Special Issue on Integrated gasification fuel cell (IGFC) technology

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Coal is the primary fossil fuel used in the world for power generation and chemicals production for a long time. However, the utilization of coal also results in emissions of CO₂ and other pollutants. At present, the global climate change due to the emission of greenhouse gases, especially CO₂, is becoming more and more serious. It is necessary to improve the efficiency of coal-fired power generation technology and achieve nearly zero CO₂ emissions for future ultra-clean energy plants.

Integrated gasification fuel cell (IGFC) systems that combine coal gasification and high-temperature fuel cells, such as Solid oxide fuel cell (SOFC) or Molten carbonate fuel cell (MCFC), are promising technologies, due to the higher power generation efficiency and more environmentally friendly than that of conventional coal-fired power generation systems.

The aim of the Special Issue is to introduce the progress and prospects of advanced IGFC technology, analyze the efficiency and economic performance of IGFC plants with CO₂ capture. This Special Issue also reviews recent advances in basic research and technological development on the processes of coal gasification and purification technology, SOFC and MCFC technology, and Carbon capture, utilization, and storage technology (CCUS).

The International Journal of Coal Science and Technology (JCST) published its first issue in Oct. 2014 in collaboration with the well-known publisher Springer. All of the papers published in this journal are peer-reviewed and can be accessed through open access. This will significantly increase the opportunity to be cited.

Scope of the special issue

The scope of the Special Issue will be considering the research and review papers on the following broad areas:
(1) Progress and prospects of IGFC technology

(2) Solid Oxide Fuel Cell (SOFC) technology

(3) Molten Carbonate Fuel Cell (MCFC) technology

(4) Coal gasification and purification technology

(5) Carbon capture, utilization and storage (CCUS) technology

**Submission instructions**

Important dates

Manuscript submission: May 15, 2020- October 30, 2020 (last date)

Tentative publication date: March 2021

**Submission**

Submit your manuscript to the journal's Editorial Manager website at editorialmanager.com/coal and select the special issue "Integrated gasification fuel cell (IGFC) technology ".

If you have any questions, please contact the Managing Editor, Wanjie Wang at wangwanjie@chinacs.org.cn or jcst@chinacs.org.cn.