



The 60th Annual Meeting of the International Society of Electrochemistry

August 16 to 21, 2009, Beijing, China

Conference Summary

Zhongfan Liu

Peking University, Beijing, China

August 21, 2009





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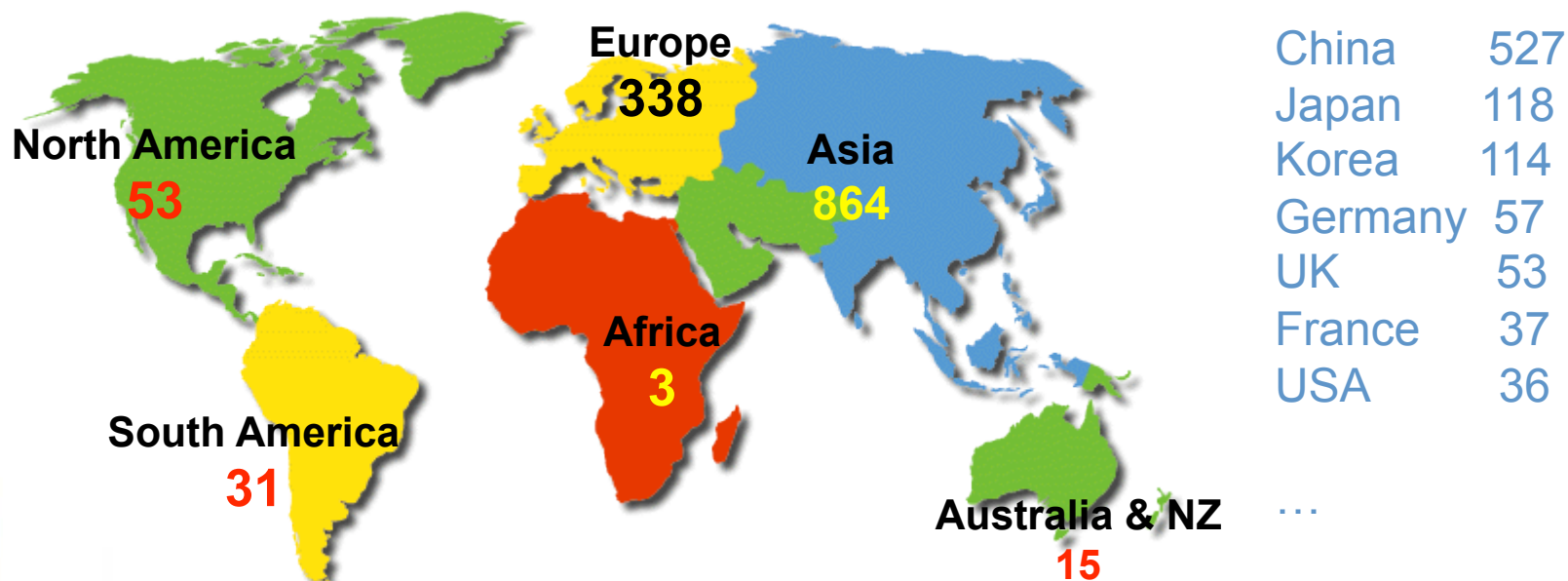
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Some statistics ISE 2009

- 1310 registrants, including 450 students
- 55 countries/regions
- 5 plenary lectures, 56 keynote lectures, 600 oral presentations, 700 poster presentations, and 2 tutorial lectures.



A large number of participants from 55 countries/regions.



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Tutorial Lectures

August 16, 2009

1. Nanoscopic Processes in Fuel Cells



Prof. Ulrich Stimming
Germany



Prof. Masahiro Watanabe
Japan

2. Principles and Applications of Diffusion at Ultramicroelectrodes



Prof. Christian Amatore
France



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5 Plenary Lecturers



Alan J. Heeger (USA)



Philip N. Bartlett (UK)



Shi-Gang Sun (China)



Zempachi Ogumi (Japan)



Dieter M. Kolb (Germany)



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5 Plenary Lecturers

- **Alan J. Heeger (*University of California, USA*)**
“Plastic” Solar cells: Self-Assembly of Bulk Heterojunction
- **Philip N. Bartlett (*Southampton University, UK*)**
Molecular Electrochemistry: Modification, Mediation and Design of Electrode Surfaces
- **Shi-Gang Sun (*Xiamen University, China*)**
Electrochemically Shape-Controlled Metal Nanoparticle
Electrocatalysts of Open Surface Structure and High Performances
- **Zempachi Ogumi (*Kyoto University, Japan*)**
Lithium Ion Batteries for Green Energy Systems
- **Dieter M. Kolb (*University of Ulm, Germany*)**
Electrochemical Surface Science: The Present and Future



