DESCRIPTION

This reference book addresses the evolution of materials for both oxygen and hydrogen transport membranes and offers strategies for their fabrication as well as their subsequent incorporation into catalytic membrane reactors. Other chapters deal with, e.g., engineering design and scale-up issues, strategies for preparation of supported thin-film membranes, or interfacial kinetic and mass transfer issues. A must for materials scientists, chemists, chemical engineers and electrochemists interested in advanced chemical processing.

ABOUT THE AUTHOR

Anthony F. Sammells received his BSc in chemistry from the University of London and his PhD from the University of California at Santa Barbara. He began his career at Crown Zellerbach in Oregon, prior to working in electrochemistry at Information Magnetics in Santa Barbara, before moving to Gould Laboratories in Minnesota, where he researched advanced battery systems. He then joined Rockwell International, California, to work on new energy systems, and, in 1977, joined the Institute of Gas Technology in Chicago, where he later became Assistant Director of Solar and Electrochemistry Research. Dr. Sammells founded Eltron Research Inc. in 1982 and served as its President until 2005. He has over 100 publications and 60 patents to his name.

Michael V. Mundschau studied chemistry at the University of Wisconsin-Milwaukee, gaining his PhD in catalysis and surface science. He continued his studies first on fundamentals of thin-film growth as a fellow at the Institute of Physics in Clausthal-Zellerfeld, Germany, and subsequently at the Fritz-Haber-Institute in Berlin on catalytic reactions and reaction-diffusion fronts.
Returning to the US, he took up a teaching post at Bowling Green State University, and also studied thin-film growth at the University of Illinois, Urbana-Champaign. His work at Eltron Research involves developing catalysts for oxygen and hydrogen transport membranes. Dr. Mundschau has written over 65 scientific papers, and presented his work at over 60 conferences and seminars worldwide.

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