Jeffery L. Coffer, PhD
BIOGRAPHICAL SKETCH

EDUCATION/TRAINING :INSTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
Wofford College, Spartanburg, SC	B.S.	1982	Chemistry
University of Wisconsin, Milwaukee, WI	M.S.	1985	Inorganic Chemistry
University of Wisconsin, Milwaukee, WI	Ph.D.	1987	Inorganic Chemistry
University of Illinois, Urbana-Champaign	postdoctoral	1987-1989	Inorganic Chemistry / Chemical Engineering

Academic Positions

1990 - 1995 Texas Christian University, Assistant Professor of Chemistry
1995 - 2001 Texas Christian University, Associate Professor of Chemistry
2001 - present Texas Christian University, Professor of Chemistry
2003 – 2009 Texas Christian University, Chair, Department of Chemistry

Other Appointments

1995 - present University of North Texas, Adjunct Professor of Materials Science
Spring 1999 Texas Instruments Kilby Research Center, Visiting Scientist
2000 - present Institute for Cancer Research, University of North Texas Health Sciences Center, Affiliate Member
Fall 2009 Flinders University, Adelaide, Australia, Visiting Research Fellow
2010-2011 TCU Faculty Fellow in Entrepreneurship
2011-2012 Senior Faculty Fellow in Entrepreneurship

Recent Professional Experience

- Journal Advisory Board Memberships: *Mesoporous Biomaterials* (2013-present), *Open Journal of Biomedical Engineering* (2007-present); *Journal of Nanotechnology* (2008-present); *Journal of Cluster Science* (1999-2007).
- *Recent Scientific Symposia Organizational responsibilities:* International Advisory Board: Porous Semiconductors Science and Technology (PSST) (since 2008); Symposium Co-Organizer (with Mike Sailor, UCSD), "Silicon-Based Inorganic Nanomaterials in Medicine," 2014 Fall ACS National Meeting, San Francisco, CA; Co-Organizer, Symposium on Porous Silicon as a Biomaterial, at the 5th World Biomaterial Congress in Chengdu, China (2012).

Awards and Honors

- Dean's Distinguished Award for Research & Creative Activity, 2003
- Mortar Board Preferred Professor, 2006
- Exceptional Honors Professor, 2007
- College of Science and Engineering, Award for Distinguished Achievement as a Creative Teacher and Scholar, 2008.
- College of Science and Engineering, Award for Distinguished Achievement as a Creative Teacher and Scholar, 2009.
- Chancellor's Award for Distinguished Achievement as a Teacher-Scholar, 2009.
- Wilfred T. Doherty Award for Research, Dallas-Fort Worth Section of the American Chemical Society, 2010

Research Interests

- *Nanoscale Semiconducting Structures for Sensing and Therapeutic Applications;*
- *Structure and Properties of Doped Group IV Nanocrystals and Nanowires;*
- *Biologically-Inspired Electronic Nanostructures.*

Publications and Presentations

- 126 publications in peer-reviewed journals

- 128 Presentations at Professional Meetings
- 68 Seminars at Universities / Industries
- 3 Patents

Graduate Dissertations/Theses Directed

completed: 14 PhD students; 5 MS students

Undergraduate Research Participants

A total of 33 students have been supervised since 1990.

Selected Significant Publications

Semiconducting Silicon Nanowires for Biomedical Applications. Coffer, J. Editor. Woodhead Publishing (Cambridge, UK). Woodhead Publishing Series in Biomaterials, **2014**.

Fabrication of Porous Semiconductor Nanotube Arrays. Huang, X.; Gonzalez-Rodriguez, R.; Rich, R.; Gryczynski, Z.; Coffer, J. *Chem Comm,* **2013***,* 49, 5760-5762.

