NADER VAHDAT
Chemical Engineering Department
Tuskegee University
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Summery

Forty five years of experience in Chemical Engineering Education and research. Expertise include: Curriculum development for chemical engineering, including new options in environmental engineering, biochemical engineering and pre-med. Development of a graduate program in chemical engineering; Adsorption of vapors and liquids on solids and its application in air pollution monitoring, water and waste water treatment and analysis, and respirator cartridges; Chemical polymer interaction with application in protective clothing materials, and membrane separation; Development of air monitoring instruments for aerosols and vapors; Development of fire extinguishing agents; Carbon dioxide capture from flue gas in power plants.

Education

Ph.D. (Chemical Engineering), University of Manchester, England, 1975.
M.S. (Chemical Engineering), University of California, Berkeley, 1972.
B.S. (Chemical Engineering), Abadan Institute of Technology, 1970.

Academic and Professional Experience

Adjunct Professor, Chemical Engineering, Tuskegee University 2023- present
Department head, Chemical Engineering, Tuskegee University, 1986 – 2022
Lawrence Livermore National Laboratory, Sabbatical leave, 1991 – 1992
Professor, Chemical Engineering, Tuskegee University, 1989
Associate Professor, Chemical Engineering, Tuskegee University, 1986 – 1988
Assistant Professor, Chemical Engineering, Tuskegee University, 1983 – 1985
Visiting Faculty, Chemical Engineering, University of Wisconsin, 1980 – 1982
Assistant Professor, Chemical Engineering, Abadan Institute of Technology, 1975 – 1979

Professional credentials, certifications, or licensing

Professional Engineer (PE) in Alabama (License no 16174)
Member of American Institute of Chemical Engineers
Member of American Society for Engineering Education
Service Achievement Award, Tuskegee University

PROFESSIONAL ACTIVITIES

Consultant for chemical engineering, environmental and safety projects
Major clients : Phillips Petroleum (Bartlesville OK)
American Technology (Baltimore MD)
Lawrence Livermore National Laboratory (CA)

Contributions to the discipline (e.g., service, publications or presentations)

Department Head, Chemical Engineering
Member of Dean's Council, College of Engineering
Member of Educational Policy Committee, College of Engineering

Member of Personnel Committee, College of Engineering
Member of Department Head's Council, Tuskegee University
Served on Faculty Senate, Tuskegee University
Served on Bio-Hazard Committee, Tuskegee University

"Carbon capture and CCS Research at Tuskegee University", Presented at the Second Annual Tuskegee Forum on Carbon Capture and Storage (CCS) Technologies, April 26, 2010, Tuskegee, AL

"Geological Sequestration Training and Research Program in Capture and Transport: Development of the Most Economical Separation Method for CO_2 Capture", Presented at the NETL/DOE Kickoff Meeting, March 22, 2010.

" Development of the Most Economical Separation Method for CO_2 Capture", Presented at the NETL/DOE Annual Meeting, February 23, 2011.

"Development of a model to screen different absorption processes for possible use for CO_2 capture" presented at the Tenth annual Carbon Capture & Sequestration Conference, May 2 – 5, 2011, Pittsburgh, PA.

"Gulf coast oil spill instruction at Tuskegee University", presented at the Annual conference of American Society of Engineering Education, Vancouver, Canada , June 26-29, 2011.

"Towards chemical engineering student diversity: The case of international student experiences at Tuskegee University", Chemical Engineering Education, 32 (2), 152-160, 2018.

"Statistical Process Monitoring for IoT-Enabled Cybermanufacturing: Opportunities and Challenges" presented at The 20th World Congress of the International Federation of Automatic Control, July 9-14, 2017, Toulouse, France.

"Statistical Process Monitoring for IoT-Enabled Cybermanufacturing: Opportunities and Challenges" IFAC-Papers online, 50 (10, 14946-1451 (2017).

Book chapter in "Green Sustainable Process for Chemical and Environmental Engineering and Science", 1st Edition, Editors: Inamuddin Abdullah and Asiri Arun Isloor. Chapter 19 "Organometallic compounds solubility in supercritical carbon dioxide (SCCO2): Measurements techniques, variables affecting solubility, recent developments, and thermodynamic modeling", October 2019, Elsevier Inc., Cambridge MA, ISBN: 9780128173886.