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Preface

Reforming of liquid hydrocarbon fuels for fuel cell applications

This special issue of *Catalysis Today* is a selection of papers presented at the symposium organized by Division of Fuel Chemistry at the 234th American Chemical Society National Meeting held in Boston, MA, on August 19–23, 2007.

This symposium focused on the processing of liquid hydrocarbon fuels for the purpose of providing gaseous reactants to fuel cells. A total of 36 papers were submitted for this symposium and were presented in five different sessions: Catalytic Partial Oxidation, Autothermal Reforming, Steam Reforming, Desulfurization, and System Analysis. The sessions were all fully attended and represented one of the largest known compilation of papers ever presented on the subject. This symposium provided a platform for researchers in the area of liquid fuel reforming to interact, exchange their ideas, discuss current developments, and develop collaborations.

Fuel cells are not yet widely available, but are rapidly approaching increased commercial viability and have become a technology of great worldwide interest. Fuel cells are generally seen as cleaner and more efficient energy sources for transport, stationary, and distributed power. Private industry, academia, as well as government agencies (particularly in developed countries) are actively engaged in developing efficient and cost effective fuel cell technology. The fuel processor is a critical component of this system and must be able to provide a clean, tailored synthesis gas to the fuel cell stack for long-term operation. Depending on the application (stationary, central power, remote, auxiliary, transportation, military, etc.), there are a wide range of conventional fuels, such as natural gas (methane), propane, butane, light distillates, methanol, ethanol, propanol, dimethyl ether, naphtha, gasoline, diesel, biodiesel, naval distillate fuel (NATO F-76), kerosene, and jet fuels that could be used in reforming processes to produce H₂-rich synthesis gas. Liquid fuels, such as gasoline and diesel, are globally attractive because of their existing infrastructure, higher well-to-wheel efficiencies, and higher energy densities, are the focus of this issue.

We would like to thank all participants and presenters who contributed to the success of symposium. We wish to express our appreciation to the keynote speakers; Wayne Surdoval (U.S. Department of Energy, Pittsburgh, PA), Mike Krumpelt (Argonne National Laboratory), James J. Spivey (Louisiana State University,

Baton Rouge, LA) for their contribution. Special thanks to Daniel J Haynes (Parsons, Inc. Morgantown, WV) and Mark Smith (REM Engineering, Morgantown, WV) for their support during this symposium. Many thanks to those who submitted their work to this special issue. We also want to express our heartfelt gratitude to all reviewers who provided their thoughtful and timely comments. Also, thanks to Rosie Malone of Elsevier for her help in coordinating the publication process. Our appreciation also extends to the editor of the journal, Prof. Julian Ross for his support of this issue.

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