
Jeffery L. Coffey, 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 - 2005	University of North Texas, Adjunct Professor of Materials Science
Spring 1999	Texas Instruments Kilby Research Center, Visiting Scientist
2000 – 2016	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: *Nanomaterials* (Synthesis & Interfaces, as well as Biology/Medicine sections), *Mesoporous Biomaterials* (2013-present), *Open Journal of Biomedical Engineering* (2007-2017); *Journal of Nanotechnology* (2008-2016); *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 Nanoparticles for Sensing and Imaging," 2018 Pittcon Conference, Orlando, FL; Symposium Co-Organizer (with Mike Sailor, UCSD), "Silicon-Based Inorganic Nanomaterials in Medicine," 2014 Fall ACS National Meeting, San Francisco, CA; Co-Organizer (with Nico Voelcker, Monash University), Symposium on Porous Silicon as a Biomaterial, at the 5th World Biomaterial Congress in Chengdu, China (2012).
- Member, External Advisory Board of the Department of Materials Science & Engineering, University of Texas – Arlington (since 2015).
- Consultant, pSiMedica Ltd. 2003-2007; Intrinsic Materials Ltd, 2008 – 2010; Houston Methodist Research Institute (HMRI), 2019-2020; Advanced Silicon Group (ASG), Inc., 2021-present.
- Member, Scientific Advisory Board, Nanolume, Inc., 2004-2008.

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
- Texas Christian University, John V. Roach Honors College, Finalist, Honors Professor of the Year 2023

Research Interests

- *Nanoscale Semiconducting Structures for Sensing and Therapeutic Applications;*
- *Eco-Friendly, 'Green' routes to Silicon Nanostructure Formation;*
- *Silicon Nanostructures as Templates for Advanced Energy Applications.*

Publications and Presentations

- 169 publications in peer-reviewed journals
- 180 Presentations at Professional Meetings
- 76 Seminars at Universities / Industries
- 3 Patents

Graduate Dissertations/Theses Directed

completed: 25 PhD students; 5 MS students

Undergraduate Research Participants

A total of 54 students have been supervised since 1990.

Selected Significant Publications (For a complete list, see: <http://personal.tcu.edu/coffer/publications.html>)

Template Pore Size and A-Site Cation Management Dictate Luminescence Efficiency, Stability, and Wavelength in Confined Perovskite Nanostructures. V da Costa, K Frohna, S Stranks, J Coffey, *Adv. Opt. Mater.* **2023**, doi.org/10.1002/adom.202202755

Editor: "Semiconducting Silicon Nanowires for Biomedical Applications," 2nd Edition, Elsevier (Cambridge, UK). [Woodhead Publishing Series in Biomaterials], 2021

Formation of Platinum Nanocrystals on Silicon Nanotubes and Corresponding Anti-Cancer Activity in Vitro. Nguyen T Le, Giridhar Akkaraju, Jeffery L Coffey, *ACS Applied Biomaterials*, **2020**, 3, 208-216

Single Plant Derived Nanotechnology for Synergistic Antibacterial Therapies, JR Kalluri, R Gonzalez-Rodriguez, PS Hartman, A Loni, LT Canham, JL Coffey, *PLOS One*, **2016**, 11(9), e0163270.

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

The Role of Silicon in Discriminating In Vitro Calcification for Electrospun Porous Silicon-Biopolymer Orthopedic Scaffolds, D Fan, GR Akkaraju, EF Couch, LT Canham, and JL Coffey, *Nanoscale*, **2011**, 3,354-361 (Feature article)

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 Coffey, *Tissue Engineering A*, **2008**, 14(1): 195-206.

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

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

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

Porosified Silicon Wafer Structures Impregnated With Platinum Anti-Tumor Compounds: Fabrication, Characterization, and Diffusion Studies. Li, X.; St. John, J; Coffey, 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; Coffey, J.; Chen, Y.; Pinizzotto, R.; *J. Am. Chem. Soc.*, **1999**, 121, 1888.

Transition Metal Complex-Doped Hydroxyapatite Layers on Porous Silicon, Li, X.; Coffey, 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. Coffey, J.; Bigham, S.; Li, X.; Pinizzotto, R; Rho, Y.; Pirtle, R.; Pirtle, I. *Appl. Phys. Lett.*, **1996**, 69, 3851.

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