Progresses Made in Coal-Based Energy and Fuel Production

ARTICLE *in* ENERGY & FUELS · OCTOBER 2009

Impact Factor: 2.79 · DOI: 10.1021/ef900741e

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Energy Fuels **2009,** *23,* 4709–4709 · DOI:10.1021/ef900741e
Published on Web 08/19/2009

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editorial

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Received July 17, 2009

Coal is one of the most important energy resources powering the built environment in which we live. Coal-fired power plants generate over 50% of the electricity in the U.S. and higher percentages of electricity in developing countries, such as China. It is anticipated that, although other energy resources, such as natural gas, will be used increasingly to generate electricity, coal will remain highly important for electricity generation for many years to come. Of particular significance are the considerable advances now envisioned for clean coal technologies.

The wide implementation of clean coal technologies, such as the integrated gasification combined cycle (IGCC), is likely to make coal even more widely used. Accordingly, a considerable amount of recent research has focused on coal gasification, liquefaction, combustion, and coking. Moreover, much current research addresses the diverse environmental issues associated with these processes; these issues are challenging but solvable. Already, substantial progress has been achieved in each of these areas of research. This special issue of *Energy & Fuels* focuses on recent advances in research and technological developments associated with coal-based energy and fuel production.

Many people have contributed to this special issue. We sincerely thank the authors and reviewers of the manuscripts. Additionally, We appreciatively acknowledge the support provided by the American Chemical Society and its staff.

We anticipate that the papers forming the special issue will stimulate considerably more interest in clean coal technology development. Besides those of us closely involved in the various aspects of clean coal technologies, the general public as consumers of the products of clean coal technologies no doubt will show increasing interest in these technologies. Coal is a marvelous energy resource, as well as a potentially rich source of a broad range of byproducts. Further research and technological innovation are needed to realize this potential, however.

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