investigator. He has supervised 5 postdoctoral fellows, 23 Ph.D., 29 master students, and over 70 final-year projects by research for undergraduate students. Dr. Bassim has published 310 articles in reputable indexed-journals and over 100 articles in international journals and conference proceedings. His publications have received more than 49,190 citations on Google Scholar, and his top article has been cited 5600 times. Dr. Bassim's h-index is 111, and his i-10-index is 292. He has received numerous awards in recognition of his work in the field, including being listed as a Highly Cited Researcher in Engineering for 6 years (2014–2020) and being named a Most Cited Researcher in Chemical Engineering & Environmental Science and Engineering Subjects in the Shanghai Global Rankings of Academic Subjects. Dr. Bassim serves on several editorial boards, including the Energy Conversion and Management (Elsevier), the Journal of Water Process Engineering (Elsevier), and the Energy, Ecology and Environment (Springer), among others. He is an advisory editor of the Science Letters (Universiti Teknologi MARA) Malaysia and a member of the editorial board of the PERTANIKA Journal of Science & Technology and the Iraqi Academy Journal. His name is listed in the 14th edition of webometrics as a Highly Cited Researcher according to Google Scholar Citations public profile, and he is among the 4730 Highly Cited Researchers of all disciplines (as of March 2021) around the world.

Dr. Sunarti bt Abd Rahman is an Associate Professor at the Faculty of Chemical and Process Engineering Technology, University Malaysia Pahang Al-Sultan Abdullah. She begins her career as an academician in 2004 and has been serving the academic world for over than 15 years. She obtained her PhD degree in Chemical Engineering from Universiti Sains Malaysia in year 2012. Most of her research work focuses on the area of membrane, separation, wastewater, and advanced material. Apart from that, she also studied on the re-utilization of waste to wealth products. Over the academic years, she managed to secure more than 30 international and national funded projects as the principal investigator and co-investigator. She has published more than 30 peer-reviewed journals including few review articles in high-impact journals (i.e., Surfaces and Interfaces, Polymer-Plastics Technology and Materials, Vacuum, Green Process Synthesis, etc.), 4 book chapters (John Wiley and Sons, Universiti Malaysia Pahang, Nova Science, Springer Nature), and more than 30 conference proceedings. She and her research collaborators have a filed/patented patent and won numbers of medals in national/international exhibitions. She has served as organizing committee for more than 5 international conferences in chemical engineering, materials and energy. She is also an active reviewer for many high-impact journals published by Elsevier, Wiley, Taylor & Francis, and Springer.