

Hydrogen Science

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15th World Hydrogen Energy Conference will be held from July 27th to July 2nd, 2004 in Yokohama, Japan. More than 500 papers will be presented from 39 countries. The papers cover all the fields of Hydrogen Energy System.

The World Hydrogen Energy Conference(WHEC) was first held in 1976 in Miami organized by Prof. Vegiroglu. Since then, this conference has lead the academic aspects of the Hydrogen Energy.

The Hydrogen Energy will play an important role in the near future. A clean energy system is needed, considering the environmental problems such as the global warming. If we consider the sustainable growth of human beings, the increased entropy that is produced through any process should be thrown away from the earth by some way. Considering the global dynamic flow of water, the water/hydrogen system is the only one solution, where hydrogen is produced by renewable energies. This will be the ultimate goal of the hydrogen energy system. The fossil fuels should not be used up within several hundred years. The fossil fuels were made by solar energy for billions and billions of years.

The hydrogen energy system is an ideal system. However, there are many difficult problems in order to achieve this system. We have to think of a primary energy to make hydrogen. Considering the nature of hydrogen we have to develop efficient storage and transportation systems. We need much higher technology to commercialize fuel cell systems. These technologies are very good from the theoretical point of view. We have to develop higher technologies related to all aspects of the hydrogen energy system.

In order to achieve this goal we have to think more of the scientific aspect of the hydrogen energy. We should promote the fundamental science of the hydrogen energy. This is the "Hydrogen Science". The science should contain the all aspects of hydrogen energy, where science, engineering and sociology, etc should be merged.

The hydrogen energy is not a fashion. We really need the ultimate clean energy system as soon as possible to reach the sustainable growth. We need a strong basic science to achieve real hydrogen system. We need the "Hydrogen Science".