

Biographical Information

Professor M.E. Glicksman
Materials Science & Engineering Department
University of Florida

Professional Preparation

- 1) Rensselaer Polytechnic Institute, Metallurgical Engineering, B.Met. E., 1957.
- 2) Rensselaer Polytechnic Institute, Physical Metallurgy, Ph.D., 1961.
- 3) Harvard University, Summer Solidification Program, Certificate, 1962.
- 4) NAS-NRC Postdoctoral Research Associate, Metal Physics, Naval Research Laboratory, Washington DC 1961-1963.

Professional Appointments

- 1) Research Metallurgist, Naval Research Laboratory, 1963-1975.
- 2) Professor and Chairman, Materials Science & Engineering Department, Rensselaer Polytechnic Institute, Troy, NY 1975-1986.
- 3) John Tod Horton Distinguished Professor of Materials Science and Engineering, Rensselaer Polytechnic Institute, 1986-2006.
- 4) Professor, Materials Science & Engineering Department, University of Florida, Gainesville, FL, 2006-present.

Professional Affiliations

Dr. Glicksman has co-authored over 300 technical papers and monographs and authored one book on diffusion in solids. He has held visiting professorships at various universities in the US, Germany, Spain, and Israel. Professor Glicksman is a Fellow of the Metallurgical Society (TMS), ASM International, AAAS, and the American Institute for Aeronautics and Astronautics (AIAA). He is a member of the American Physical Society (APS)

Professional Recognition

For his research accomplishments on the solidification of metals Professor Glicksman received the Stanley P. Rockwell medal, the Kent van Horn Award, ASM's Marcus Grossman Award, the TMS Bruce Chalmers Medal, ASM's International Gold Medal, and the Alexander von Humboldt Senior Research Prize for 2002. The execution of three space flight experiments (Isothermal Dendritic Growth Experiment) in 1994, 1996, and 1997 led to his receiving NASA's Award for Technical Excellence, and the National Space Processing Medal from the AIAA. In 1996 he was elected to the National Academy of Engineering. He served as the Director of Microgravity Science and Applications for the Universities Space Research Association (USRA), from 1989 to 2002, and has participated on numerous panels and boards for the U.S. government, the National Research Council (NRC), including the National Materials Advisory Board, the Space Studies Board, and the Solid-State Sciences Panel of the NRC. He also serves on academic advisory boards for several colleges and universities.

Recent Publications Relevant to the IGERT Program

M.E. Glicksman, “Analysis of 3-D network structures”, *Philosophical Magazine*, **85**, No. 1, 2005, 3–31.

M. E. Glicksman, P. R. Rios: “Microstructural characteristics of 3-D networks”, *Z. Metallkd.*, **96** (2005) 1099-1105.

Paulo R. Rios and Martin E. Glicksman, “Topological theory of abnormal grain growth”, *Acta Materialia*, **54** (2006) 5313-5321.

P.R. Rios and M.E. Glicksman, “Self-similar evolution of network structures,” *Acta Materialia*, **54** (2006) 1041-1051.

M.E. Glicksman and P.R. Rios, “Minimal network partition using average N-hedra”, *Philosophical Magazine*, **87** (2007) 189–208.

International Activities:

Professor Glicksman has maintained active collaborations with several professors of materials science and engineering in Brazil. He visits Brazil about once per year, giving student lectures and public seminars, and, in turn, invites return visits by his Brazilian counterparts. His major collaborators are Professor Paulo Rangel Rios, Head, Graduate Programs, Universidade Federal Fluminense, Escola de Engenharia Industrial Metalúrgica, Volta Redonda, Brazil, and Dean Fernando Rizzo, and Professor Ivani Bott, Departamento de Ciencia de Materials e Metalúrgia, Pontificia Universidade Catolica do Rio de Janeiro, Brazil. At least six papers in the archival literature have been published with his Brazilian collaborators during the past four years, indication productive cooperation between principals. In addition, Professor Glicksman maintains cooperation with Professor-Dr. Guenter Gottstein, Head, Institut fuer Metallkunde und Metallphysik, Aachen, Germany, and with Professor Lasar Shvindlerman, having spent a total of one year at that institute during 2002 and 2003 as an Alexander von Humboldt Senior Research Prizewinner. Professor Glicksman also maintains active interactions with Professor Markus Rettenmayr, Friedrich Schiller Universitaet, Jena, Germany, and with Professor Peter Streitenberger, at the Otto von Guericke Universitaet, Magdeburg, Germany.

Outreach activities

Professor Glicksman helped organized “Space Week” in April 1999 at Rensselaer Polytechnic Institute (RPI), Troy, New York, where several thousand people participated in a major regional celebration of space science and technology. In 1994, 1996, and 1997 Professor Glicksman assembled student teams to run three primary spaceflight experiments for NASA as part of the United States Microgravity Payload Mission. This was the first instance of student-run space flight experiments aboard the space shuttle *Columbia*. Over 1500 people visited his laboratory during these missions representing teachers and students area schools as well as the general public. Numerous TV, radio, and print media interviews were provided by him to inform the public-at-large of the major investment made by the US Government in his space flight research at RPI.