In remembrance: Richard G. Hoagland

MRS Fellow

Dr. Richard (Dick) G. Hoagland passed away September 29, 2022, at the age of 81, in Santa Fe, NM. He is survived by his spouse Cheryl, a son, a daughter, and four grandchildren.

Dick received his education from Colorado School of Mines (BS, 1962), Washington State University (MS), and The Ohio State University (1973, advised by Professor John P. Hirth). During a distinguished career spanning nearly six decades, he worked as a staff scientist at Battelle Institute (Columbus, Ohio); a faculty member at Vanderbilt University, Washington State University, and The Ohio State University; and as a national lab scientist at Pacific Northwest National Laboratory and Los Alamos National Laboratory (LANL).

Dick Hoagland (left) receiving MRS Fellow award in 2013 from then MRS President Orlando Auciello.

Dr. Hoagland gained international recognition for his contributions to atomistic modeling and applications of the theory of dislocations to structural metallic materials. He was the first (~1970) to employ flexible boundary conditions (FLEX II) in atomistic models of defects, thereby enabling significant improvements in computational speed and accuracy. He also championed developments in atomistic modeling of fracture, hydrogen embrittlement, and toughening mechanisms in ceramics. At LANL, he was a principal leader in the atomistic modeling of dislocation-interface interactions in ultrahigh-strength, radiation-damage-tolerant metallic composites.

He was an inspirational mentor to a diverse group of scientists and was known for asking probing questions, explaining scientific concepts with clarity and humor, and forming lifelong friendships with scientific colleagues. In his spare time, he enjoyed fishing in the rivers and lakes of the wild west as well as astronomy, painting, and cooking.

Dr. Hoagland received numerous honors and awards and was the first LANL scientist to be honored with the rank of Fellow in all three materials science professional societies: (1) ASM International (ASM); (2) The Minerals, Metals and Materials Society (TMS); and (3) the Materials Research Society (MRS). The citation for MRS Fellow reads: "*For outstanding contributions in fracture mechanics and atomistic modeling of dislocation mechanisms of deformation and fracture of metals, ceramics and nanolayered composites.*"

Contributed by J.P. Hirth, A. Misra, and P.M. Anderson on behalf of Dick's colleagues in materials research.