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56 keynote Speeches



Frieder W. Scheller



Philippe Marcus



Eekang Wang



Juan M. Feliu



Jiu-Jun Zhang



Francois Beguin



Tetsuya Osaka



Marc Robert



Nongjian Tao



Agnieszka Kapalka



Jacek Lipkowski



Reginald Penner



Jun-Jie Zhu



Jan Rossmeisl



Ken-ichiro Ota



Nenad Markovic



Zhaoyu Tian



Masahiro Watanabe



Kingo Itaya



Akira Fujishima



Elzbieta Frackowiak



Bernard Tribollet



Hong-Yuan Chen



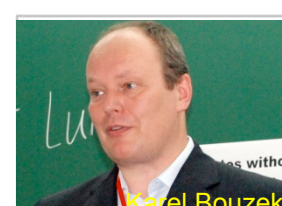
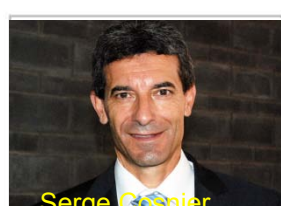
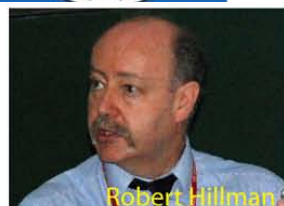
Nan Bond



Tim Burstein



56 Keynote Speeches





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Major Topics

	Talks & Posters		Totals
1. Bioelectrochemistry	52	51	103
2. Corrosion Science and Technology	54	37	91
3. Electroanalysis and Electrochemical Sensors	55	83	138
4. Electrocatalysis	48	59	107
5. Electrochemical Energy Conversion and Storage	138	202	340
6. Electrochemical Materials Science	49	29	78
7. Electrochemical Engineering and Technology	52	33	85
8. Electrochemical Nano/Micro-Science	50	38	88
9. Interfacial Electrochemistry	53	38	91
10. Molecular Electrochemistry	27	18	45
11. General Session	17	19	36

- Involved all the scientific Divisions of ISE
- Emphasized the links between fundamental understanding at the nanoscale and application on an industrial scale.
- Aim to “Emerging Trends and Challenges in Electrochemistry”





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Emerging Trends in Electrochemistry:

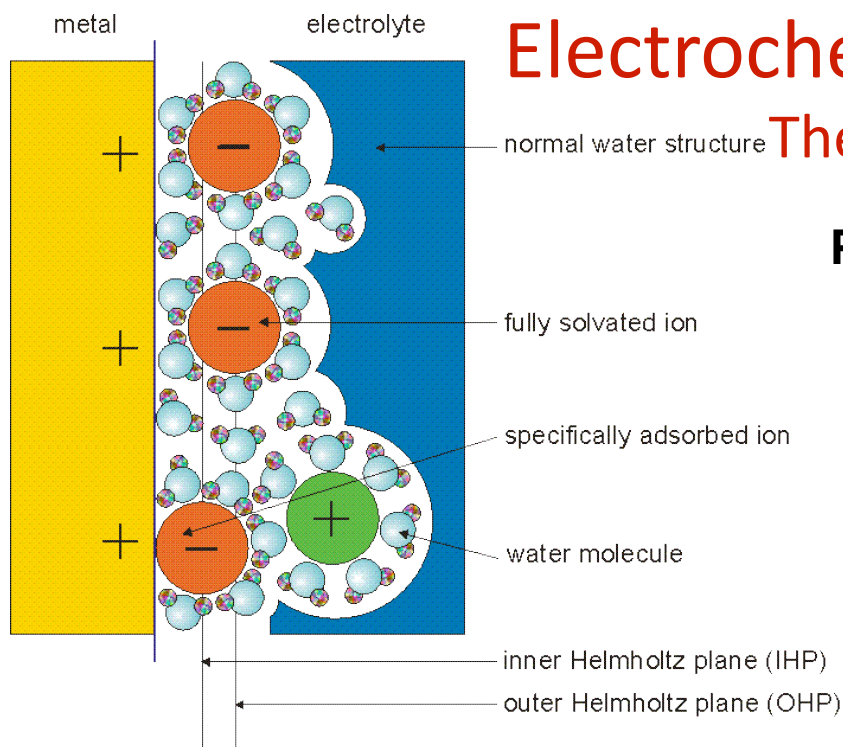
- Energy conversion and storage
- Analytical electrochemistry
- Sensors and biosensors
- Molecular electrochemistry
- Bioelectrochemistry
- Electroactive polymers
- Corrosion
- Nanostructure fabrication



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Electrochemical Surface Science: The present and future

Prof. Dieter M. Kolb (Germany)

