Eric L. Brosha is a staff member in the Materials Physics and Applications division at the Los Alamos National Laboratory. He received his BA (Summa Cum Laude) in physics from Rider College, Lawrenceville, NJ in 1989. He was awarded an Ashton Fellowship from the University of Pennsylvania, Philadelphia, PA, in 1989 and received his Ph.D. in Materials Science and Engineering in August 1993. Eric joined the Materials Synthesis and Integrated Devices group (MPA-11) in September 1993 as a postdoctoral researcher and worked on ion-conducting oxide thin film materials and devices. After being converted to staff member in 1996, Eric pursued novel electrochemical approaches for the recovery and separation of tritium in support of the Nation's fusion and weapons programs and expanded this work to include water electrolysis and hydrogen production applications using high-temperature proton-conducting ceramics. In 1999, his electrochemical sensor work was recognized with an R&D 100 award for the development of an advanced, robust sulfur resistance oxygen sensor for heavy boiler applications. Currently, his research interests include the development of electrochemical gas sensors and sensor systems engineering for vehicles and hydrogen safety applications. He has served as PI on projects focused on the development of NO_x, HC, and NH_3 electrochemical gas sensors for lean-burn engines and emissions systems and on a California-funded project to conduct field trials testing mixed-potential, zirconia based hydrogen safety sensors at commercial hydrogen fueling stations. This work was recently recognized by R&D Magazine as an R&D 100 Award Finalist in Fall of 2017. Eric is also presently engaged in the development and field-testing of an electrochemical, in-line H_2 fuel quality analyzer prototypes for the DOE. Additional areas of interest include the growth of thin film oxide and nitride materials using physical vapor deposition methods, synthesis of hydrogen fuel cell catalysts, materials chemistry and electrochemistry of high-temperature solid-oxide fuel cell electrolyte and electrode materials, X-ray diffraction, X-ray fluorescence spectroscopy and thermal analysis of materials.