

# 2008

## International Fuel Cell Symposium

燃料電池國際研討會

**Date : September 25~26, 2008**

**Venue :**

Yan-Kung Hall, 3 Flour, Building 5, Yuan Ze University, Chung-Li

(元智大學五館三樓 彥公廳)

**Organizer :**

Fuel Cell Center, Yuan Ze University (元智大學 燃料電池中心)

**Co-organizer :**

Chung-Shan Institute of Science & Technology (中山科學研究院)

Canadian Trade Office in Taipei (加拿大駐台北貿易辦事處)

**Advisers :**

Ministry of Education (教育部)

Ministry of Economic Affairs (經濟部)

**Welcome to the 2008 International Fuel Cell Symposium!** The symposium has been held annually since 2000 by Yuan Ze Fuel Cell Center to boost up research in fuel cell development technology. By acquiring experience and reputation, this symposium has become the most important one of its kind in Taiwan. The two-day conference will commence with keynote lectures in various fuel cell areas on the first day. The second day will be more detailed talks and discussions in transport mechanism and properties of fuel cell. In addition, a micro-channel type reformer for PEMFC will also be presented.

**We invite your participation**

The registration will be accepted on a **first come first serve basis**. Please kindly fill in and submit your registration form to us **by Friday, 19 September 2008**.

We look forward to seeing you all on site!

## Keynote Speaker

(Prioritized by speaking order)

姓名	單位	簡介
Christopher Guzy	Ballard, Canada	Christopher Guzy holds Bachelor and Master of Science degrees in Chemical Engineering from Clarkson University and a Doctorate in Chemical Engineering from the University of New Mexico. Dr. Guzy began his career as Station Director of the School of Chemical Engineering Practice and Assistant Professor of Chemical Engineering at the Massachusetts Institute of Technology from 1983 to 1986. He joined Ballard as Vice President and Chief Technology Officer since 2005. On 2008, Dr. Guzy took on the additional role of Vice President of Operations. Prior to joining Ballard, Dr. Guzy was General Manager of GE Healthcare's product development and supply chain operations in Hungary. During his 17 years at General Electric in the United States and Europe, he also held a number of other senior technology and product development leadership positions including Global General Manager of Linear Fluorescent Technology and Vice President and Director of Quality and Technology, Europe for GE Lighting.
Jay B. Benziger	Princeton University, USA	Jay Benziger is a professor of Chemical Engineering at Princeton University. He was educated in Mathematics, Chemistry and Chemical Engineering at Carleton College, Columbia University and Stanford University. He is an expert in surface reactivity focusing on heterogeneous catalysis and chemical reaction engineering. His work has demonstrated the existence of steady state multiplicity in PEM fuel cells leading to the development of PEM fuel cells that operate with dry feeds to 120°C. Professor Benziger's group has also elucidated the coupling of mechanical and transport processes in polymer electrolytes. Professor Benziger and his group have also developed sulfur recovery process for hydrocarbons streams that operates at low temperature and with very low energy requirements. Professor Benziger has led the development of systems that purified one thousand

		tons of organic liquid scintillator to contain less than 1 radon atom per ton for the Borexino Solar Neutrino experiment.
Brant A. Peppley	Queen's University, Canada	<p>Brant Peppley graduated from Royal Military College of Canada (1997) and he is the Tier I Canada Research Chair in Fuel Cells at Queen's University. He has served as scientific advisor to the Canadian Department of National Defence for a number of major fuel cell research contracts. He is the co-inventor on two patents on the production of hydrogen by methanol-steam reforming. He has been consulted on various aspects of fuel cell system development by a wide range of international corporations including: Motorola, GM, DaimlerChrysler, and Ford. His current research activities include modeling of polymer electrolyte fuel cells and the development of new technologies for processing diesel fuel and bio-fuels for use in solid oxide fuel cells. He is a Professor of Chemical Engineering and the Director of the Queen's-RMC Fuel Cell Research Centre.</p>
Gu-Gon Park	KIER, Korea	<ul style="list-style-type: none"> <li>● Senior Researcher, Fuel Cell Research Center, Korea Institute of Energy Research.</li> <li>● Ph.D.: Department of Energy and Hydrocarbon Chemistry, Kyoto University, Japan.</li> <li>● Research Interests: Design &amp; evaluation of electro-catalyst, Water management in PEFC, PEFC durability and microchannel reactors for small PEFC applications.</li> <li>● He published more than 30 articles and owned 20 patents in the field of fuel cells.</li> </ul>
Tzyy-Lung Yu	Yuan Ze University, Taiwan	<p><b>Education:</b></p> <ul style="list-style-type: none"> <li>● 1988 Ph.D. Case Western Reserve University, Cleveland, Ohio, Macromolecular Science.</li> </ul> <p><b>Professional Experience:</b></p> <ul style="list-style-type: none"> <li>● 1993-present, Professor, Department of Chemical Engineering &amp; Materials Science, Yuan Ze University, Taiwan</li> <li>● 1989-1993, Associate Professor, Department of Chemical Engineering &amp; Materials Science, Yuan Ze University, Taiwan</li> <li>● 1988-1989, Chemist, Union Chemical Laboratory, ITRI, Taiwan</li> </ul> <p><b>Research Interests:</b></p>