**An atomistic view of the
electrode-electrolyte interface
and of simple electrochemical
reactions.**

The roots are in classical (i.e., UHV-based) surface science

- use of new, structure-sensitive in-situ methods (XRD, STM, ...)
- use of single-crystal electrodes **J. Clavilier**
- implementation of UHV-techniques in electrochemistry
(LEED, ESCA, electrode emersion, ...) **W. N. Hansen**
- adoption of theoretical concepts from solid-state physics (DFT, ...)
J. K. Nørskov



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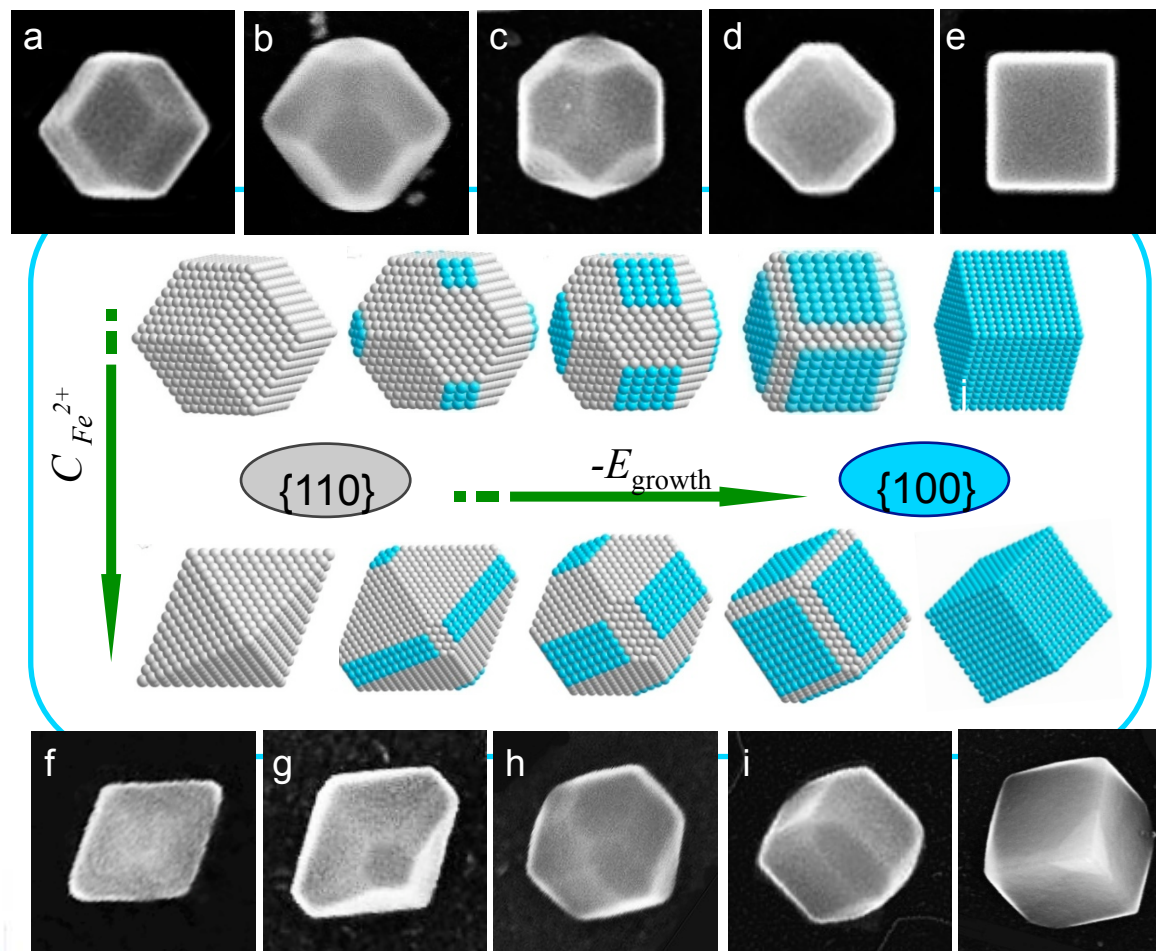
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Electrochemically shape-controlled metal nanoparticle catalysts of open surface structure

- Programmed electrodeposition route
- Square wave potential route



From Prof. Shigang Sun (China)



