



## **Subhash C. Singhal**

**Battelle Fellow and Director, Fuel Cells  
Pacific Northwest National Laboratory (PNNL)**

### **Education:**

B.S., Physics, Chemistry, and Mathematics, Agra University  
B.E., Metallurgy, Indian Institute of Science  
Ph.D., Materials Science & Engineering, University of Pennsylvania  
M.B.A., University of Pittsburgh

### **Experience:**

Dr. Singhal joined the Energy Science and Technology Directorate at PNNL in April 2000 after having worked at Siemens Power Generation (formerly Westinghouse Electric Corporation) for over 29 years. At PNNL, Dr. Singhal provides senior technical, managerial, and commercialization leadership to the Laboratory's extensive fuel cell program. At Siemens Westinghouse, he conducted and/or managed major research, development, and demonstration programs in the field of advanced materials for various energy conversion systems including steam and gas turbines, coal gasification, and fuel cells. From 1984 to 2000, he was manager of Fuel Cell Technology there, and was responsible for the development of high temperature solid oxide fuel cells (SOFCs) for stationary power generation. In this role, he led an internationally recognized group in the SOFC technology and brought this technology from a few-watt laboratory curiosity to fully-integrated 200 kW size power generation systems. He has authored over 75 scientific publications, edited 13 books, received 13 patents, and given over 240 plenary, keynote and other invited presentations worldwide.

### **Professional Memberships/Recognition:**

Dr. Singhal is a member of the U.S. National Academy of Engineering, a Fellow of four professional societies (American Ceramic Society, The Electrochemical Society, ASM International, and American Association for the Advancement of Science (AAAS)); and a senior member of the Mineral, Metals & Materials Society (TMS). He served on the Electrochemical Society's Board of Directors during 1992-94, received its Outstanding Achievement Award in High Temperature Materials in 1994, and continues as the Chairman of its International Symposium on Solid Oxide Fuel Cells held biennially since 1989. He served as President of the International Society for Solid State Ionics during 2003-2005. He received the American Ceramic Society's Edward Orton Jr. Memorial Award in 2001; an Invited Professorship Award from the Japan Ministry of Science, Education and Culture in 2002; and the Christian Friedrich Schoenbein Gold Medal from the European Fuel Cell Forum in 2006. He serves on the Editorial Boards of the Elsevier's *Journal of Power Sources* and the *Fuel Cell Virtual Journal*, and is an Associate Editor of ASME's *Journal of Fuel Cell Science and Technology*. He has also served on many national and international advisory panels including those of the National Materials Advisory Board of the National Research Council, National Science Foundation, Materials Properties Council, U.S. Department of Energy, NATO Advanced Study Institutes and NATO Science for Peace Programs, United Nations Development Program (UNDP), United Nations Industrial Development Organization (UNIDO), International Energy Agency (IEA), and the European Commission.

Dr. Singhal is also an Adjunct Professor in the Department of Materials Science and Engineering at the University of Utah; and serves on the Visiting Advisory Board of the Department of Materials Science and Engineering at the University of Florida.