		<ul style="list-style-type: none"> <li>● Proton exchange membrane fuel cells.</li> <li>● Polymer viscoelasticity</li> <li>● Polymer light scattering</li> <li>● Polymer morphology</li> </ul>
Shuo-Jen Lee	Yuan Ze University, Taiwan	<p><b>Education:</b></p> <ul style="list-style-type: none"> <li>● 1984 Ph.D. University of Illinois at Urbana-Champaign</li> <li>● 1980 M.S. University of Wisconsin - Madison</li> <li>● 1977 B.S. National Tsing-Hua University</li> </ul> <p><b>Professional Experience:</b></p> <ul style="list-style-type: none"> <li>● 2005-present Chair and Professor, Department of Mechanical Engineering, Yuan Ze University</li> <li>● Senior Scientist, GE Corporate Research and Development Center</li> </ul> <p><b>Research Interests:</b></p> <ul style="list-style-type: none"> <li>● Fuel cells</li> <li>● Nontraditional Manufacturing Processes</li> <li>● Reverse engineering</li> <li>● Automatic Machinery Design</li> <li>● Integration and applications of CAD / CAM / CAE</li> </ul>
Chia-Chieh Shen	Yuan Ze University, Taiwan	<p>Chia-Chieh Shen is a postdoctoral fellow in the Fuel Cell Center at Yuan Ze University since 2006. Dr. Shen received his Ph.D. in Materials Science and Engineering from National Tsing Hua University in 2006. The title of his Ph.D. thesis is “Hydrogenation degradation of LaNi<sub>5</sub>-based alloy and hydrogen-induced phase transformations of Ti-6Al-4V alloy”. His current research focuses on “Fabrication of micro methanol reformer” and “Development of Ti-based hydrogen storage material”.</p>
Etsuo Akiba	AIST, Japan	<p>Dr. Etsuo Akiba is the Deputy Director of Energy Technology Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan and adjunct professor of Utsunomiya University, Hiroshima University and Kyushu University,. He received Ph. D from The University of Tokyo in 1979 in physical chemistry. He joined AIST in 1979 and started the research on metal hydrides. He was a research associate of National Research Council Canada from 1983 to 1984 and a visiting scientist at Lab. de Cristallographie, CNRS, France in 1991.</p>

		<p>He developed various types of hydrogen storage materials including Ti based and Mg based BCC alloys. He received several awards including The Ichikawa Prize of Technology from New Technology Development Foundation Japan in 1998 and the H. C. Brown Award from Perdue University, USA in 2008. He is the project leader of “Advanced Fundamental Research on Hydrogen Storage Materials” conducted by New Energy and Industrial Technology Development Organization (NEDO) since 2007.</p>
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## September 25

