



Irvin W. Osborne-Lee
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CAREER OBJECTIVES

To positively impact society through academic enterprise: educating and empowering students, motivating and inspiring faculty, building key research programs, and giving exemplary service.

Education and Training

The University of Texas at Austin	Chemical Engineering	B.Sc., 1979
The University of Texas at Austin	Chemical Engineering	M.Sc., 1983
The University of Texas at Austin	Chemical Engineering	Ph.D., 1985

Professional Experience

Sept 2019 – Present	Professor, Chemical Engineering Dept., Prairie View A&M Univ. (PVAMU)
Sept 2018 – August 2019	Professor & Int. Assoc. Dean of Engineering, PVAMU
Sept 2010 – Sept 2018	Professor & Head, Chemical Engineering Department, PVAMU
June 1998 – August 2010	Associate Professor & Head, Chemical Engineering Dept., PVAMU
May 1985 – June 1998	Group Leader & Development Staff Member II, Chem. Tech. Division, Oak Ridge National Lab (ORNL)

Key Service Roles (Last 5 Years)

2019-Present	Graduate Council, PVAMU. Graduate Coordinator, chemical engineering program.
2006-Present	Institutional Review Board on Research with Human Subjects PVAMU.
2004-Present	Associate Director, Center for Environmentally Beneficial Catalysis (U. Kansas led).
2003-Present	Technical Advisory Committee., Mary Kaye O'Connor Process Safety Center, Texas A&M University.
2000-2018	Board of Directors, Gulf Coast Authority.
2005-2013	Board of Directors, Nuclear and Radiological Education Division, American Society for Engineering Education (ASEE), roles included Secretary, Vice Chair, and Chair.

Publications (Most Recent)

*(Student authors is indicated in **bold print**; primary author is underlined where applicable)*

1. Pulikkathara, M., T. Adair, K. Kirby, R. Wilkins, B. Gersey, and I. Osborne-Lee, "Online Nuclear Power Summer Institute and Day of Science: A two-pronged approach to increasing girls and under-represented minorities towards STEM careers," *Proceedings of the 2022 ASEE Gulf Southwest Annual Conference*, Prairie View, Texas. <https://peer.asee.org/39193>. (March 2022).
2. Anyaegbu, O. and I. Osborne-Lee, "Thermodynamics and the Origin of Life," Proc. NOBCCHE 2020 Annual Meeting, Virtual Conference held September 24-25, 2020.
3. Shakir Hanna, S., P. Obiomon, I. Osborne-Lee, G. Cesaretti, and R. Misso, "Global Solar Energy availability model and use in relationship to Ecological Human imprint: Economic Sustainability Impact and Assessment," *Proceedings of ICREPQ '19, Tenerife, Spain* (April 2019).
4. Shakir Hanna, S., I. Osborne-Lee, G. Cesaretti, and R. Misso, "Ecological Human Imprint (EHI) and Water Resources in USA Modeling: Impacts and Assessment," January 2019, *Rivista di Studi sulla Sostenibilita*, DOI: 10.3280/RISS2018-002005, January 2019.
5. Gyamerah, M., J. Lavan, I. Osborne-Lee, and S. Musa, "Finite Element Technique for Electrochemical Copper Deposition," *Proceedings of the 2019 COMSOL Conference in Boston*, (2019).
6. Shakir Hanna, S., I. Osborne-Lee, and M. Khalil, "Solar Energy availability model and use in relationship to Ecological Human imprint in Egypt: Economic Sustainability Impact and Assessment," *Proc. International Scientific Conf. of Faculty of Science – Ain Shams University, Hurghada, Red Sea, Egypt* (October 2018).

7. Shakir Hanna, S., K. Harris, I. Osborne-Lee, R. Misso, G. Cesaretti, and Z. Andreopoulou, "Agroecosystem Engineering Energy, Ecological Human Imprint and Economic Sustainability: Impact and Assessment," *Proceedings of Energy Conference 7, Manchester, UK* (August 2017).
8. Shakir Hanna, S., I. Osborne-Lee, and **E. Ahlinvide**. "Studies on the role of earthworms in bioremediation of motor oil," *Eur. Chem. Bull.*, **6(11)**, 491-503 (2017).
9. Shakir Hanna, S., I. Osborne-Lee, et al. "Ecological human imprint in Egypt: prospective analysis and views from ecological sustainability and modeling," *Eur. Chem. Bull.*, **6(12)**, 564-568 (2017).
10. Shakir Hanna, S., I. Osborne-Lee, et al. "Ecological ecosystem Sustainable Development in Relationship to Other Sectors in the Economic System, and Human Ecological Footprint and Imprint," *DOI: 10.1016/j.aaspro.2016.02.004* (December 2016).
11. Shakir Hanna, S., I. Osborne-Lee, et al. "Ecological Currency. A New Approach in Sustainable Development. In the 21st Century in Relationship to Climate Change and Human Imprint Impacts," *DOI: 10.3280/RISS2016-001003*, (July 2016).
12. Shakir Hanna, S., I. Osborne-Lee, G. Cesaretti, R. Misso and M. Khalil. "Ecological Agro-ecosystem Sustainable Development in Relationship to Other Sectors in the Economic System, and Human Ecological Footprint and Imprint," *Agriculture and Agricultural Science Procedia* **8**, pp.17-30, 2016.
13. Elmore, R., I. Osborne-Lee, R. Wilkins, and C. Marianno, "Answering the Scientific National Security Call: The Prairie View A&M University Approach to the Nuclear Forensics For Minority Serving Institutions Partnership," *Proceedings of the 2015ANS Winter Conference, Washington, D.C.*, (December 2015).
14. Osborne-Lee, I., M. Gyamerah, and K. Olanrewaju, Development of Energy Efficient Process for the Capture of CO₂ from Post-Combustion Coal Fired Power Plant Flue Gases Using a Novel Solvent, 2015 Carbon Management Technology Conference (ISBN: 978-0-8169-1093-9).
15. Wilkins, R., I. Osborne-Lee, and B. Gersey, "Radiation Research and Nuclear Forensics Curriculum Development at Prairie View A&M University," *DNDO ARI Program Review*, (July 7-9, 2015).

