Preface: 3rd International Conference on Green Energy and Sustainable Development (GESD 2020)

This proceeding includes original and peer-reviewed research papers from the 3rd International Conference on Green Energy and Sustainable Development (GESD 2020), which held on November 14-15, 2020. GESD 2020 is organized by Research Center of Engineering and Science, co-organized by Chongqing University, Northeast Petroleum University, Huazhong University of Science and Technology, Asian Union of Information Technology, sponsored by Wanxiang Group Technology Center, CCC Second Harbour Engineering Company Ltd., Chishun Chemical.

This GESD was held ONLINE via Tencent meeting/VooV Meeting. During the COVID-19 outbreak, many academic exchange activities were affected, such as visas, venues with more than 30 people, possible 14-day quarantine across regions, epidemic prevention measures, etc. After comprehensive consideration, the conference organizing committee decided to hold GESD 2020 online.

The aim of GESD 2020 was to provide a platform for researchers, engineers, academicians, as well as industrial professionals, to present their research results and development activities in Green Energy and Sustainable Development. It provides opportunities for the delegates to exchange new ideas and application experiences, to establish business or research relations and to find global partners for future collaboration. This two-day conference was being organized in invited keynote talks and three Parallel Sessions: SESSION I: Green Energy & Sustainable Energy and Power; SESSION II: Resource Extraction, Utilization & Sustainable Development; SESSION III: Environmental Sustainability and Green Technologies.

The keynote speakers and their speech topics are as follows.

Prof. Zhou from China University of Petroleum, and his speech topics: Proposed the concept of chemical sequence stratigraphy and established the sea The theory and method of quantitative calculation of sea level change and intermittent missing time of facies stratum; found a group of Si-O atomic cluster structures represented by Si3O4, and systematically discussed the possible cluster molecular structure, and established the original solar nebula A stationary model for the statistical thermodynamics of the atomic clusters in the middle.

Prof. Wang from Xi'an Jiaotong University, and his speech topics: Key technology and system integration for high-concentration refractory organic wastewater/sludge supercritical water treatment and energy utilization, advanced combustion technology (supercritical hydrothermal combustion, chemical chain combustion), waste/biomass pyrolysis gasification and fly ash Melting technology, high-temperature metallurgical slag dry centrifugal granulation and waste heat efficient recovery technology and system integration, high-efficiency environmental protection boiler technology (garbage and biomass pyrolysis gasifier, oil production wastewater
directly heated steam injection boiler, SAGD steam drum furnace, waste Liquid incinerators, vertical industrial pulverized coal kilns, supercritical hydrothermal combustion multiple thermal fluid generators, etc.) development, geothermal energy/(microalgae) biomass energy development, multi-energy complementary green low-carbon intelligent energy system integration and Optimization research.

Prof. Liu from Huazhong University of Science and Technology, and his speech topics: Energy recovery of automobile shock absorbers, energy conversion efficiency and vehicle energy management, also engaged in the modeling and simulation of complex systems in multidisciplinary fields, hydraulic and fluid mechanics simulation, system dynamics simulation, energy conversion and efficiency simulation and verification.

All full paper submissions to this GESD would be sent to at least two reviewers and evaluated based on originality, technical or research content, correctness, relevance to conference, contributions, and readability. The full paper submissions were chosen based on technical merit, interest, applicability, and how well they fit a coherent and balanced technical program. GESD 2020 received 412 manuscripts. And 279 submissions had been accepted by our reviewers. The Committees of GESD 2020 invested great efforts in reviewing the papers submitted to the conference and organizing the sessions to enable the participants to gain maximum benefit.

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Conference Organizing Committee