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利用水的分解產生氫氣，水也可以成為電力。3月9日至10日在臺大凝態中心暨物理學館進行的「第二屆台英青年科學家國際交流計畫-先進氧化物材料之催化、能源與自旋電子研討會」上，臺大化學系劉如熹教授與國內外學者共同發表了此項全球各國積極發展的尖端技術。劉如熹教授及工研院能環所張文昇研究員指出，面臨二氧化碳減量與能源需求大增的壓力，各國紛紛在尋找取代傳統石化燃料的再生能源；由於氫氣具有非常高的能量密度，且燃燒後的產物為水，不會對環境造成污染，因此被視為極具潛力可取代石化燃料的次世代能源。

太陽能產氫技術與電解水產氫相似，可將水分解成為氫氣與氧氣，但不同的是太陽能產氫技術是利用光觸媒藉由太陽光之能量，在不需供給任何電力的情況下便可分解水產生純淨的氫氣，所產生之氫氣可作為電力之來源。此項示範系統由工研院能環所結合中正大學、臺灣大學、中研院原分所與民間企業所共同研發，並於此次會議中解說系統之原理與設計。

青年科學家國際交流計畫 ( International Networking for Young Scientists, 簡稱INYS)是由英國文化協會所發起的青年科學家國際交流計畫，旨在藉由重點議題的研究，提供青年科學家一個交流的平台。從英國出發與世界各國接軌，建立研究上緊密的連結；以短期研討會的形式，促進具創造力的意見交流。「第二屆台英青年科學家國際交流計畫 - 先進氧化物材料之催化、能源與自旋電子研討會」是由國立臺灣大學化學系教授劉如熹暨國立臺灣大學物理系教授郭光宇與英國愛丁堡大學 ( University of Edinburgh ) 教授J. Paul Attfield共同提出，也是臺灣再度成功申請到青年科學家國際交流計畫 ( INYS ) 之研討會。本研討會是由行政院國家科學委員會與英國文化協會共同指導，臺灣大學與英國愛丁堡大學 ( University of Edinburgh ) 共同合作主辦。

資訊來源：

[臺大校訊第955期](#)

[New Energy] It's about Time to Produce Electrical Power via Water-Splitting's Producing Hydrogen, Taida and Other Participants Present the Findings at the 2nd UK-Taiwan International Networking for Young Scientists Conference

Electrical power can be produced via water-splitting's producing hydrogen. At the "2nd UK-Taiwan International Networking for Young Scientists Conference" at the Building for Condensed Matter Sciences and Physics, NTU, on 9th- to 10th-Mar., 2009, Professor Ru-Shi Liu of the Dept. of Chemistry, NTU, and the other international participants present the advanced findings together. Professor Liu and Research Fellow Wen-Sheng Zhang of Energy and Environment Lab., Industrial Technologies Research Institute, point out that, facing the growing of the demand for energy as well as the stress for reducing carbon dioxide output, a lot of countries in the world are looking for alternative energies and renewable energy. Because hydrogen possesses high energy density, and the surplus after the power production is merely water which will not cause any pollution at all. Hence hydrogen is regarded as a highly potential candidate for alternative energy source.

Solar production of hydrogen and electrical production of hydrogen are similar regarding the production mechanism. Yet solar production of hydrogen requires no power consumption, and the hydrogen produced can be used for power production. The demonstration system of hydrogen solar production is collaborated by ITRI-EEL, NTU, National Chung Cheng University, Academia Sinica-Institute of Atomic and Molecular Sciences, and industries.

The International Networking for Young Scientists, INYS, is conducted by British Council, an international project aiming at providing a communication platform for young scientists and networking UK with the world, mostly in the form of short-term conference. The project of the 2nd UK-Taiwan International Networking for Young Scientists Conference is proposed by NTU-Dept. of Chemistry Professor Ru-Shi Liu, NTU-Dept. of Physics Professor Guangyu-Yu Guo and University of Edinburgh Professor J. Paul Attfield. This is the second time Taiwan succeeds in

application for INYS's project. The conference is directed both by NSC and British Council, and conducted by NTU and University of Edinburgh.

Reference:

[National Taiwan University Newsletter Issue 955](#) (in Chinese)

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