

Preface

Due to recent pandemic, the International Conference on Process Engineering and Advanced Materials 2020 (ICPEAM2020), which was planned to be held in Borneo Convention Centre, Kuching, Malaysia was held virtually online during July 13 - 15, 2021. Due to the spread of covid-19 in the world, the epidemic situation in various countries is complicated, and the world was dealing with different confinement and mobility restrictions when ICPEAM2020 was due to be held. The decision to hold the virtual conference was made in compliance with many restrictions and regulations that were imposed by countries around the globe. The good news is that in terms of contents, there continues to be the same depth as before, with a wide range of excellent keynote speakers and many contributing scholars.

The ICPEAM2020 aims to gather professors, researchers, scholars and industrial pioneers all over the world, to spark a broader discussion on the opportunity and challenges of current technological innovations including Industrial Revolution 4.0 (IR 4.0) in achieving a sustainable future. The organizing committee of conference is pleased to invite prospective authors to submit their original manuscripts to ICPEAM2020.

The ICPEAM2020 model was divided into three sessions, including technical session for online Q&A discussion, keynote speeches, and plenary speeches. In the first part, some scholars, whose submissions were selected as the excellent papers, were given about 5-10 minutes to clarify any question regarding their recorded presentation one by one. Then in the second and third parts, keynote and plenary speakers were each allocated 30-45 minutes to hold their speeches. In the second part, we invited five keynote speakers. Mr Senapathy Gopalakrishnan, the Chairman of Axilor Ventures, India performed a speech: *Sustainable Technology*. Then we had Prof Emeritus Tan Sri Dr Zakri Abdul Hamid, the Senior Fellow Academy of Sciences Malaysia. He made a wonderful speech on *Society 5.0*. In addition, we had Prof Dato' Ir Dr A Bakar Jaafar, Vice-President, Academy of Sciences Malaysia, and Chairman, Malaysian Green Technology & Climate Change Corporation, Malaysia, who delivered speech on *Future Engineering for the Tropical Environment*. Next, Dr William Selvamurthy, President, Amity Science, Technology & Innovation Foundation (ASTIF), Amity University, India performed a speech on *Innovation Culture*. Last but not least, we had by Prof Dr John Holbrey, Chair of Green Chemistry, School of Chemistry and Chemical Engineering, Queen's University Belfast, United Kingdom to deliver speech on *Sustainability Chemistry for Living*. Their insightful speeches had triggered heated discussion in the conference. Every participant praised this conference for disseminating useful and insightful knowledge.

The proceedings are a compilation of the accepted papers and represent an interesting outcome of the conference. Topics include but are not limited to the following areas: Advanced Kinetics and Thermodynamics, Sustainable Process Development, Green and Advanced Materials Engineering and Process Systems Engineering and Optimization. All the papers have been through rigorous review and process to meet the requirements of International publication standard.

We would like to acknowledge all of those who supported ICPEAM2020. The help and contribution of each individual and institution was instrumental in the success of the conference. In particular, we would like to thank the organizing committee for its valuable inputs in shaping the conference program and reviewing the submitted papers.

We sincerely hope that the ICPEAM2020 turned out to be a forum for excellent discussions that enabled new ideas to come about, promoting collaborative research. We are sure that the proceedings will serve as an important research source of references and knowledge, which will lead to not only scientific and engineering findings but also new products and technologies.

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