Grants/Contracts Funded (Last 5 Years)

1. Increasing teaching, research and outreach capabilities with combined Raman-AFM system (DOD), \$461,992 awarded 1/2022 (Co-PI).
2. Investigating the Kinetics of Vitrification and Crystallization of Energetic Materials using Flash Differential Scanning Calorimetry (DOD, AFOSR), \$458,220 awarded 3/2022 (Co-PI).
3. Thermal Fingerprinting of Energetic Materials using Flash Differential Calorimetry (DOD, AFOSR), \$117,768 awarded 5/2022 (Co-PI).
4. "Optimization of Marine Propulsion System (TEES), \$10,000 awarded 5/2021 (Co-PI).
5. Thermodynamics and the Origin of Life (VPRISE, PVAMU), \$20,000 awarded 9/2020, 9/2021 (PI).
6. Louis Stokes STEM Pathways & Research Alliance (TAMUS LSAMP-RA), \$4,000,000 (\$425,000 PV) Jun 2019 – May 2024. NSF (subcontract via TEES, Co-PI).
7. Nuclear Power Institute (NPI), \$43,597 May 2016-December 2018. Nuclear Power Institute (Subcontract via TEES, PI); \$15,000 February 2015-April 2016; \$12,200 June 2014-January 2015.
8. Nuclear Forensics at Minority Serving Institutions (NFMSI), \$196,413, September 2015-December 2017. Department of Homeland Security, via subcontract with U. South Carolina.

Other Relevant Research Activities (Last 5 Years)

1. PhD dissertation committee member:
 - Guddi Karna "Radiation Effect on Single Walled Carbon Nanotube (SWCNT) and Poly (methyl methacrylate) (PMMA) Composites," in progress.
2. Master's thesis committee member: "Investigation of Effects of Span and Chord on Torque of Wind Turbine Blade Using S809 Airfoil," 2018.
3. Master's projects advised: "A Comparison of Two Renewable Energy Models," 2022; "Analysis of the Deepwater Horizon: Causes, Effects, and Remediation," 2018. Total master's graduate thesis students advised: six; co-advised, seven.
4. Faculty Led Study Abroad Proposal. Approved for May 2020 cohort to the NASA Astrobiology Institute in Santander, Spain.

Graduate Courses Taught (Last 5 Years)

1. GNEG 5319 Renewable Energy, developed and taught Fall 2022 and Spring 2020.
2. GNEG 5193 Nuclear Forensic Analysis, developed and taught Spring 2022, Fall 2019, Spring 2018, Spring 2017, Spring 2016, and Spring 2015
3. GNEG 5193 Nuclear Science Fundamentals developed and taught Fall 2021, Fall 2017, Fall 2016, and Fall 2015.
4. GNEG 5193 Chemical Process Design & Evaluation taught summer 2017.
5. GNEG 5193 Advanced Chemical Engineering Thermodynamics developed and taught fall 2019.

Honors, Achievements & Recognition (Most Recent)

1. Outstanding Teacher (Tenured) Award, Faculty Senate, PVAMU, 2022.
2. Celebrating Professional and Leadership Growth in the 21st Century Award (AIChE 2022)
3. Life Member of AIChE (Since 2009). Fellow grade membership in AIChE (since 2012).
4. MAC Eminent Chemical Engineer Award (AIChE 2012)
5. Member of Societal Impact Operating Council (AIChE 2009-2011).
6. AIChE Centennial Award for Top 20 Black Achievers Chemical Engineers, (AIChE 2008).
7. Nunn Perry Award in Recognition of Support, US Dept. of Defense, Mentor-Protégé Program (2007).
8. Member of Career and Education Operating Council (AIChE 1999-2002)
9. Best of Show (Paper) Award, Society for Technical Communications (2002)
10. Distinguished (Paper) Award, Society for Technical Communications (2002)