

**Summary** Experienced materials science researcher in final year of Ph.D. study in materials and electrochemical characterization with a focus on ionic liquid electrolytes for supercapacitors. Excellent analytical, communication, and leadership skills with a passion for leading and motivating a goal-oriented team. Acknowledged for problem solving skills, teamwork, and out-of-the-box thinking.

**Education Drexel University, Philadelphia, PA**

Ph.D. Materials Science and Engineering (3.95 GPA) exp. 2016  
Dissertation Topic: *Ionic liquid electrolytes for electrochemical capacitors*  
Advisor: Dr. Yury Gogotsi

**Haverford College, Haverford, PA**

B.S Physics, Minor Mathematics (3.5 GPA) May 2012  
Senior Thesis: *Solar-cell effect in organic self-assembling porphyrin nanowires*  
Women's Varsity Soccer Captain ('11-'12)

**Council Rock High School North, Newtown, PA**

Diploma, GPA: 4.0, Class Rank: 1/596, Valedictorian June 2008

**Research Experience at Drexel University**

*Graduate Research Fellow*

*2012-Present*

- Presented research on supercapacitor electrolyte findings at 6 national and international conferences, including an invited talk (2016)
- Member of collaborative research teams at Oak Ridge National Lab, Imperial College London, UC Riverside, and Army Research Labs
- Collaborates with industry teams at EnerSys, SI2 Technologies, Merck
- Published 7 papers in peer reviewed journals on supercapacitor technology
- Coordinated cooperative efforts between Drexel, 2 national labs, and 5 universities as part of an Energy Frontier Research Center (EFRC)
- Represent EFRC in the *EFRC Early Career Network* organized by DOE (1 chosen out of all grad students and post-docs in our group)
- "Super-user" of electrochemical testing equipment and all glovebox users
- Laboratory Manager and team mentor

**Technical Skills**

Electrochemical impedance spectroscopy, cyclic voltammetry, galvanostatic cycling, X-ray diffraction, Raman, atomic force microscopy, Au and AuPd evaporation, e-beam lithography, large data set analysis

*Programs/Software*

EC-Lab (BioLogic), MATLAB, Mathematica, Vesta, OriginLab, LabView, Python

## Honors and Awards

- National Academy of Engineering Grand Challenges GAANN Fellow (2014-16)
- Koerner Family Award Recipient (2015)
  - *Awarded to one graduate student in Material Science & Engineering*
- Drexel Alumni Association Outstanding Student Award (2015)
  - *Awarded to one graduate student each year university-wide*
- W.L. Gore & Associates Fellowship Semifinalist (2015)
- American Society of Materials Poster Contest Second Place (2015)
- Drexel College of Engineering Carleone Fellowship Winner (2014)
- Materials Research Society Spring Meeting Best Poster Award San Francisco, CA (2013)

## Professional Activities

- *Student Ambassador*: Materials Research Society University Chapters Committee (2015-Present)  
Act as liaison between student chapters and MRS university chapter committee leadership
- *President*: Materials Research Society Drexel Chapter (2013-Present)  
Coordinate seminars, work with executive board, oversee funds for conferences, report progress at biannual meetings, plan annual events at MRS conference in Boston
- *President*: Drexel Materials Science Graduate Network (MaGNet) (2014-2015)  
Write proposals and budget requests, manage funds for events, work with executive board to hold poster sessions and faculty panels
- *Member*: Drexel Electrochemical Society (2012-Present), Drexel Experience in Materials Outreach (2013-Present), Graduate Women in Science & Engineering (2012-Present)

## Publications (total 7, select below)

Van Aken KL, Beidaghi M, Gogotsi Y. Formulation of ionic-liquid electrolyte to expand the voltage window of supercapacitors. **Angew. Chemie Int. Ed.** 2015;54(16):4806.

Van Aken KL, Perez CR, Oh Y, Beidaghi M, Jeong YJ, Islam MF, Gogotsi Y. High rate capacitive performance of single walled carbon nanotube aerogels. **Nano Energy.** 2015;15:662.

Van Aken KL, McDonough JK, Li S, Guang F, Chathoth S, Mamontov E, Fulvio PF, Cummings PT, Dai S, Gogotsi Y. Effect of cation on diffusion coefficient of ionic liquids at onion-like carbon electrodes. **J of Phys: Cond. Matter.** 2014;26(28):284104.

## Education Outreach and Service

- *Special Demonstration Leader*: For 2000+ children and families at Philly Materials Day and 30 Students at Drexel Materials Camp (2012-Present)
- *Drexel Experiences in Materials Outreach (DEMO) Active Member*: Designed and implemented an array of demos for students of all ages at Drexel events, local museums, and local schools (2013-Present)
- *Science Saturdays Program Founder/Organizer*: Launch of a new outreach for high school students to attend lectures/demos each Saturday for 8 weeks (2014)
- *Judge at research competitions and science fairs*: Drexel University and local high schools
- *Math/Science Tutor*: Lower Merion High HS, Friends Central HS (2012-Present)