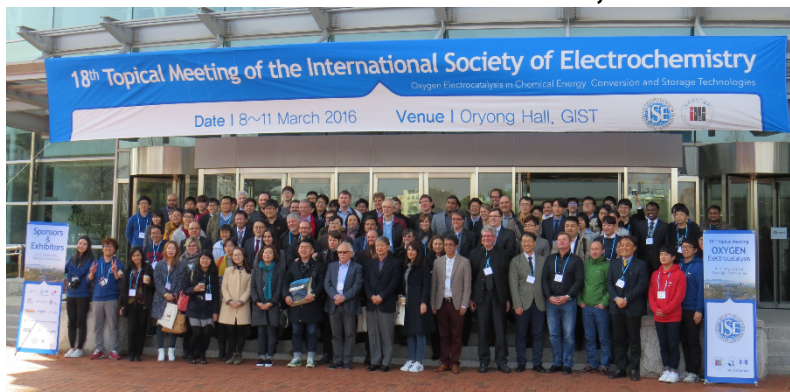


Report on the 18th ISE Topical Meeting – Gwangju, South Korea, March 8-11, 2016



The 18th Topical Meeting of the International Society of Electrochemistry (ISE) was held at Oryong Hall of Gwangju Institute of Science and Technology in Gwangju, South Korea. The **214 participants** (plus not a few accompanying persons and visitors) came from 22 countries of all around the world and the region of the

world with most participants was Asia (72%) – see list by country at the end of the report.

The theme of the meeting was “**Oxygen Electrocatalysis in Chemical Energy Conversion and Storage Technologies**” and the most recent advances in oxygen electrocatalysis were extensively discussed. During the conference, the researches on noble and non-noble electrocatalysts, *operando* analysis, catalyst design based on theory, catalyst support, bi-functional catalysts, fuel cells, water electrolysis, metal-air batteries, fuels from CO₂, and electrode architecture were covered. Highlights of some of the latest advancements were presented in **7 keynote lectures, 19 invited lectures, 43 oral and 103 poster presentations**.

An opening speech entitled “Will H₂ be an Option for the Future Energy after Fossil Fuels?” was delivered on Tuesday evening by the former president of ISE, Hasuck Kim. After the speech, a welcome reception was held at the banquet room of Oryong Hall. On Wednesday morning, the conference commenced with the two consecutive keynote lectures: “On the surface chemistry of OER electrodes” – Robert Schlögl (Fritz-Haber-Institut der MPG, Germany); “Electrochemical interfaces, electrocatalysis and green energy” – Nenad M. Markovic (Argonne National Laboratory, USA). On Thursday afternoon, the three keynote lectures were given: “Oxygen electrocatalysis at soft interfaces. Indirect water electrolysis using a vanadium/cerium redox flow battery” – Hubert Girault (EPFL, Switzerland); “On the Activity Origin in Metal-Free Nitrogen-Doped Carbons for Oxygen Reduction Reaction and Their Mechanisms” – Dang-Sheng Su (Institute of Metal Research, China); “Development of Highly Active Pt Core-Shell Catalyst for PEFCs” – Hideo Daimon (Doshisha University, Japan). On Friday morning, two keynote speakers delivered the talks: “Precious Metal-Free Electrocatalysts for Fuel Cell Applications: In Pursuit of Performance and Understanding” – Piotr Zelenay (Los Alamos National Laboratory, USA); “Electrocatalyst design from nanoscale to macroscale for fuel cells” – Yung-Eun Sung (Seoul National University, Korea). After the keynote lectures, two oral sessions were run in parallel from Wednesday till the end of the meeting at around noon on Friday.

The invited speakers during the conference includes Wolfgang Schuhmann (Ruhr-Universität Bochum, Germany), Zongping Shao (Nanjing Tech University, China), Sang Hoon Joo (Ulsan National Institute of Science and Technology, Korea), K. Andreas Friedrich (German Aerospace



Center, Germany), Plamen Atanassov (The University of New Mexico, USA), Renate Hiesgen (University of Applied Sciences, Esslingen, Germany), Hansung Kim (Yonsei University, Korea), Federico Calle-Vallejo (Leiden University, Netherlands), Seong Ihl Woo (Korea Advanced Institute of Science and Technology, Korea), Jong-Sung Yu (DGIST, Korea), Karl Mayrhofer (FZ Jülich, Germany), Hyungjun Kim (Korea Advanced Institute of Science and Technology, Korea), Olaf Magnussen (Kiel University, Germany), Jinwoo Lee (Pohang University of Science and Technology, Korea), Zhi Liu (ShanghaiTech University, China), Woonsup Shin (Sogang University, Korea), Tatsumi Ishihara (Kyushu University, Japan), and Peter Strasser (Technical University Berlin, Germany).



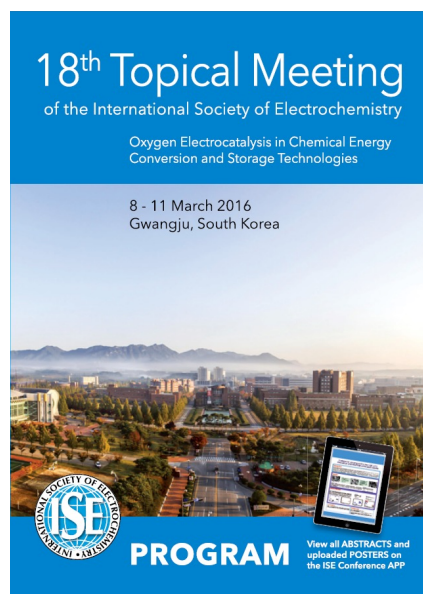
In the poster session, held on Wednesday evening, 103 presentations are given with fruitful discussions in an atmosphere of warm friendship with specially selected finger-foods. During the conference dinner, held at the Hotel Holiday Inn Gwangju on Thursday evening, a Korean traditional music performance was given, and the 5 best poster prize winners were announced: Hansaem Jang (Gwangju Institute of Science and Technology, Korea),

Balwinder Kaur (Indian Institute of Technology Ropar, India), Seonggyu Lee (POSTECH, Korea), Silver Sepp (University of Tartu, Estonia), and Kuang-Hsu Wu (Chinese Academy of Sciences, China). On Friday afternoon, after having a lunch-box, an excursion to Damyang was organized, which include a Korean traditional snack-making activity, a Bamboo forest visit, and a traditional Korean dinner.

Last but not the least, we wish to thank all the participants whose presentations contributed to the excellent scientific quality of the meeting. We specially extend our gratitude to our colleagues of the Organizing Committee for their help all along the preparation of the meeting, as well as to Thierry Lenzin (ISE office) who largely contributed to the success of the meeting. The financial support provided by Gwangju Convention & Visitors Bureau is gratefully acknowledged. We would also like to acknowledge the exhibitors and sponsors during the meeting.

Number of participants per country:

South Korea: 116; Germany: 32; China: 20; Japan: 10; France: 6; USA: 5; Philippines: 3; Switzerland: 3; Estonia: 2; Italy: 2; Netherlands: 2; Poland: 2; Singapore: 2; Australia: 1; Austria: 1; Canada: 1; India: 1; Russia: 1; Saudi Arabia: 1; South Africa: 1; Taiwan: 1; United Kingdom: 1.



Jaeyoung Lee and Bongjin Simon Mun
Co-Chairpersons, 18th ISE Topical Meeting