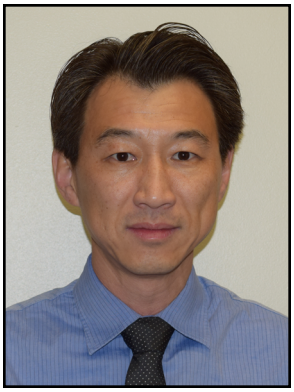

Lei Yu

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Education:
BS (Chemistry), Jilin University
PhD (Chemistry), Changchun Institute of Applied Chemistry, Chinese Academy of Sciences
Postdoctoral (Analytical Chemistry), Oakland University
Postdoctoral (Analytical Chemistry), Clemson University

Research Expertise:
Electrochemistry | Electrochemical energy storage and conversion devices | Spectroscopy | Surface Characterization | Nanomaterials Characterization | Conductive polymers

My three major research projects are: (1) ionic liquids solutions of lithium ion and acids as advanced electrolyte solutions of lithium ion batteries and fuel cells; (2) electrochemical preparation of carbide-derived carbon and its application in supercapacitors, sensors, and biomedical devices; (3) quantities measurement and characterization of nanoparticles in complicated systems. Other projects include the development of biosensors and synthesis of soluble conducting polymers.

Member of:
American Chemical Society (www.acs.org)
The Electrochemical Society (www.electrochem.org)

Recent Academic Projects:
(1) Ionic liquid solutions' properties and applications as electrolytes; (2) electrochemical oxidation of metal carbides; (3) effects of nanoparticles on human and cancer cells.

Recent Publications:

Lam PH, Tran AT, Walczyk DJ, Miller AM, Yu L (2017) Conductivity, Viscosity, and Thermodynamic Properties of Propylene Carbonate Solutions in Ionic Liquids. J Mol Liq. 246:215-220.

Goderecci S, Kaiser E, Yanakis M, Norris, Scaturo J, Ozust R, Medina C, Waechter F, Heon M, Yu L, Lofland S, Demarest R, Krchnavek R, Caputo G, Hettinger J (2017) Silver oxide coatings with high silver-ion elution rates and characterization of bactericidal activity. Molecules. 22:1487.

Walczyk DJ, Mason DF, Palazzo BG, Norris ZA, McRae, N, Tran AT, Hettinger JD, Yu L (2017) Electrochemical Oxidation of Niobium and Tantalum Carbides in Aqueous Solutions. ECS Trans. 77:1599-1606.

Tran AT, Lam PH, Miller AM, Walczyk DJ, Tomlin J, Vaden TD, Yu L (2017) Proton transfer and esterification reactions in EMIMOAc-based acidic ionic liquids. RSC Adv. 7:18333–18339.

Camargo LGB, Palazzo BG, Taylor G, Norris ZK, Patel YK, Hettinger JD, Yu L (2015) Carbide-Derived Carbon by Electrochemical Etching of Vanadium Carbides. J Electrochem Soc. 162:H811-H815.