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特邀报告二

International Perspectives on Energy Research Priorities

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A sustainable supply of clean energy represents the most critical problem facing mankind in the next century. While fossil fuels seem unlikely to disappear in the foreseeable future, their increasing use loads the atmosphere with greenhouse gases and particulate matter, which may ultimately threaten our quality of life. To achieve sustainable economic development, new sources of clean energy and further improvements in energy efficiency are required worldwide. The energy landscape is complex, however, and the entire system from production to disposal must be considered in order to ensure a sustainable future. For example, many renewable sources of energy in reality may increase pollution unless coupled with reliable and scalable methods of energy storage. Conversely, fossil fuels that are regarded as dirty may become much cleaner with proper design to efficiently extract their energy. There are important research opportunities at multiple points in the energy ecosystem, and exploring them offers the potential to develop new ways of supplying and using energy, with both environmental and economic benefits for the entire world.

演讲嘉宾介绍

Paul E. Burrows obtained his Ph.D. degree from University of London in 1989. From 1990 to 1991 he was a Research Scientist in the Frontier Research Program at the Riken Institute in Japan, and from 1992 to 2000, he held research appointments at the University of Southern California and Princeton University. His work encompassed the first demonstration of organic molecular quantum well structures and a portfolio of intellectual property around organic light emitting devices (OLEDs) which led to the spinout of Universal Display Corporation. He subsequently joined Pacific Northwest National Laboratory as a Laboratory Fellow, where he was instrumental in the development of multilayer thin film encapsulation for OLEDs, the latter work leading to the spinout of Vitex Systems which was eventually acquired by Samsung. In 2008 he established Reata Research to work with U.S. and Canadian government agencies and private industry to accelerate technology development and commercialization. In 2013, he was appointed Senior Vice President for Research and Development at the Institute of New Energy, Shenzhen, China. Dr. Burrows has over 100 refereed publications and is a co-inventor of 96 issued U.S. patents.