



Dr. **Piotr Zelenay**, Professor of Chemistry, received his Ph.D. and D.Sc. ("habilitation") degrees in chemistry from the University of Warsaw, Poland. He was a postdoctoral research fellow at Texas A&M University (1983-1986), a visiting professor at the University of Illinois Urbana-Champaign (1988, 1989, 1990-92), University of Alicante (1994), Colorado State University (1996-1997), and the University of Padua (2019). Dr. Zelenay was a faculty member in the Department of Chemistry, the University of Warsaw from 1983 to 1997 when he accepted research position at Los Alamos National Laboratory (LANL). He has been associated with Materials Physics and Applications Division at LANL for the past 28 years. He is currently a Los Alamos Laboratory Fellow and

Scientist 6 (one of ca. 15 at this highest-level R&D position in the laboratory employing nearly 17,000 workers), concentrating on fundamental and applied aspects of polymer electrolyte fuel cell (PEFC), hydrogen production science and technology, electrocatalysis and electrode kinetics. His research at Los Alamos has predominantly focused on electrocatalysis for oxygen reduction reaction (ORR) and methanol and dimethyl ether (DME) oxidation in PEFCs, hydrogen and oxygen evolution reactions in water electrolyzers, and electrochemical reduction of CO₂ to value-added products. Among Dr. Zelenay's many accomplishments in the area of fuel cell electrocatalysis, especially worth mentioning are (i) leading role in the development of non-precious metal ORR catalysts worldwide; (ii) the discovery of ruthenium crossover in the direct methanol fuel cell (DMFC; also found in other fuel cells operating with Ru-containing anodes, such as the reformat-air fuel cell); and (iii) advancement of the direct DME fuel cell performance to the level that now matches that of the state-of-the-art DMFC. Dr. Piotr Zelenay has over 220 research publications to his credit, many in renowned scientific journals, including *Nature*, *Nature Catalysis*, *Nature Reviews Materials*, *Science*, *Chemical Reviews*, *Accounts of Chemical Research*, *Angewandte Chemie*, *Energy & Environmental Science*, and *Advanced Materials*. He has co-authored over 500 presentations, including more than 220 invited, keynote, and plenary lectures. Dr. Zelenay's publications have been cited more than 34,000 times, with ca. 55 of his publications cited more than 100 times, including two with more than 4,000 citations (*Science*, 2011; *Chemical Reviews*, 2007), one with over 2,400 citations (*Nature*, 2006), and three more with over 1,000 citations. Dr. Zelenay has co-authored 27 patents and patent applications in polymer electrolyte fuel cells and related fields. Since joining Los Alamos Fuel Cell Program in 1997 he has successfully led numerous large projects totaling ca. \$100M in research funding and received numerous awards and recognitions. Among them, he was awarded, DOE Lifetime Achievement Award (2024) "in recognition of his outstanding contributions to the fields of electrocatalysis and electrochemistry", International Association for Green Energy (IAGE) Outstanding Researcher Award (2022) for "outstanding research and advancement of knowledge in fuel cells, electrochemical energy, and green energy systems"; Fellowship of the International Society of Electrochemistry (2021) for "excellent scientific record and outstanding contributions to electrochemical science"; DOE Hydrogen and Fuel Cells Program Fuel Cell R&D Awards "in recognition of outstanding contributions to fuel cell technologies" (in 2010 & 2020); R&D 100 Award (2017) for his electrocatalysis research; Los Alamos National Laboratory Fellowship "in recognition of sustained outstanding scientific contributions" (2016); National Professorship in Chemistry by the President of Poland (2015); Los Alamos National Laboratory Fellows Prize "for longstanding contributions to the understanding of non-precious metal electrocatalysts for fuel cells" (2015); Fellowship of the Electrochemical Society "for major contributions in the development of materials and concepts for polymer electrolyte fuel cells" (2014); and Research Award of the Electrochemical Society Energy Technology Division "for fundamental and applied advances in polymer electrolyte fuel cell science and technology, electrocatalysis, and electrode kinetics" (2013). Dr. Zelenay is a co-director of Electrocatalysis Consortium (ElectroCat, part the DOE-EERE Energy Materials Network), an active member of International Society of Electrochemistry, the Electrochemical Society, and Materials Research Society; he has been a member of the editorial boards for *Electrocatalysis*, and *ChemElectroChem*, the steering committee board member of the International Academy of Electrochemical Energy Science (IAOEEES), International Scientific Board member for Bar-Ilan University Center for Energy and Sustainability, the University of California Merced Nanomaterials Center for Energy and Sensing (MACES), and chairman of the technical advisory board of Pajarito Powder, LLC.