

**Contact Information:**

Phone: (520) 621-6044
Email: gervasio@email.arizona.edu



Dominic Gervasio, Ph.D.

Research Professor of Basic Medical Sciences at the College of Medicine, Phoenix and Department of Chemical and Environmental Engineering, College of Engineering, Tucson.

Background

From 2009 to present, Don is Research Professor at the University of Arizona in the Department of Basic Medical Sciences at the College of Medicine, Phoenix and in the Department of Chemical and Environmental Engineering in Tucson. Prior to joining the University of Arizona, Don was a Research Professor in the School of Materials and Center for Applied Nanobioscience in the Biodesign Institute of Arizona State University, Tempe AZ from 2003 to 2009; was a Member of the Technical Staff and served as a Principal Research Scientist for Motorola from 1997 to 2003; was a Founding Member of Red Bank Research Company (a joint venture of Motorola and Bellcore) from 1993 to 1997. Between 1984 and 1993, Don was a Senior Research Associate for Case Center for Electrochemical Sciences (CCES) and instructor at Case Western Reserve University and a Lecturer at Cleveland State University.

Don has authored several book chapters, over 60 peer reviewed papers, a dozen patents, and is a popular invited speaker who has contributed and chaired at prestigious international meetings, including: invitation speaker at the 2010 Gordon Research Conference; invited as 1 of 30 international advisors to the Shell Oil Game Changer meeting (Egham, Surrey, UK, February 2007) for shaping Shell's energy policy from 2007 to 2027; repeatedly an invited speaker to FreedomCar Fuel Cell Tech Team (GM, Ford, Chrysler, DoE) in Detroit, MI; plenary speaker for the first "International Fuel Cell R&D Forum" hosted by the Korean Institute of Technology (KITECH), April 20, 2005 in Seoul, Korea; and chairman of the session on "Integration of BioFuel-cells in Devices" for the DARPA Workshop on BioFuel-cells, held on June 30 to July 2, 2002 in Washington, DC. Don was awarded the Arizona Technology Ventures Innovator of the Year Award for 2007; elected to the Elsevier Editorial Board for the Journal of Power Sources 2007-2010 and the ST Microelectronics Company's Technology Council, 2007-2010. Don has been the Chairman Arizona Section of the Electrochemical Society (ECS) from 2001-present.

Research

Don's research interest centers on electrochemistry and synthesis. Don has made significant contributions in proton conduction, electro-catalysis including bio-mimetic catalysis, electro-synthesis and corrosion. Don made the first high temperature proton conducting membranes, and has continued interests involve advancing proton electrolyte membranes (PEMs), the principals of ion conduction and effect of electrolytes on the catalysis of electrochemical power generation in fuel cells. New interests have involved energy storage in NUCs (Nanowire Ultra Capacitors) which are novel dielectric super-capacitors, electrosynthesis of photovoltaics and advanced materials and designs for power sources systems.

Selected Publications

"Synthetic Models of Copper Proteins for BioFuel Cell Applications", Dominic Gervasio, Chapter in Nanotechnology for electronics, photonics, sensing and renewable energy applications, A. Korokin, P. Krstic, J. Wells, Editors, Springer, in press.

"Fuel Cells with Neat Proton-conducting Salt Electrolytes", Don Gervasio, chapter in Fuel Cell Science: Theory, Fundamentals and Bio-Catalysis, Wiley, NY, NY. Andrzej Wieckowski, Ed. (2010).

"The nature of surface oxides on corrosion-resistant nickel alloy covered by alkaline water", Jiaying Cai and D. F. Gervasio, *Nanoscale Res. Lett.* 5:613-619, (2010). DOI 10.1007/s11671-009-9521-5

"Polymer Electrolyte Membrane Fuel Cell (PEMFC) Gas Diffusion layers" (MS 225), D. Gervasio, in Encyclopedia of Electrochemical Power-sources, Elsevier, Zoe Kruze, Editor (2009).

"Fuel Cells: Direct Alcohol Fuel Cells and Direct Alcohol New materials" (MS247), D. Gervasio, in Encyclopedia of Electrochemical Power-sources, Elsevier Publishing Co., Zoe Kruze, Editor (2009).

"Approach to Developing a Multi-Disciplinary University Fuel Cell Program", D. F. Gervasio, in *Electrochemical Transactions*, 17, 685 (2009).

"Self Assembled Monolayer (SAM) of Metallomacrocycle as a Synthetic Cathode Catalyst for a Hybrid Bio-fuel-cell", Gervasio Dominic, Thomson Jeffery, *Electrochemical Transactions* 10.1149/1.3036211 (2008).

"A Fluorinated Ionic Liquid as a High-Performance Fuel Cell Electrolyte", Jeffery Thomson, Patrick Dunn, Lisa Holmes, Jean-Philippe Belieres, Charles A. Angell, and Dominic Gervasio, *ECS Trans.* 13 (28), 21 (2008).