

Veena Tikare, Ph.D.

Veena Tikare obtained her B.S. in Ceramic Engineering from Georgia Tech and M.S. and Ph.D. in Materials Science and Engineering from Case Western Reserve University. She is a computational materials scientist and is currently managing a multiscale materials modeling department at Sandia National Laboratories. She has conducted extensive research in developing and applying materials models to problems of microstructural evolution during fabrication and service of ceramics and metals for many structural, thermal, nuclear and electronic applications. This work includes models to simulate grain growth, second phase pinning effects, Ostwald ripening, sintering, recrystallization, solidification, ferroelectric domain reorientation and diffusion of pores and bubbles in crystalline materials with applied thermal gradients. It also includes extensive research in coupling multi-physics at the same length scale and bridging models across length- and time-scales. She has also developed and applied advanced materials models for simulation of nuclear fuel behavior during fabrication, in service during irradiation under normal and off-normal operational conditions, and during storage of spent fuel. She is active in several professional societies, served as an officer at the local level and organized several international symposia on materials modeling for ACerS, MRS, PMS and IMAPS. She has published over 60 articles in peer-reviewed journals, been a guest editor for one issue of the Journal of the American Ceramic Society, edited three proceedings for MRS, chaired an expert group of nuclear fuels modeling and editing a monograph on multi-scale modeling of materials for the OECD NEA and is a Fellow of the American Ceramic Society.