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Ignition Mechanism and Advanced Combustion Technology

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Message from the Guest Editors

Dear colleagues,

Carbon reduction has become a global consensus, and the clean and efficient utilization (EEU) of carbon-containing fuels (coal/biomass) has received widespread attention. This Special Issue aims to bring together researchers to share their latest findings on the ignition mechanism and advanced combustion technology. Topics of interest include, but are not limited to, the following:

- 1. Mechanism, prevention, and control technology of coal/biomass spontaneous combustion;
- 2. Ignition characteristics, physico-chemical structure and reaction kinetics of coal/biomass conversion in self-heating conditions or in boilers;
- Prediction of coal/biomass ignition/combustion behavior or pollutant emission behavior by mechanism modeling or artificial intelligence technology;
- 4. Advanced ignition technologies including plasmaenhanced ignition, high-temperature preheating combustion, etc.;
- 5. Advanced combustion diagnosis technologies;
- 6. Blending technology including co-firing of coal with coal, biomass, or ammonia, etc...
- Rapid load lifting technology, deep peak regulation technology, and intelligent control technology of coal-fired power units.



