MIN WANG

E-mail: m.wang@epfl.ch

EDUCATION

UNIVERSITY PARIS DIDEROT, France

2016.09 – 2019.10 PhD in Electrochemistry and Catalysis

Supervision: Prof. Marc Robert

PhD fellowship from CSC (China Scholarship Council)

SHANDONG UNIVERSITY, China

Master of Inorganic Chemistry (specialized in

2013.09 - 2016.06 nanomaterial for catalysis)

Supervision: Prof. Weiliu FAN

2009.09 - 2013.06 SHANDONG NORMAL UNIVERSITY, China

Bachelor of Science in Applied Chemistry

RESEARCH EXPERIENCE

"Hybrid Systems Comprising Cobalt Complexes for Highly Efficient Electrocatalytic Reduction of CO₂ in Water"

"Visible-light-sensitive Water Splitting Photocatalyst - ZnGa₂O₄ with Hollow Sphere Structure and Doped Rh³⁺"

"Heterojunction Photocatalysts for Organic Pollutants Degradation- BiOI/PSC ZnO NPs with Controlled Carrier Separation and Transfer"

SKILLS AND EXPERTISE

- •Electrochemical methods to characterize the reduction activity and mechanism of molecular complexes;
- •Hybrid systems fabrication by supported molecular;
- •H-cell and flow-cell design and fabrication;
- •Chemical synthesis of inorganic nanomaterials;
- •Photo or chemical deposition of cocatalysts (Pt, Au);
- •Electron microscopy characterization of nanocrystals: SEM, TEM;
- •Structural characterization with X-Ray scattering techniques; X-ray photoelectron spectroscopy; Fluorescence Spectroscopy and Zeta potential;
- •Spectroscopic investigation techniques: UV-Vis, FT-IR, Raman;

PUBLICATIONS

- 1, A Hybrid Co Quaterpyridine Complex/Carbon Nanotube Catalytic Material for CO₂ Reduction in Water. **Min Wang**, Lingjing Chen, Tai-Chu Lau, Marc Robert, *Angew. Chem. Int. Ed.* (2018), 57, 7769 –7773.
- 2, CO₂ electrochemical catalytic reduction with a highly active cobalt phthalocyanine. **Min Wang**, Kristian Torbensen1, Danielle Salvatore, Shaoxuan Ren, Dorian Joulie, Fabienne Dumoulin, Daniela Mendoza, Benedikt Lassalle-Kaiser, Umit Işci, Curtis Berlinguette & Marc Robert, *NATURE COMMUNICATIONS* (2019), 10:3602.
- 3, Molecular electrocatalysts can mediate fast, selective CO₂ reduction in a flow cell. Shaoxuan Ren, Dorian Jouli é, Danielle Salvatore, Kristian Torbensen, **Min Wang**, Marc Robert, & Curtis P. Berlinguette, *Science* (2019), 365, 367–369.
- 4, Sequential electrochemical reduction of CO₂ into methanol with cobalt phthalocyanine. Etienne Boutin, **Min Wang**, John C. Lin, Matthieu Mesnage, Daniela Mendoza, Benedikt Lassalle-Kaiser, Christopher Hahn, Thomas F. Jaramillo, Marc Robert, *Angew. Chem. Int. Ed.* (2019) *DOI*: 10.1002/anie.201909257.
- 5, Molecular catalysis of CO₂ reduction. Recent advances and perspectives in electrochemical and light-driven processes with selected Fe, Ni and Co aza

macrocyclic and polypyridine complexes. Etienne Boutin, Lydia Merakeb, Bing Ma, Benjamin Boudy, **Min Wang** Julien Bonin, Elodie Anxolab & ère-Mallart, Marc Robert, *Chem Soc Rev.* submitted (2020).

6, Molecules@Materials: A Route to Boost the Electrocatalytic Reduction Rate of CO₂. Kristian Torbensen, Dorian Jouli & Shaoxuan Ren, **Min Wang**, Danielle Salvatore, Curtis P. Berlinguette, Marc Robert, *ACS Energy Letters*, submitted (2020).

CONFERENCES

1, 01/07/2018-07/07/2018: **ICPP-10-International Conference on Porphyrins and Phthalocyanines**, Munich (Germany)

Oral presentation: Hybrid Systems Comprising Cobalt Porphyrins and Phthalocyanines for Highly Efficient Electrocatalytic Reduction of CO₂ in Water

- 2, 30/05/2018-01/06/2018: **3 ème GDR Solar Fuels**, Paris (France)
- 3, 03/06/2019-07/06/2019: **FCCat 2019 French Conference on Catalysis 2019**, Frejus (France)

Oral presentation: Beyond the CO. Efficient multi-electrons, multi-protons CO₂ electrochemical reduction with Co molecular catalysts

4, 05/07/2019-12/07/2019: **47th IUPAC World Chemistry Congress**, Paris (France)

Poster presentation: CO₂ electrochemical catalytic reduction with a highly active cobalt phthalocyanine

Hobbies

Traveling, Sports and Reading