Chemical Engineering & Technology

Editorial

Towards a Greener Future – Every Little Effort Counts!

Today, the sea level is rising, more areas are flooded, some places facing prolonged drought and pollution still ravaging the land, water bodies, and air. The quest towards a greener future should be accelerated to tackle pressing issues on the impacts of human activities on the environment and society. A huge step has been taken by several countries by pledging their commitment towards carbon neutrality by 2050, consequently hoping for our ultimate aim – a greener future.

The hope for a greener future is assigned to engineers and environmental experts throughout the world who are working tirelessly on new technology. Notably, the application of artificial intelligence (AI), cloud computing, and the internet of things are indeed promising. Monitoring of environmental pollutants could be done effortlessly through rapid data collection, analysis, and prediction. The implementation of such technology can predict airborne substances and prevent them to reach a certain limit. The development of such technology has never been easy as it requires involvement between various research disciplines. Good ethical research and data-sharing practices could result in better smart technological ecosystem development for environmental protection and preservation.

Smart AI to protect the environment seems daunting and a very complicated topic. The fact is that it started with mathematical modeling through differential equations paired with electrode sensors as the input collector. Oxidation reaction plays a major role on the surface of the electrode acting as a sensor based on the scale of power generated. Additionally, the discovery of nanotubes significantly reduced the size of the sensor down to the nanoscale and improved sensing ability. Immobilization of biological receptor molecules on electrodes has paved the way for a highly selective sensor-analyte interaction for a very specific application. Evidently, the birth of great technology is often driven by successive smaller incremental discoveries.

Therefore, we should be proud of every single contribution we made for a greener future. In most of the world, the excess to advanced technology is very limited. Their continuous effort to protect and preserve the environment in their own ways should be acknowledged. Hence, this special issue aims to disseminate novel research findings, and exchange information on new emerging areas of research in the field of environment worldwide, regardless of the scale of their efforts.

Fadzil Noor Gonawan

Dai-Viet N. Vo

Zeinab Abbas Jawad

Palsan Sannasi Abdullah

Dr. Fadzil Noor Gonawan
School of Chemical Engineering, Universiti Sains Malaysia
Dr. Dai-Viet N. Vo
Center of Excellence for Green Energy and Environmental Nanomaterials (CE@GrEEN), Nguyen Tat Thanh University
Dr. Zeinab Abbas Jawad
Department of Chemical Engineering, Qatar University
Dr. Palsan Sannasi Abdullah
Faculty of Agro Based Industry, Universiti Malaysia Kelantan

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