

GIFTY OSEI-PREMPEH

Chemical Engineering Department, WVU Institute of Technology, 405 Fayette Pike, Montgomery, WV 25136

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EXPERIENCE

- August 2010 – Present **Assistant Professor**, Dept. of Chemical Engineering, West Virginia University Institute of Technology, Montgomery, WV
- August 2008 – August 2010 **Postdoctoral Scholar**, Dept. of Chemical and Materials Engineering, University of Kentucky, Lexington, KY.
- August 2007 – August 2008 **Lecturer**, Dept. of Chemical and Materials Engineering, University of Kentucky College of Engineering Extended Campus, Paducah, KY

EDUCATION

- Ph.D Chemical Engineering** (June 2007) University of Kentucky, Lexington, KY
- MS Chemical Engineering** (July 2002) North Carolina A&T State University, Greensboro, NC
- BS Chemical Engineering** (July 1999) University of Science and Technology, Kumasi, Ghana

HONORS AND AFFILIATIONS

- ASEE Chemical Engineering Education's 2011 Corcoran Award (Co-recipient)
- American Society of Engineering Education (Member), 2013
- American Institute of Chemical Engineers (Member), 2001 – present.

RESEARCH AREAS

Current

- Functionalized silica-polymer composites for CO₂ capture
- Carbon oxidation evaluation for application in direct carbon fuel cell
- CO tolerant MEA fabrication for PEM fuel cells

Post-doctoral Research Synthesis of glucose or xylose imprinted silica for the adsorption and separation of glucose or xylose from cellulosic biomass to enhance cellulosic ethanol production.

Ph. D. Dissertation 'Synthesis and analysis of organic functionalized structured nanoporous silica by sol-gel technique for application in: Fluorous solid phase extraction (F-SPE), Catalysis, and CO₂ capture.

ACTIVITIES AND OUTREACH

- Advisor WVU Tech AIChE Student Chapter
- Reviewer for Journal of Colloid and Interface Science (2010)
- Mentor for NSF-Research Experience for Undergraduates, University of Kentucky (Summer 2009)

SELECTED PUBLICATIONS

- Wenjin Xu, **Gifty Osei-Prempeh**, Fresia C. Lema Herrera, E. Davis Oldham, Renato J. Aguilera, Sean Parkin, Stephen E. Rankin, Barbara L. Knutson, Hans-Joachim Lehmler 'Synthesis, thermal properties, and cytotoxicity evaluation of hydrocarbon and fluorocarbon alkyl b-D-xylopyranoside surfactants' *Carbohydrate Research* 349 (2012) 12–23.
- **Osei-Prempeh, G.**, Knutson, B.L., Rankin, S.E., Lehmler, H.-J., 'Direct Synthesis and accessibility of amine functionalized mesoporous silica Templated Using Fluorinated Surfactants.' *Ind. Eng. Chem. Res.*, 2011, 50 (9), pp 5510–5522

HIGHLIGHTS OF TEACHING ACTIVITIES

Material and Energy Balances I (CHE 201): Fall 2010, Fall 2011, Fall 2012

Unit Operations Lab I (CHE 450): Fall 2010, Fall 2011

Chemical Thermodynamics (CHE-320): Fall 2011, Fall 2012

Material and Energy Balances II (CHE 202): Spring 2011, Spring 2012, Spring 2013

Polymer Science and Engineering (CHE 461): Spring 2011

Kinetics and Reactor Design (CME 550): Fall 2007; (CHE 327): Spring 2012, Spring 2013