



The Combustion Institute

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Hope Michelsen

2022 Candidate Profile: The Combustion Institute Board of Directors

Reasons for Nomination

Combustion plays a central role in our rapidly changing world, and combustion science is critical to addressing many of the challenges we face now and will face in the future. I would like to help our community of scientists and engineers evolve the field of combustion research to prepare for the looming energy and environmental challenges of tomorrow. As a board member of the Combustion Institute, I would like to explore more ways to leverage the creativity and enthusiasm of our junior members, combined with the knowledge and experience of our senior members, to tackle problems such as those related to energy security and climate change. With active global participation in the Combustion Institute comes a rich diversity of experiences and perspectives; exploiting the associated diversity of ideas and expertise requires a strong commitment to collaboration. I would like to find ways to facilitate communication and collaboration across our community. My expertise spans multiple fields, including soot chemistry and diagnostics, surface science, atmospheric chemistry and transport, and greenhouse gas source attribution. There are ways in which the experience of CI membership can benefit scientists in other fields, and I would like to explore means to increase communication between scientific communities.



See the next page for the candidate's curriculum vitae.

Hope A. Michelsen

Paul M. Rady Department of Mechanical Engineering and Environmental Engineering Program
University of Colorado Boulder

Education

Stanford University Ph.D. major in Chemistry and minor in Physics 1/7/93
Dartmouth College A.B. with High Honors in Chemistry 6/10/84

Work experience

University of Colorado Boulder Program faculty, Environmental Engineering 7/20 - present
University of Colorado Boulder Associate professor, Mechanical Engineering 8/19 - present
Sandia National Laboratories Technical staff, Combustion Research Facility 7/99 - 8/19
Atmospheric and Environmental Research, Inc. Staff scientist 12/97 - 6/99
Harvard University Postdoctoral research fellow/research associate 2/93 - 10/97
Stanford University and *IBM Almaden Research Center* Graduate research assistant 6/85 - 1/93

Awards and recognition

Fellow of the American Physical Society (APS) 9/19 - present
Fellow of Optica, formerly The Optical Society (OSA) 9/17 - present
Full member of Sigma Xi 12/19 - present
Distinguished Paper Award, Soot, Nanomaterials, and Large Molecules (Combustion Institute) 4/21
University of Colorado Boulder Research Impact Fellow 1/20 - 10/20
Adams Award (Combustion Research Facility, Sandia National Labs) 11/18
Awardee, Outstanding Women at Sandia National Laboratories 2/14
Inductee, Alameda County Women's Hall of Fame 1/13
Sandia National Laboratories Employee Recognition Award 6/11
Award for Excellence in Reviewing (American Geophysical Union) 12/03
NASA Group Achievement Awards: POLARIS (ASHOE/MAESA) (ER-2 missions) 9/97 (11/94)
Postdoctoral Research Fellowship in Chemistry (National Science Foundation) 2/93 - 3/95
Nellie Yeoh Whetten Award (American Vacuum Society) 11/92
Student Award (American Vacuum Society) 11/92
Global Change Distinguished Postdoctoral Fellowship (Dept. of Energy) - declined 6/92
Chandler T. White 1916 Research Prize (Dartmouth College) 5/84

Papers or book chapters published, in press, or under review for publication

Combustion sci. 51; Atmospheric sci. 56; Surface sci. 20; Total: 127; *h*-index: Google scholar 52

Service to the scientific community

Organizing Committee, International Sooting Flame Workshop 3/22 - present
Elected Member of the Advanced Light Source Users' Executive Committee 11/19 - present
Advanced Light Source (ALS) Proposal Study Panel (LBNL, Dept. of Energy) 6/19 - present
Gold Medal Nominating Committee, Combustion Institute 10/19 - present
Tsuji Award Committee, Combustion Institute 9/18 - present
Associate Editor, Proceedings of the Combustion Institute 1/18 - present
Linac Coherent Light Source (LCLS) Peer Review Panel (SLAC, Dept. of Energy) 5/17 - present
Science Advisory Board, International Sooting Flame Workshop 2/17 - 3/22
Advisory Committee, International Workshop on Laser-Induced Incandescence 9/05 - present
Co-organizer of the Advanced Light Source (ALS) Annual User Meeting 8/20, 8/21, 8/22
Guest Editor, Combustion and Flame Special Issue on Particle Formation 6/21 - 6/22
Member of National Academies Consensus Study Committee 2/21 - 11/21
Member of Nominating Committee of the APS Group on the Physics of Climate 10/20 - 2/21
Program Advisory Committee, 38th International Symposium on Combustion 9/18 - 3/20
Chair (Co-chair) Colloquium on Soot, 37th (36th) International Symposium on Combustion 8/18 (8/16)
Chair (Vice chair) Gordon Research Conference on Laser Diagnostics in Combustion 8/17 (8/15)
Host, 7th International Workshop on Laser-Induced Incandescence of Soot 6/16
Topical editor, Applied Optics (The Optical Society, now Optica) 5/02 - 11/05
SPARC international water vapor assessment panel 3/99 - 3/00
NASA satellite science teams: SAGE II/III, TOMS, ATMOS 1/96 - 3/01, 1/98 - 10/01, 3/94 - end