

WEIWEI ZHANG

Phone: (1) 4168713267 **Email:** zhanw51@mcmaster.ca **LinkedIn:** www.linkedin.com/in/weiwei-zhang-62323ba8

Address: Office JHE B128, 1280 Main Street West, Hamilton, Ontario, Canada, L8S 4L8

QUALIFICATION

2-year experience in materials characterization, finite element analysis software, data processing by using SQL and Python, and 3D model design by AutoCAD. 2-year departmental safety inspection experience with good team work and communication ability. Using creative thinking to solve problems. Self-motivation and fast learning to solve unexpected issues in the research.

EDUCATION

Master of Applied Science in Materials Science and Engineering, McMaster University, Canada 05/2017 – 05/2019

Cumulative GPA: 4.00/4.00

Master of Engineering in Materials Science and Engineering, University of Toronto, Canada 09/2016 – 04/2017

Cumulative GPA: 3.93/4.00

Bachelor of Engineering in Materials Engineering, City University of Hong Kong, Hong Kong 09/2012 – 07/2016

Cumulative GPA: 3.99/4.30, First Class Honors

WORK EXPERIENCE

Teaching assistant, Department of Materials Science and Engineering, McMaster University 09/2018 – 12/2018

- Supervise the experiments on non-destructive test on materials by ultrasonic technique and marking

Teaching assistant, Department of Materials Science and Engineering, McMaster University 09/2017 – 12/2017

- Help teach student with the common statistics methods in engineering fields and marking

EXTRA-CURRICULAR ACTIVITIES

Safety Committee graduate representative, Department of Materials Science and Engineering, McMaster University

04/2017 – present

- Responsible for conducting safety inspection and resolve the potential hazard issues

Student Mentor, Department of Physics and Materials Science, City University of Hong Kong 09/2015 – 07/2016

- Responsible for communicating with fresh student and assisting them with academic problems

Volunteer for social work, City Youth Empowerment Project, City University of Hong Kong 09/2013 – 04/2014

- Responsible for teaching and assisting students from low-income family

Fire marshal, Lee Shau Kee Hall, Hong Kong Fire Service Department 09/2013 – 06/2014

- Responsible for conducting fire drill activities and identifying safety issues

Student assistant, Low Carbon Green Energy Summer School 2014, City University of Hong Kong 06/2014 – 07/2014

- Responsible for guiding and touring the incoming student with City U campus

AWARD & HONORS

- First Place Student Presentation Award, 11th Annual FIB-SEM Workshop 05/2018
- Outstanding Academic Papers Award, City University of Hong Kong 04/2017
- Outstanding Graduate Award, City University of Hong Kong 11/2016
- Mainland Student Scholarship Scheme -First Class Scholarship, City University of Hong Kong 08/2012

- AP Education Fund Scholarship(s), City University of Hong Kong 08/2013 & 08/2015
- Dean's list of College of Science and Engineering, City University of Hong Kong 2013 – 2016

RESEARCH EXPERIENCE

Study the focused ion beam (FIB) damage on soft materials| Researched-based master project 05/2017- present

Supervisor: Dr. Nabil BASSIM, Department of Materials Science and Engineering, McMaster University

Design and fabrication of alternative-current organic light emitting diodes| 1-year master project 09/2016 – 04/2017

Supervisor: Professor Zheng-hong LU, Department of Materials Science and Engineering, University of Toronto

Design and synthesis of lanthanide doped upconversion nanoparticles| Research Assistant 03/2015 – 07/2016

Supervisor: Dr. Feng WANG, Department of Physics and Materials Science, City University of Hong Kong

Synthesis and Characterization of Diamond and Cubic Boron Nitride Films| Research Assistant 09/2015 – 12/2015

Supervisor: Professor Wenjun ZHANG, Department of Physics and Materials Science, City University of Hong Kong

TECHNICAL SKILLS

Materials characterization techniques: scanning electron microscopy (SEM), focused ion beam (FIB), Fourier transformed infrared spectroscopy (FTIR), X-ray diffraction analysis (XRD), atomic force microscopy (AFM), transmission electron microscopy (TEM), Raman spectroscopy, photoluminescence spectroscopy.

Nanomaterials synthesis: liquid-solid-solution strategy and oleate route for upconversion nanoparticles synthesis and fabrication of core-shell structure. Thin film sythesis: spinning coating, thermal evaporation.

Software: Python, Oringin, COMSOL, AutoCAD, MATLAB, Scilab, Solidworks and LabVIEW.

PUBLICATIONS & CONFERENCE POSTERS

- **Zhang, W.**, Melo, L., Hitchcock, A., and Bassim, N. (2018) *Electron beam damage on epoxy resin film studied by scanning transmission X-ray spectromicroscopy*. (submitted to **Micron**)
- Zhao, J., Chen, X., Chen, B., Luo, X., Sun, T., **Zhang, W.**, Wang, C., Lu, X., Su, D., Qiao, X., and Wang, F. (2018) *Tuning Core-Shell Nanoparticles by Leveraging Anisotropic Interfacial Strain*. (submitted to **Nature chemistry**)
- Luo, D., Li, G., Deng, Y., Zhang, Z., Li, J., Liang, R., **Zhang, W.**, Jiang, Y., Li, M., Liu, Y., Lei, W., Yu, A., and Chen, Z. (2018) *Defective Double-Shelled Transition Metal Oxide Microspheres as Multifunctional High-Efficiency Sulfur Immobilizer for Superior Lithium-Sulfur Batteries*. (submitted to **Nano Energy**)
- **Zhang, W.**, Melo, L., Hitchcock, A., and Bassim, N. (2018). *Untangling the electron beam damage from overall specimen damage in the FIB-SEM system*. Poster presented in 11th Annual FIB-SEM Workshop, McMaster University, Hamilton, Canada
- Sartipi, Y., **Zhang, W.**, Norris, S., El-Sherif, H., Ross, A., Bassim, N., and Anand, C. (2018). *Scanning electron microscope 3D surface reconstruction via optimization*. Poster presented in 11th Annual FIB-SEM Workshop, McMaster University, Hamilton, Canada
- **Zhang, W.**, and Wang, F. (2016). *Controlling the morphology of core-shell nanoparticles*. Poster presented in College of Science and Engineering Discovery and Innovation Gala 2016, City University of Hong Kong, Hong Kong SAR, China
- **Zhang, W.**, Zhang, J., and Ho, D. (2016) *Portable infrasound detection system integrating a barometric pressure sensor*. Poster presented in Employers' Luncheon Meeting, City University of Hong Kong, Hong Kong SAR, China