

## **Bilal El-Zahab**

### **1. Name and academic rank:**

Bilal El-Zahab, Associate Professor, Department of Mechanical and Materials Engineering, FIU

### **2. Education – degree, discipline, institution, year**

Ph.D. Chemical Engineering, University of Akron, Akron, Ohio, May 2009

B.S. Chemical Engineering, Middle East Technical University, Ankara, Turkey, July 2001

### **3. Academic experience – institution, rank, title**

10 Years

Associate Professor, Mech. & Mater. Eng. Dept., FIU, 2021-present

Research Associate Professor, Elec. & Computer Eng. Dept., FIU, 2019-2021

Chair, Engineering and Technology, Miami Dade College, 2019-2019

Assistant Professor, Mech. & Mater. Eng. Dept., FIU, 2012-2019

Graduate Program Director, Mech. & Mater. Eng. Dept., FIU, 2016-2018

Postdoctoral Associate, Chemical Engineering, MIT, 2010-2012

Postdoctoral Associate, Chemistry, Louisiana State Univ., 2009-2010

### **4. Non-Academic experience:**

N/A

### **5. Certifications or professional registrations: N/A**

### **6. Current membership in professional organizations**

The Electrochemical Society (ECS)

### **7. Honors and awards**

Top Scholar, FIU, 2020

Excellence in Teaching Award, FIU, 2018

Excellence in Mentorship Award, FIU, 2017

Odebrecht Award for Sustainable Development, Second Place, 2015

CIMIT Prize, Top 10, 2014

### **8. Service activities (within and outside of the institution)**

Member of Board of Directors, FIU Research Foundation, 2019-present

Member of Board of Directors, Lion Battery Technologies Inc., 2020-present

University and College Curriculum Committees, FIU

Dissertation Status Advisory Committee, FIU

College of Engineering Library Committee, FIU

**9. Briefly list the most important publications and presentations from the past five years**

El-Zahab, B. and Jones, R. M. (2021). *The Case for PGMs in Batteries: A Little Bit of Catalyst Goes a Long Way*. **Rho Motion Magazine**, The energy transition in the post Pandemic era, Q3, 22-24.

Safa, M., Adelowo, E., Chamaani, A., Chawla, N., Baboukani, A. R., Herndon, M., El-Zahab, B. (2019). *Poly(Ionic Liquid)-Based Composite Gel Electrolyte for Lithium Batteries*. **ChemElectroChem**, 6(13), 3319-3326.

Mirtaheri, E., Dolatmoradi, A., & El-Zahab, B. (2019). *Thermally Assisted Acoustofluidic Separation Based on Membrane Protein Content*. **Analytical Chemistry**, 91(21), 13953-13961.

Chawla, N., Chamaani, A., Safa, M., Herndon, M., & El-Zahab, B. (2019). *Mechanism of Ionic Impedance Growth for Palladium-Containing CNT Electrodes in Lithium-Oxygen Battery Electrodes and Its Contribution to Battery Failure*. **Batteries**, 5(1).

Mirtaheri, E., Dolatmoradi, A., Pimentel, K., Bhansali, S., & El-Zahab, B. (2018). *Thermally-assisted acoustofluidic separation of extracellular vesicles from cells*. **Microfluidics, Biomems, and Medical Microsystems**, (2018), 10491.

Chamaani, A., Safa, M., Chawla, N., Herndon, M., & El-Zahab, B. (2018). *Stabilizing effect of ion complex formation in lithium-oxygen battery electrolytes*. **Journal of Electroanalytical Chemistry**, 815, 143-150.

Safa, M., Hao, Y., Chamaani, A., Adelowo, E., Chawla, N., Wang, C. L., & El-Zahab, B. (2017). *Capacity Fading Mechanism in Lithium-Sulfur Battery using Poly(ionic liquid) Gel Electrolyte*. **Electrochimica Acta**, 258, 1284-1292.

Dolatmoradi, A., Mirtaheri, E., & El-Zahab, B. (2017). *Thermo-acoustofluidic separation of vesicles based on cholesterol content*. **Lab on a Chip**, 17(7), 1332-1339.

Chawla, N., Chamaani, A., Safa, M., & El-Zahab, B. (2017). *Palladium-Filled Carbon Nanotubes Cathode for Improved Electrolyte Stability and Cyclability Performance of Li-O<sub>2</sub> Batteries*. **Journal of the Electrochemical Society**, 164(1), A6303-A6307.

Chamaani, A., Safa, M., Chawla, N., & El-Zahab, B. (2017). *Composite Gel Polymer Electrolyte for Improved Cyclability in Lithium-Oxygen Batteries*. **ACS Applied Materials & Interfaces**, 9(39), 33819-33826.

**10. Briefly list the most recent professional development activities**

- Attended the Faculty Bystander Leadership workshops, FIU, Fall 2021