

RESUME

David B. Marshall

Education

1975 Ph.D. Physics, Monash University, Australia
1971 BSc (Hons. I) Physics, Monash University, Australia

Research and Teaching Positions

2016 – present: Research Professor, Department of Mechanical Engineering, University of Colorado, Boulder
2000 - 2016: Principal Scientist and Senior Fellow, Teledyne Scientific (formerly Rockwell International Science Center), Thousand Oaks, CA.
1983 - 2000 Group Leader/Manager, Rockwell International Science Center, Thousand Oaks, CA.
1988 – present Adjunct Professor at the University of California at Santa Barbara.
1991 Professor, Department of Materials Science and Engineering, University of California, Los Angeles
(Winter Quarter)
1979 - 1983: Associate Research Engineer , Department of Materials Science and Mineral Engineering, University of California, Berkeley.
1975 - 1979: Research Fellow, Department of Applied Physics, University of New South Wales, Australia.
1971 - 1975: Teaching Assistant, Physics Department, Monash University, Australia

Research Interests

Current interests include oxide materials for battery applications and development of textile-based ceramic composite materials for use in power generation, aerospace propulsion systems, hypersonic flight, and thermal protection. Activities in the latter area include system performance analysis, composite microstructure design and processing, development of new material systems (oxide composites) for oxidation resistance, and advanced thermal, mechanical and environmental testing and modeling.

Other research topics have included fracture phenomena, strengthening, toughening, environmental stability and reliability of advanced structural materials, with emphasis on ceramic and intermetallic matrix composites, ultra hard materials (cBN), transformation-toughened materials and monolithic ceramics.

Awards

2012 Mueller Award, the American Ceramic Society
2011 Distinguished Life Member, the American Ceramic Society

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| 2008 | Teledyne Scientific & Imaging Technologist of the Year |
| 2007 | Elected to National Academy of Engineering |
| 2004 | Elected to World Academy of Ceramics |
| 1998 | Sosman Award, The American Ceramic Society |
| 1996 | John Jeppson Award, The American Ceramic Society |
| 1991 | Fulrath Award, The American Ceramic Society (for "contributions to science of ceramics") |
| 1990 | Fellow of the American Ceramic Society |
| 1989 | Ross Coffin Purdy Award, The American Ceramic Society (for "the outstanding contribution to the ceramics literature in 1987, paper No.85 of publication list) |
| 1987 | "Materials Engineering Distinguished Lecturer," UCSB |
| 1985 & 1986 | Rockwell Independent R&D award |
| 1999 | "Shell Distinguished Lecturer," Northwestern University |

Publication record

Author or coauthor of more than 210 research publications and 18 patents

Named in the ISI list of most highly cited researchers in materials science for the period 1981 to 1999: <http://isihighlycited.com/> (ranked 7th in field for this period <http://www.physics.dal.ca/~dahn/Achievements.html>)

Total citations >20,000; H factor: 61 (Google scholar)

American Ceramic Society selection of 11 best papers written by ACS members in 110 year history of the society: Paper No. 31 on attached publication list was one of the papers selected (received largest numbers of nominations and citations). Results published in Am. Ceram. Soc. Bull. 87[11] 27(2008).

Citation survey by American Ceramic Society (1992): Co-author of 2 out of the 10 most cited papers published in the 75 year history of the Journal of the American Ceramic Society (Papers No. 31 & 33 on attached publication list). Results published in J. Am. Ceram. Soc. 75[3] 489-491(1992)

Citation survey by Science watch (1993): Co-author of 2 out of the 20 most cited papers published since 1988 by Defense and aerospace contractors (Papers No 90 & 103 on attached publication list (Science Watch, Vol.4, No.1, 1993)

Citation survey by Science watch (1995): Ranked 7th most highly cited author in Materials Science field for the period 1990 - 1994 (Science Watch, pp 1-8, October 1995)

Service to Profession

Editor, Journal of the American Ceramic Society, 1994 - 1999

Editorial chairman of the Journal of the American Ceramic Society 1987-1988

Associate editor of the Journal of the American Ceramic Society 1984 – 1994, 1999-present

Regular reviewer of papers for: J. Applied Physics, Acta Metall, J. Composites, Mech. Mater., J. Amer.Ceram.Soc., J. Adhesion, J. Applied Mech., J. Mat. Res. Soc.

Regular reviewer of research proposals for DOE and NSF

Program Chairman, Basic Science Division, American Ceramic Society, 1993

Program Chairman for Symposium on Ceramic Composites at 1st International Ceramic Science and Technology Congress sponsored by the American Ceramic Society 1989

Chairman of the 1988 Gordon Conference on Ceramics.

Served on external review panel for DOE Laboratory - Lawrence Berkeley Laboratory (2002)

Served on Advisory Board of NIH "UMDNJ Machinable Dental Ceramics" grant, 1995 to 1999

Served on external review panel for DOE Laboratory – Oak Ridge National Laboratory (1999)

Served on external review panel for DOE Laboratory - Lawrence Berkeley Laboratory (1997)

Served on external review panel for Wright Patterson Air Force Base Materials Laboratory (1993)

Served on external review panel for DOE Laboratory - AMES Iowa (1987)

Served as member of the National Research Council Committee on recommendations for US Army Basic Scientific Research (1986-1988)