

- 09:10 1975 Effect of Carbon Support on Selectivity of CO₂ Electrochemical Reduction to C₂H₄ on Copper Nanoparticles – O. A. Baturina, Q. Lu, A. Purdy (Naval Research Laboratory), B. Dyatkin (U.S. Naval Research Laboratory), J. P. Grote (Max-Planck-Institut für Eisenforschung GmbH), S. Cherevko (Helmholtz-Institut Erlangen-Nürnberg), R. R. Unocic (Oak Ridge National Laboratory), and Y. Gogotsi (Drexel University)

Fundamental Aspects of Electrochemical Conversion of Carbon Dioxide 5 – 10:00 – 12:10

Co-Chairs: Pawel J Kulesza, Andrew B. Bocarsly and David E Cliffl

- 10:00 1976 *(Keynote)* The Role of Oxide in the Design of Electrocatalytic Interfaces for CO₂ Reduction: Post Transition Metals for the Production of Formate – A. B. Bocarsly, J. Pander III, J. White, M. Baruch, and Z. Detweiler (Princeton University)
- 10:40 1977 *(Invited)* Electronic-Level Insight on CO₂ Reduction Reaction – A. Lewera, M. T. Gorzkowski, R. R. Jurczakowski, and P. J. Kulesza (University of Warsaw, Department of Chemistry)
- 11:10 1978 Electrocatalytic Reduction of Carbon Dioxide at Network Films of Metallic Centers Generated within Supramolecular Ligands – A. Wadas, M. Frik, I. A. Rutkowska, and P. J. Kulesza (University of Warsaw)
- 11:30 1979 Electrocatalytic Reduction of Carbon Dioxide on Tin Oxide-Based Nanoparticles: Indirect Detection of Formate Ions Via on-Line Dems – M. R. Camilo (Institute of Chemistry of Sao Carlos) and F. H. B. Lima (IQSC - Institute of Chemistry of Sao Carlos)
- 11:50 1980 Tuning the Ligament Size and the Content of the Foreign Atom of the Nanoporous Copper for the Electrochemical Carbon Dioxide Reduction – B. Hecker and M. Oezaslan (Carl von Ossietzky University of Oldenburg)

Fundamental Aspects of Electrochemical Conversion of Carbon Dioxide 6 – 14:00 – 16:00

Co-Chairs: Pawel J Kulesza, Krishnan Rajeshwar and Iwona Agnieszka Rutkowska

- 14:00 1981 *(Keynote)* Oxide Semiconductors, Solid-State Chemistry, and Photoelectrochemistry: A Nexus – K. Rajeshwar (University of Texas)
- 14:40 1982 *(Invited)* Silicon Nanowires Photocathodes Combined with Mn-Based Molecular Complex Catalysts for the Efficient Light-Driven Electrocatalytic Reduction of CO₂ to CO – B. Fabre (Université de Rennes 1, France), S. Chardon (Université Grenoble Alpes, France), and E. Torralba-Penalver (Univ. Paris-Est, France)
- 15:10 1983 *(Invited)* Photo-Electrochemical CO₂ Reduction on Composite Metal and Metal-Oxide Cathodes – J. Augustynski and R. Solarska (University of Warsaw)
- 15:40 1984 Photoelectrochemical Reduction of Carbon Dioxide at Copper(I) Oxide Modified with Ultra-Thin Polymer Layers – E. Szaniawska (University of Warsaw, Department of Chemistry), K. Bienkowski, R. Solarska, I. A. Rutkowska (University of Warsaw), K. Rajeshwar (University of Texas), and P. J. Kulesza (University of Warsaw)

Fundamental Aspects of Electrochemical Conversion of Carbon Dioxide 7 – 16:20 – 18:10

Co-Chairs: Pawel J Kulesza, David E Cliffl and Nianqiang (Nick) Wu

- 16:20 1985 *(Invited)* Role of Heterojunctions in Activation of CO₂ Molecule – R. Solarska and K. Bienkowski (University of Warsaw)
- 16:50 1986 Mechanistic Insight into High Temperature CO₂ Electrolysis on Mixed Conducting Perovskite-Type Electrodes Revealed By in-Operando Photoelectron Spectroscopy – A. Nenning (Vienna University of Technology, Austria), A. K. Opitz (TU Wien), C. Rameshan (Vienna University of Technology, Austria), M. Kubicek (TU Wien), T. Götsch (University of Innsbruck), R. Blume, A. Knop-Gericke (Fritz-Haber-Institut der MPG, Berlin, Germany), G. Rupprechter (TU Vienna), B. Kloetzer (University of Innsbruck), and J. Fleig (Vienna University of Technology)
- 17:10 1987 Electrochemical Investigation of CO₂ Conversion Utilizing Nanoporous Polystyrene-Polyvinylpyridine Catalyst – H. Ghebremichael and A. Sidorenko (University of the Sciences)
- 17:30 1988 Grain Boundary Effect in Electroreduction Catalysis for Renewable Energy Conversion – X. Feng (University of Central Florida)
- 17:50 1989 Highly Active and Selective Au Thin Layer on Cu Polycrystalline Surface Prepared By Galvanic Displacement for the Electrochemical Reduction of CO₂ to CO – W. Guo, H. Woo, and Y. T. Kim (Pusan National University)

L07

Computational Electrochemistry

Physical and Analytical Electrochemistry / Energy Technology / Industrial Electrochemistry and Electrochemical Engineering
National Harbor 4, Gaylord National Resort and Convention Center

Molecular Modeling 2 – 08:20 – 09:40

- 08:20 2023 Doping Amorphous Ti Oxides to Decrease Oxygen Reduction Rates – M. C. Groenenboom and J. A. Keith (University of Pittsburgh)
- 08:40 2024 Reactive Molecular Dynamics Modeling of Iron Passivity – H. DorMohammad, Q. Pang, L. Árnadóttir, and O. B. Isgor (Oregon State University)
- 09:00 2025 Atomistic Simulations of Lithium Ion Mobility in Battery Electrolytes – J. M. Sanders, S. H. Kwak, C. M. Krauter, J. Gavartin, S. Pandiyan, T. Morisato, A. R. Browning, and M. D. Halls (Schrodinger, Inc.)
- 09:20 2026 Understanding and Tailoring the Performance of Transition Metal Oxides for the Oxygen Evolution Reaction – V. Tripkovic, H. A. Hansen, J. M. Garcia Lastra, and T. Vegge (Technical University of Denmark)

QM Modeling 2 – 10:00 – 12:00

- 10:00 2027 *(Invited)* Toward Design Principles for Anion Exchange Membranes with High Hydroxide Conductivity – M. E. Tuckerman, T. E. Zelovich, and Z. E. Long (New York University)