

**Title Clean and Efficient Coal Technology Integrated with  
CO<sub>2</sub> Sequestration and Hydrogen Energy Systems**

**Speaker** Dr. Ken OKAZAKI  
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**Date & Time** Friday, September 9, 2011 4:00p.m.

**Place** INAMORI Hall, Ito campus, Kyushu University

**Abstract** In view of the present social limitations such as global environmental issues and depletion of fossil fuel resources, a hydrogen energy-oriented society will be realized around 2030-2050 supported by introducing a large amount of renewable energy. To achieve this, however, it will take a long time and a realistic intermediate scenario is needed which is practical and socially acceptable. For this purpose, in this presentation, a new system integration for CO<sub>2</sub>-free coal utilization combined with hydrogen energy and CO<sub>2</sub> sequestration is proposed and discussed based on the present status and future prospect of various related technologies in Japan including O<sub>2</sub>/CO<sub>2</sub> (oxy-firing) coal combustion with CO<sub>2</sub> recovery, highly sophisticated utilization of hydrogen and CO<sub>2</sub> sequestration.

**About the Speaker**

Professor Ken Okazaki was born in 1949 in Chiba prefecture. He received Doctor of Engineering in mechanical engineering from Tokyo Institute of Technology in 1978. He was with Toyohashi University of Technology from 1978 to 1992 and he has been a professor of Tokyo Institute of Technology since 1992. His research subjects cover a wide range of energy and environmental issues including hydrogen-based advanced energy systems and fuel cells, clean and high-efficiency coal/biomass technologies for global environmental protection, non-equilibrium plasma chemistry and applications. He was a president of hydrogen society of Japan, vice-president of JSME and others. He received many awards from various academic societies. He has been a Dean of Engineering, Tokyo Institute of Technology since October, 2007.

**Host** Professor Kazunari SASAKI

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