

***A Special Issue on Biorefinery & Lignin Chemistry***

As fossil resources are being depleted, the exploitation of forest resources and the structure of forest industries are changing rapidly worldwide. This highlights the need for development, innovation and deeper knowledge of the properties, processing and utilization of wood and other lignocellulosic materials, which are very versatile resources that can be used to produce heat, electricity, transport fuels and a range of chemicals and materials. They are used in all these applications today, and their future demand is estimated to grow substantially. In particular, the Chinese Pulp and Paper Industry has been growing rapidly, with an annual growth rate of more than 10% in the last decade, and in 2009 China became the No. 1 paper and board producer in the world. Although cellulose utilization is well realized, sustainable uses of lignin and hemicelluloses are still being sought. Consequently, the concept of biorefinery, aiming to efficiently fractionate and overall utilize lignocelluloses, was proposed and expected to integrate a variety of multi-conversion process to create a bio-based economy. Analogous to oil refinery, the establishment of the rational biorefinery approach is the critical process to satisfy the industrial and economical demands.

In this special issue, we have collected a selection of papers presented at the *Sixteenth International Symposium on Wood, Fibre and Pulping Chemistry* (16<sup>th</sup> ISWFPC) held on June 8-10, 2011, in Tianjin, China. These papers cover topics from wood chemistry, lignin biosynthesis and chemistry, new pulping and bleaching technology, lignocellulosic-based biomaterial/composites, fiber-related nanotechnology, effluent treatment/environmental remedy in pulping and bleaching processes and other new technologies. The international conference runs biannually and is held at locations throughout the world. The goal of the symposium is to contribute to this understanding and to its applications by bringing together people from academia and from industry who are engaged in research and development, to share their knowledge, establish new contacts and keep up to date with current developments.

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