The Role of Silicon in Discriminating In Vitro Calcification for Electrospun Porous Silicon-Biopolymer Orthopedic Scaffolds, Dongmei Fan, Giridhar R. Akkaraju, Ernest F. Couch, Leigh T. Canham, and Jeffery L. Coffer, *Nanoscal*e, **2011**, 3,354-361 (Feature article)

Sustained Antibacterial Activity from Triclosan-Loaded Nanostructured Mesoporous Silicon. Mengjia Wang and Jeffery L. Coffer, Katrina Dorraj and Phil S. Hartman, Armando Loni and Leigh T. Canham. *Molecular Pharmaceutics*, **2010**, 7 (6), 2232–2239.

High-porosity poly(ε-caprolactone)/mesoporous silicon scaffolds : calcium phosphate induction and biological response to fibroblasts and bone precursor cells, M. A. Whitehead, P. Mukherjee , G. Akkaraju, L. T. Canham, and J. L Coffer, *Tissue Engineering A*, **2008**, 14(1): 195-206.

Emissive Erbium-Doped Silicon and Germanium Oxide Nanofibers Derived from an Electrospinning Process, Ji Wu and Jeffery L. Coffer. *Chem. Mater*.; **2007**; 19(25); 6266-6276.

Biorelevant Calcification and Non-Cytotoxic Behavior in Silicon Nanowires**.** Nagesha, D.; Whitehead, M.A.; Coffer, J.L., *Adv. Mater*. **2005**, *17*, 924,

"Porous Silicon-Based Scaffolds for Tissue Engineering and Other Biomedical Applications," Coffer, J.; Whitehead, M.A.; Nagesha, D.; Mukherjee, P.; Akkaraju, G.;Totolici, M.;Saffie, R.; Canham, L.. *Phys. Stat. Sol (a)*, **2005**, *202*, 1451.

Fabrication and Optical Properties of Erbium-Doped Germanium Nanowires, Wu, J.; Coffer, J.L.; Punchaipetch, P.; Wallace, R.M. *Adv. Mater*., **2004**,16, 1444.

Quantum Dots: A Primer. Murphy, C.J. and Coffer, J. *Appl. Spectroscopy,* **2002**, *56*, 1.

Erbium Surface Enriched Silicon Nanowires, Wang, Z, Coffer, JL. *NanoLetters*, **2002**, *2*, 1530.

Porosified Silicon Wafer Structures Impregnated With Platinum Anti-Tumor Compounds: Fabrication, Characterization, and Diffusion Studies. Li, X.; St. John, J; Coffer, J.; Chen, Y.; Pinizzotto, R.; Newey, J.; Canham, L.T., *Biomedical Microdevices,* **2000**, *2*, 265.

Synthesis and Characterization of Discrete Luminescent Erbium-Doped Silicon Nanocrystals. St. John, J; Coffer, J.; Chen, Y.; Pinizzotto, R.; *J. Am. Chem. Soc.*, **1999**, *121*, 1888.

Transition Metal Complex-Doped Hydroxyapatite Layers on Porous Silicon, Li, X.; Coffer, J.; Chen, Y.; Pinizzotto, R.; Newey, J.; Canham, L. *J. Am. Chem. Soc.*, **1998**, *120*,11706.

Dictation of the Shape of Mesoscale Semiconductor Nanoparticle Assemblies by Plasmid DNA. Coffer, J.; Bigham, S.; Li, X.; Pinizzotto, R; Rho, Y.; Pirtle, R.; Pirtle, I. *Appl. Phys. Lett*., **1996**, *69*, 3851.

Surface Reactivity of Luminescent Porous Silicon, Coffer, J.L., Lilley, S.C., Martin, R.A., and Files-Sessler, L., *J. Appl. Phys.*, **1993**, *74*, 2094.

Characterization of Quantum-Confined CdS Nanocrystallites Stabilized By Deoxyribonucleic Acid. Coffer, J.L., Bigham, S.R., Pinizzotto, R.F., and Yang, H., *Nanotechnology*, **1992**,*3*, 69.

For a more complete list, see <www.chm.tcu.edu/faculty/coffer/publications.html>