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Preface

The present volume contains a selection of papers presented in the 12th Asian Pacific Confederation of Chemical Engineering (APCChE) Congress which was held on 4–6 August 2008, Dalian, China. The Asian Pacific Confederation of Chemical Engineering was founded in 1975 to provide a platform of communication for various non-profit societies, associations and institutions working in the field of Chemical Engineering in the Asian Pacific region. The 12th APCChE was co-organized by East China University of Science and Technology and Dalian University of Technology. In this Congress, there were six themes as follows: (1) clean energy technology; (2) environment and green processing; (3) materials science and engineering; (4) biotechnology; (5) new frontiers in chemical engineering; (6) education for chemical engineers.

Based on the current key research interests of the international academic and engineering communities, the guest editors selected a number of papers from the above two sections of clean energy technology, and environment and green processing. The received manuscripts have undergone a rigorous peer review process. Finally, 19 papers have been accepted and selected in this special issue related to "The recent advances in sustainable development in Chemical Engineering". These papers truly reflect the latest achievements and understandings for efficient energy utilization and reasonable environmental protection in the field of chemical engineering, including membrane reactors, membrane adsorption process, catalysis tranconversion of exhaust gas, plasma discharge activation, process intensification, micro/nano materials, fuel cell, process system engineering for water and heat recovery, thermodynamic properties of ionic liquid, computational fluid dynamics.

We would like to especially thank Prof. K.L. Yeung, L.R. Weatherley, M. Deshusses, G. Marin and J. Santamaria (the Editors of this journal) for their providing this opportunity for the publication of this special issue. We would also like to acknowledge gratefully the efforts of all authors and referees who have contributed their work to this issue, and all people who have given their indispensable help for publication of the issue.

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