Preface

The 2021 5th International Workshop on Renewable Energy and Development (IWRED 2021) was held in the form of offline conference in Chengdu, China during April 23-25, 2021. IWRED 2021 focused on the renewable energy and development. The applications of renewable energy and development to such domains as Geothermal energy, Power system technology, Sustainability in process industries and Energy Security and Clean Use et al. It is a technical congregation where the latest theoretical and technological advances are presented and discussed. We expect that the conference and its publications will be a trigger for further related research and technology improvements in this important subject.

The conference model was divided into four sessions, including oral presentations, keynote speeches, invited speeches and Q&A. In the first part, some scholars, whose submissions were selected as the excellent papers, were given 15 minutes to perform their oral presentations one by one. Then in the second and three part, keynote speakers and invited speakers were each allocated 30-45 minutes to hold their speeches. Finally, in the Q&A part, all participants were invited to join in academic groups to discuss and explore the academic issues after the presentations. The discussion session will last 30 minutes.

More than 120 participants attended the conference. We are greatly honored to have invited Prof. Yinhui Zuo, from Chengdu University of Technology, China to serve as our Conference Chair. On this conference, three keynote speakers and an invited speaker had delivered their research works in area of Renewable Energy and Development. The first keynote speakers were Prof. Molang Cai, from North China Electric Power University, China. She delivered a wonderful speech: Strategies for Stability of Perovskite Solar Cells: Dynamical Regulation and Defects Control. The next keynote speakers were Prof. Shuihua Tang, from Southwest Petroleum University, China. She presented her latest research: Strategies for improving catalytic activity and stability of electrocatalysts in proton exchange membrane fuel cells. Prof. Tao Zhu, our third keynote speakers, from China university of mining and technology (Beijing), China, made a wonderful speech: Research on High-efficiency Utilization Technology of Coal Mine Ventilation Gas (Methane). In the invited speeches part, we were glad to invited Prof. Peigao Duan, from Xi’an Jiaotong University, China as our invited speaker. He delivered a speech on Hydro-upgrading of algal biocrude in tetralin for the production of high-quality liquid fuel: process intensification. We would like to especially thank all the keynote speakers who shared their latest research results with the audience.

IWRED 2021 is to bring together innovative academics and industrial experts in the field of Renewable Energy and Development to a common forum. Therefore, we compiled a lot of excellent papers featuring the latest advanced studies on the following topics: Renewable Energy, Sustainable Development and other related topics. 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 have supported IWRED 2021. Each individual and institutional help were very important for the success of this conference. Especially we would like to thank the organizing committee for their valuable advices in the organization and helpful peer review of the papers.

The Organizing Committee of IWRED 2021
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