Time	Speaker	Topic
<b>08 : 30</b>	Registration	
<b>09 : 30</b>	Opening Remarks	
<b>09 : 50</b>	Christopher Guzy, Ballard, Canada	Fuel Cells for Materials Handling Forklifts
<b>10 : 40</b>	Coffee Break	
<b>11 : 00</b>	Jay B. Benziger, Princeton University, USA	Fan the Flame with Water: Operation of PEM Fuel Cells with Dry Feeds
<b>11 : 50</b>	Luncheon	
<b>12 : 50</b>	Brant A. Peppley, Queen's University, Canada	Fuel Cell Research at the Queen's-RMC Fuel Cell Research Centre, the Ontario Fuel Cell Research and Innovation Network and in Canada-Wide Networks
<b>13 : 40</b>	Gu-Gon Park, KIER, Korea	PEFC R&D Activities in KIER
<b>14 : 30</b>	Tzyy-Lung, Leon, Yu, Yuan Ze University, Taiwan	Morphology of Nafion Membranes Prepared by Solutions Casting from Various Solvents
<b>14 : 50</b>	Shuo-Jen Lee, Yuan Ze University, Taiwan	Metallic Bipolar Plates
<b>15 : 10</b>	Chia-Chieh Shen, Yuan Ze University, Taiwan	Hydrogen Production from Methanol Micro-reformer
<b>15 : 30</b>	Coffee Break	
<b>15 : 45</b>	Etsuo Akiba, AIST, Japan	On board Hydrogen Storage for Mobile Application
<b>16 : 30</b>	Q&A	

## September 26

Time	Speaker	Topic
08 : 30	Registration	
09 : 00	Jay B. Benziger, Princeton University, USA	Mechanical and Transport Properties of Polymer Electrolytes for PEM Fuel Cells
10 : 40	Brant Peppley, Queen's University, Canada	Electrons, Ions, Heat, and Fluids: the Complex Interplay of Properties in Porous Electrodes and the Porous Transport Layer.
12 : 10	Luncheon	
13 : 00	Gu-Gon Park, KIER, Korea	Micro-channel Type Reformer for the Small Size PEFCs
15 : 20	Q&A	

為響應環保，本次會議不另提供杯水及瓶裝礦泉水，謝謝您的配合。



## 報名資訊

- 日期：2008 年 9 月 25 日、26 日
- 地點：元智大學 五館三樓 彥公廳
- 報名日期：即日起至 9 月 19 日止
- 報名費用：

報名日期	價錢
2008 年 8 月 29 日(含)前	一般報名 2,000 元
	學生憑證 1,500 元
2008 年 8 月 29 日後	一般報名 2,500 元
	學生憑證 2,000 元

\*含餐點、論文集

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## 註冊手續

1. 自網站(<http://www.fuelcells.org.tw>)下載報名表或來電洽詢，亦可直接線上報名。
2. 填妥報名表，並至郵局使用郵政劃撥繳交費用。
3. 劃撥戶名：魏穎君，劃撥帳號：19780491。
4. 收據上請務必註明公司名稱、姓名及連絡電話。
5. 請將(1) 報名表(線上報名不用) (2) 劃撥收據 E-mail 回傳至 [endept@saturn.yzu.edu.tw](mailto:endept@saturn.yzu.edu.tw)，郵件標題請填寫「2008 燃料電池國際研討會」或 傳真至 03-455-5574，並煩請來電確認。

## 更多資訊

網站：<http://www.fuelcells.org.tw>

E-mail：[endept@saturn.yzu.edu.tw](mailto:endept@saturn.yzu.edu.tw)

電話：03-4618697 或 03-4638800 # 3088

傳真：03-4555574



## 元智大學燃料電池中心 2008 燃料電池國際研討會

### 一般學員報名表

即日起至 97 年 9 月 19 日止開放報名

※報名表之個人資訊係資料建檔使用絕不對外公佈，敬請安心，請務必詳細填寫※

姓 名		性 別	<input type="checkbox"/> 男 <input type="checkbox"/> 女
服務單位			
職 稱		公司電話	
行動電話		傳 真	
聯絡地址			
E-mail			
餐飲方式	<input type="checkbox"/> 葷 <input type="checkbox"/> 素	備 註	

### 註冊費用

97 年 8 月 29 日(含)前	<input type="checkbox"/> 一般報名 2,000 元 <input type="checkbox"/> 學生憑證 1,500 元
97 年 8 月 29 日後	<input type="checkbox"/> 一般報名 2,500 元 <input type="checkbox"/> 學生憑證 2,000 元

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