

Xuehang Wang, PhD

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Current Residence: United State of America

Educational Background

- *March 2013-September 2016, PhD of Chemical Engineering
Norwegian University of Science and Technology (NTNU) under supervision of Prof. De Chen and Dr. Edel Sheridan*
- *Sep 2010-Nov 2012, Master of Chemical Engineering
East China University of Science and Technology (ECUST) GPA (major 3.5/4.0)*
- *Sep 2006-June 2010, Bachelor of Chemical Engineering and Technology
East China University of Science and Technology (ECUST) GPA (major 3.5/4.0, top 5%)*

Research Experience

- 2017.3-
Now
 - **Nanomaterial group, Material Science and Engineering, Drexel University**
Supervisor: Prof. Yury Gogotsi
Position: Postdoctoral researcher
Topic: Metal ions/organic ions storage in MXene and its fundamental understanding
- 2016.10-
2017.2
 - **Department of Chemical Engineering, NTNU**
Supervisor: Prof. De Chen
Co-supervisor: Dr. Edel Sheridan (SINTEF)
Position: Temporary researcher
Topic: Fundamental study of ionic mixture electrolyte for supercapacitor
- 2013.3-
2016.9
 - **State-Key Laboratory of Chemical Engineering, ECUST**
Supervisor: Prof. Xingui Zhou
Position: PhD candidate
Topic: Polymer-derived carbon material for electrochemical devices applications.
Research interests:
 - Fundamental study of carbon-ionic liquid supercapacitors
 - Electrode material synthesis for supercapacitor, Li-ion battery and Mg-ion battery
 - Fundamental study of ionic liquid electrolyte
- 2010.9-
2012.11
 - **State-Key Laboratory of Chemical Engineering, ECUST**
Supervisor: Prof. Xingui Zhou
Position: Graduate student
Topic: Deep Hydrodesulfurization catalyst of FCC gasoline-kinetics
- 2007.12-
2010.6
 - **State-Key Laboratory of Chemical Engineering, ECUST**
Supervisor: Prof. Xingui Zhou
Position: Undergraduate student
Topic: Ammonia deposition on bi-metal catalyst-Preparation method of bi-metal catalyst

Publications

Selected Publications

1. Xuehang Wang, Aleksandar Yordanov Mehandzhiyski, Bjørnar Arstad, Katherine L. Van Aken, Tyler S. Mathis, Alejandro Gallegos, Ziqi Tian, Dingding Ren, Edel Sheridan, Brian Arthur Grimes, De-en Jiang, Jianzhong Wu, Yury Gogotsi and De Chen. Selective charging behavior in an ionic mixture electrolyte-supercapacitor system for higher energy and power. **Journal of the American Chemical Society**, 2017, DOI: 10.1021/jacs.7b10693.
2. Xuehang Wang, Haitao Zhou, Fengliu Lou, Yahao Li, Marthe Emelie Melandsø Buan, Xuezhi Duan, John Charles Walmsley, Edel Sheridan and De Chen. Boosted supercapacitive energy with high rate capability in ionic liquid on a densely-knitted carbon framework with hierarchical pore structure. **ChemSusChem**, 2016, DOI: 10.1002/cssc.201600779.
3. Xuehang Wang, Haitao Zhou, Edel Sheridan, John Charles Walmsley, Dingding Ren, De Chen. Geometrically-confined favourable ion packing for high gravimetric capacitance in carbon-ionic liquid supercapacitor. **Energy & Environmental Science**, 2016, 9: 232-239.

Other publications

4. Xuehang Wang, Yahao Li, Marthe Emelie Melandsø Buan, De Chen. Enhancing capacitance of supercapacitor with both organic electrolyte and ionic liquid electrolyte on a biomass-derived carbon. **RSC Advances**, 2017, DOI: 10.1039/c7ra01630a.
5. Haitao Zhou, Xuehang Wang, Edel Sheridan, Hongquan Gao, Juan Du, Jianhong Yang, and De Chen. Boosting the energy density of 3D dual-manganese oxides-based Li-ion superbattery by controlled mass ratio and charge injection. **Journal of Electrochemical Society**. 2016, 163(13): A2618-A2622.
6. Haitao Zhou, Xuehang Wang, Edel Sheridan, De Chen. Boost the specific energy and cycling stability of dual-manganese oxides-based Li-ion full cells by preformation of SEI layer on 3D binder-free anodes with and without Li metal. **ChemSusChem**. 2015, 8(8):1368–1380.
7. Haitao Zhou, Xuehang Wang, De Chen. Li-Metal-Free Prelithiation of Si-Based Negative Electrodes for Full Li-Ion Batteries. **ChemSusChem**. 2015, 8(16): 2737-2744.
8. Hui Yang, Xuehang Wang, Xuezhi Duan, Xiangchen Yuan, Xinggui Zhou. Kinetics of Thiophene and Benzothiophene Hydrodesulfurization over Co-Mo/ γ -Al₂O₃ Catalyst. **Chemical reaction engineering and technology**, 2015, 31(5): 400-406.

Conference presentations

1. Oral presentation. 229th ECS meeting, San Diego, US, 2016
2. Oral presentation. 10th Nano@NTNU, Trondheim, Norway, 2015.
3. Poster. CESEP'15, Poznan, Poland, 2015.
4. Poster. ChemEner, Berlin, German, 2015.
5. Poster. 6th International Symposium on Carbon for Catalyst, Trondheim, Norway, 2014.
6. Poster. 9th NTNU NanoLab Symposium, Trondheim, Norway 2014.
7. Oral presentation. 8th NTNU NanoLab Symposium, Trondheim, Norway 2013.

Skills

Lab skills

- Experienced with fabricating electrical electrodes and cells (supercapacitor and batteries) in glovebox and performing electrical test equipment, including battery cyclers, potentiostats and electrochemical impedance spectroscopy.
- Skilled for materials characterization process and experienced with data analysis: BET, SEM, Raman, NMR, TGA.
- Familiar with synthesizing process of various carbon materials and polymers, skilled to perform particular synthesizing equipment.

Programing skills

- Skilled in Python;
- Familiar with Matlab and C++

Languages: English (good written/verbal communications), Chinese (native), Japanese (Ability test N2), Norwegian (level 2)

Awards

National excellent oversea PhD student (China)	2017 (500 students around world each year)
Best student oral presentation, State-Key Laboratory of Chemical Engineering, ECUST	2012
Full scholarship for master degree, ECUST	2010-2012
Excellent bachelor thesis award, ECUST	2010
Academic excellence award, ECUST	2007-2010 (4-year continuously awarded in ECUST)