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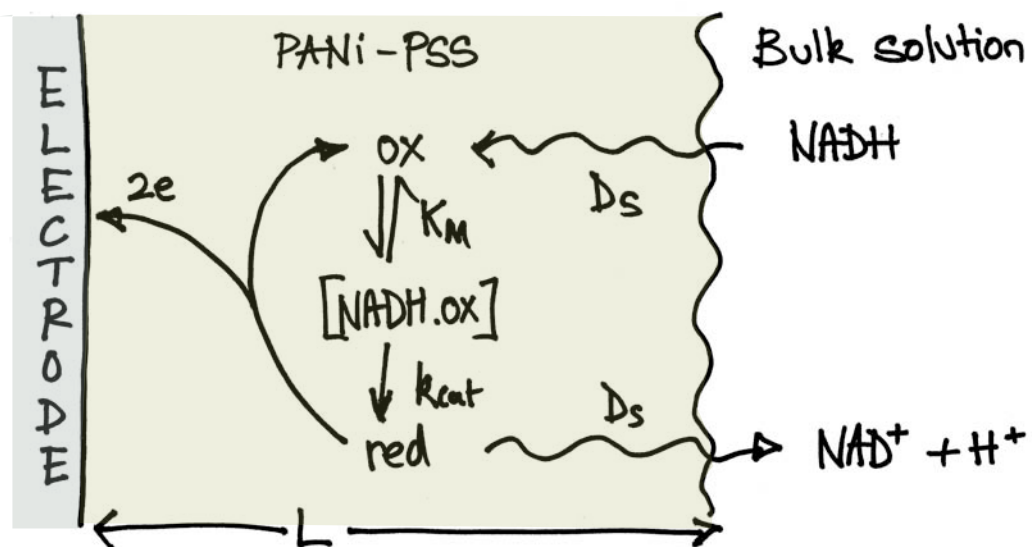
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Molecular Electrochemistry: Modification, Mediation and Design of Electrode Surfaces

mechanism



- reaction occurs throughout film
- current saturates at high NADH
- NAD^+ reversibly inhibits

From Prof. Philip Bartlett (UK)



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700 Poster Presentations





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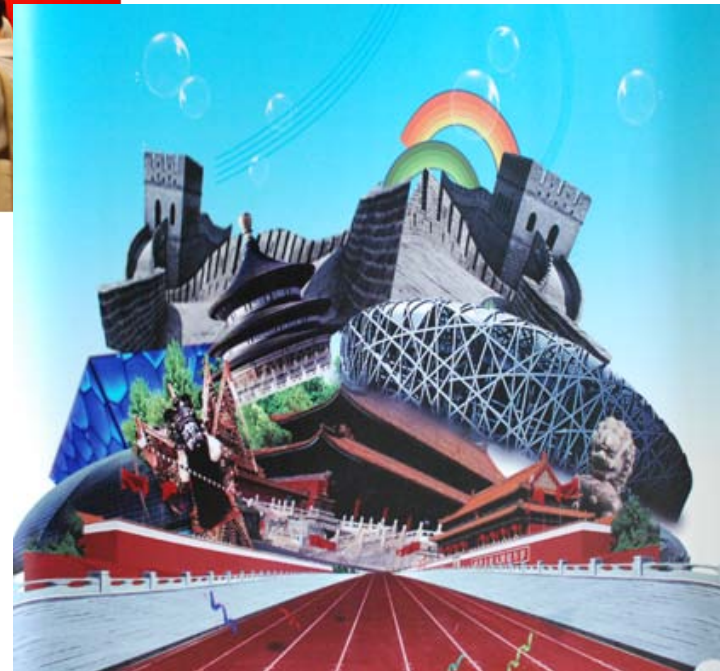
Social Activities

Receptions



Excursions

- The Great Wall
- The Forbidden City
- Acrobatic Show





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Superb Banquet

- Delicious Chinese cuisine
- Wonderful performance





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- Lijun Wan, *China (co-chair)*
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- Robert Hillman, *UK (co-chair)*
- Christopher Brett, *Portugal*
- Hasuck Kim, *Korea*
- Juntao Lu, *China*
- Tianhong Lu, *China*
- Petr Novak, *Switzerland*
- Zhongqun Tian, *China*
- Masahiro Watanabe, *Japan*

ISE Executive Committee



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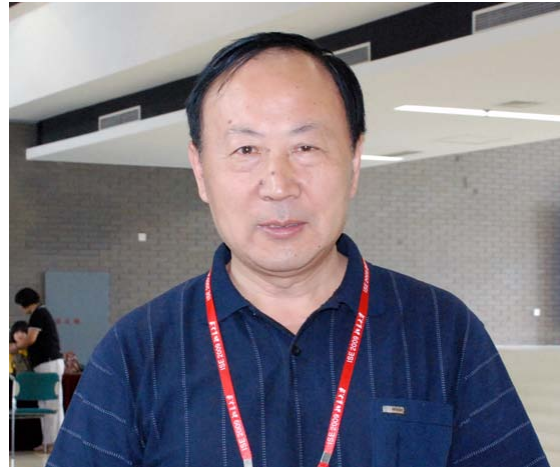
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Thanks to

- **Secretaries General**



Prof. Yongfang Li, China



Prof. Jin Zhang, China

- **Symposium Organizers and Coordinators**

- **Yingjie Exchange Center of Peking University:**

Director Zhenya Chen,
Miss Ying Wang,

...



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Thanks to

60 staff and student volunteers





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Thank you !



Have a safe journey home !