



## ARISTOTLE MEDICAL FORUM



### PELAGIA-IRENE (PERENA) GOUMA

Dr. Pelagia-Irene (Perena) Gouma is currently the Edward Orton Jr., Chair in Ceramic Engineering at The Ohio State University. Her previous appointment was with the Institute of Predictive Performance Methodologies (IPPM) and with the MSE Department (tenured Full Professor) at the University of Texas-Arlington. Prior to that, she was a Professor at the State University of New York in Stony Brook for 16 years, and the Founder and Director of the Center for Nanomaterials and Sensor Development (CNSD).

### PROFESSOR GOUMA'S RESEARCH

My research activities involve the synthesis and characterization of nanomaterials for bio-/chemical sensors and biotechnology as well as the development of artificial olfaction systems (breath analyzers, electronic noses and tongues). I have established novel and highly successful programs about nanomedicine, with emphasis on the development of non-invasive breath and skin-based diagnostic tools. Other areas of my research include photocatalysts and sorbents for remediating water from fracking operations and self-supported photocatalytic blankets that float on water and produce energy from photochemical water splitting. I have been featured as an expert in nanomaterials, ceramics, sensors, and photocatalysts in numerous press releases (Science Nation, IOP, Science press, NPR, NBC news, Fox news, Fast Company, etc.). and have published over 140 peer-reviewed articles, 18 book chapters and editorials, and a monograph. I own 18 patents (both US and International) and am a member of the National Academy of Inventors. I was a Fulbright Scholar at UNICAMP in Brazil, and received the prestigious Richard M. Fulrath award of The American Ceramic Society. I was the sole Chair of the 2011 ISOEN Conference.