



The Combustion Institute

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Angela Violi

2022 Candidate Profile: The Combustion Institute Board of Directors

Reasons for Nomination

My main motivation is to serve our international community offering time, ideas and persistence. Since 1996, I have experienced the CI environment, the climate, the opportunities and the challenges of a young researcher and the influence that the CI community has had on my professional development. I bring the experience of a woman who has lived the academic life in two very different worlds, studying in Italy and becoming a Faculty in US.

I hope to contribute to the mission of the CI in various ways, participating in committees, and discussing opportunities to augment the engagement of researchers with the combustion community. At the CI, we should seek not only to reflect society, but also to serve as a model of how bringing people from a range of backgrounds together to do important work can make a vital difference. I would be interested in implementing recognitions and awards for mid-career researchers, as well as to discuss different possibilities for the organization of the Combustion Symposium and its review process.



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

BIOGRAPHICAL SKETCHES

ANGELA VIOLI

A. Professional Preparation

University of Naples “Federico II”	Chemical Engineering	B.S., 1994, <i>Cum laude</i>
University of Naples “Federico II”	Chemical Engineering	Ph.D., 1999
University of Utah	Chemical Engineering	Postdoctoral, 2001

B. Appointments

- Professor, Mechanical Engineering, Chemical Engineering, Biophysics Program, University of Michigan, 9/1/2015-present
- Associate Professor, Mechanical Engineering, Chemical Engineering, Biomedical Engineering, Macromolecular Science and Engineering, Biophysics, University of Michigan, 9/1/2009-8/31/2015
- Assistant Professor, Mechanical Engineering, Chemical Engineering and Biomedical Engineering, University of Michigan, 1/1/2006-9/1/2009
- Research Assistant Professor, Dept. of Chemistry University of Utah, 7/2004-12/2005
- Research Associate, Dept. of Chemical Engineering University of Utah, 1/2002-12/2005
- Postdoctoral Research Assistant, Dept. of Chemical Engineering, University of Utah, 9/1999-12/2001

C. Products

(i) Five products out of more than 100 publications

1. M. Baranwal, A. Magner, P. Elvati, J.C. Saldinger, A. Violi, A.O. Hero “A deep learning architecture for metabolic pathway prediction” *Bioinformatics*. 2020 Apr 15;36(8):2547-2553. PubMed PMID: 31879763.
2. K. O. Johansson, T. Dillstrom, M. F. Campbell, P. E. Schrader, D. M. Popolan-Vaida, N. K. Richards-Henderson, K. R. Wilson, A. Violi, H. A. Michelsen “Formation and emission of large furans and other oxygenated hydrocarbons from flames” *PNAS*, 2016, 113 (30) 8374-8379;
3. N. Suzuki, Y. Wang, P. Elvati, Z-B Qu, K. Kim, S. Jiang, E. Baumeister, J. Lee, B. Yeom, J H Bahng, J. Lee, A. Violi and N. A. Kotov, “Chiral Graphene Quantum Dots”, *ACS Nano*, 2016, 10, 1744–1755; DOI: 10.1021/acsnano.5b06369.
4. P. Elvati, E. Baumeister, A. Violi “Graphene quantum dots: effect of size, composition and curvature on their assembly” *RSC Advances*. 2017; 7(29):17704-17710.
5. J.Y. Lai, P. Elvati, A. Violi, “Stochastic Atomistic Simulation of Polycyclic Aromatic Hydrocarbon Growth in Combustion”, *Phys. Chem. Chem. Phys.*, 16 (17), 7969 – 7979 (2014).

D. Selected Synergistic Activities

1. Undergraduate projects directed, including minorities and female students: 33.
2. Director BlueSky Interdisciplinary Research project for the University of Michigan January 2019- present.
3. Developed educational modules for STEM since 2019 – collaboration with Center for Engineering Diversity and Outreach, the Center for Education Design, Evaluation and Research and Engineering at the University of Michigan. Modules have been tested and launched in various communities.