Civilization now stands at the crossroads, faced as it is with grave challenges on the fronts of energy, water, and the environment. The modern industrialized and mechanized society has created a stress on three very important factors which are crucial for it to survive and thrive. These are energy, water, and the environment – three factors which do not stand in isolation but are in fact inter-connected. On the one hand, excessive consumption of fossil fuels is not only depleting fossil fuel reserves at an alarming pace but also resulting in pollution of the environment. This pollution of the atmosphere is causing global warming due to greenhouse gas emissions and rising temperatures and is also adversely affecting the water cycle. Consequences of this phenomenon is manifest in various ways such as melting glaciers, change in the form of precipitation, dry areas becoming drier and wet areas becoming wetter, etc. Coupled with this is consumption itself both of which together pose a stress on surface water as well as groundwater. Again, a broader view of environmental pollution necessitates the consideration of many aspects such as water pollution, soil contamination, plastic pollution, etc. in addition to atmospheric pollution mentioned above. All these kinds of pollution are posing a threat to the biosphere whose preservation is essential for the survival of the human species.

The present scenario urgently requires technologies and strategies for clean energy, water and environment that are free from greenhouse gases and hazards posing threats to the lives of future generations. Alternate energy sources which are clean and renewable, must be explored. Technologies which essentially promote the judicious use and preservation of our precious water resources must be developed. In general, technology must now march ahead along the path of environmental sustainability.

An International Conference on Water, Energy and Environmental Sustainability 2020 (WEES-2020) was organized by National Institute of Technology Durgapur (NIT Durgapur) in association with RMIT University Australia during January 13-15, 2020 at NIT Durgapur. The objective of WEES-2020 was the sharing of knowledge and the dissemination of ideas on future technologies and strategies for developing technically and economically viable methods for conservation of water and energy resources, for development of alternate clean and renewable energy sources and for preventing and abatement of pollution. It is our proud privilege that the Indian Chemical Society, a premier scientific Society of India, established in 1924 with Acharya Prafulla Chandra Ray as its founding President, has agreed to dedicate one Special Issue of the Journal of the Indian Chemical Society for the above International Conference. We are honoured that the Special Issue (2020) is being published some selected and peer-reviewed full length papers presented in the conference.

We are indebted to Professor Anupam Basu, Director, NIT Durgapur and to Professor Firoz Alam, RMIT University Australia, for their patronage and encouragement in organizing WEES-2020. We are grateful to the members of the Council of the Indian Chemical Society for their kind consideration of our proposal for publication of the Water, Energy and Environmental Sustainability (WEES-2020) Special Issue. We sincerely acknowledge the contribution and efforts of the authors for their articles.
We sincerely apologize for any inadvertent errors that might have crept in despite our best efforts.

We hope that the scientific and engineering community will find the “WEES-2020 Special Issue” useful and will extend their support to us to bring out more such special issues in future.

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