

MICHAEL TRENARY

Curriculum Vitae

Address: Department of Chemistry, 845 W. Taylor Street, University of Illinois at Chicago, Chicago, IL 60607

Education:

1978-1982: Massachusetts Institute of Technology. PhD in Physical Chemistry, 1982. Thesis title: "An Angle-Resolved Photoemission Study of CO on the Pt(111) and Pt(321) Surfaces" Thesis Advisor: Dr. F. Read McFeely

1974-1978: University of California, Berkeley. BS in Chemistry, with honors, 1978.

Professional Experience:

May 12 to June 21, 2010, Japanese Society for the Promotion of Science Fellowship
January-June, 2004, Eminent Visiting Scientist, Institute for Physical and Chemical Research, Wako-shi, Japan

September-December 1998, Guest Professor, Tohoku University, Sendai, Japan

August 1994-August 1995, Visiting Scholar, Waseda University, Tokyo, Japan

1992-Present: Professor, University of Illinois at Chicago

1989-1992: Associate Professor, University of Illinois at Chicago

1984-1988: Assistant Professor, University of Illinois at Chicago

1982-84: Postdoctoral research with Prof John T. Yates, Jr., University of Pittsburgh. Research on the vibrational properties of molecules chemisorbed on metal surfaces using the technique of infrared reflection absorption spectroscopy.

1978-82: Research assistant in the group of Dr. F. Read McFeely, Dep. of Chemistry, MIT. Research on the geometric and electronic structures of chemisorbed molecules.

1976-78: Undergraduate research with Prof. H. F. Schaefer III, using *ab initio* calculations to study small molecular complexes.

Professional Organizations:

American Chemical Society, member since 1981

American Vacuum Society, member since 1982

Materials Research Society, member since 1996

Awards and Honors:

Dreyfus Teacher-Scholar Award, 1989

University of Illinois, University Scholar Award, 1990

Fellow of the American Vacuum Society, elected 2002

Teaching Recognition Award, University of Illinois at Chicago, 2008

Fellow of the American Association for the Advancement of Science, elected 2009

Fellow of the American Chemical Society, elected 2011

Recent Publications

Hyun Jin Yang, Michael Trenary, Maki Kawai and Yousoo Kim, "Single-Molecule Dynamics in the Presence of Strong Intermolecular Interactions", *Journal of Physical Chemistry Letters*, 7, 4369-4373 (2016) November. DOI: 10.1021/acs.jplett.6b02053

Joel D. Krooswyk, Christopher M. Kruppe, and Michael Trenary, "In-Situ Spectroscopic Monitoring of the Ambient Pressure Hydrogenation of C₂ to Ethane on Pt(111)", *Surf. Sci.* 652, 142-147 (2016). DOI: 10.1016/j.susc.2015.12.034

Hyo Won Kim, Seiji Takemoto, Emi Minamitani, Tomonari Okada, Takeshi Takami, Kenta Motobayashi, Michael Trenary, Maki Kawai, Nobuhiko Kobayashi, Yousoo Kim, "Electron Confinement in Graphene Nanoislands with Free-electron-like Energy Dispersion", *J. Phys. Chem. C* 120, 345-349 (2016). DOI: 10.1021/acs.jpcc.5b10040

Yuan Ren, Iradwikanari Waluyo, Evan Beale, Michael Trenary, "Hydrogenation and Dehydrogenation Reactions of C₂H_x Moieties on the Ru(001) Surface", *Surf. Sci.* 650, 144-148 (2016). DOI: 10.1016/j.susc.2015.11.006

Esin Soy, Zhu Liang, Michael Trenary, "Fabrication of Pt and Rh Nanoclusters on a Graphene Moiré Pattern on Cu(111)", *J. Phys. Chem. C* 119, 24796-24803 (2015). DOI: [10.1021/acs.jpcc.5b06472](https://doi.org/10.1021/acs.jpcc.5b06472).

Zhu Liang, Hyun Jin Yang, Junepyo Oh, Jaehoon Jung, Yousoo Kim, Michael Trenary, "Atomic-Scale Dynamics of Surface Catalyzed Hydrogenation/Dehydrogenation: NH on Pt(111)", *ACS Nano*, 9, 8303 (2015). DOI: 10.1021/acsnano.5b02774. August

Joel D. Krooswyk, Iradwikanari Waluyo, Michael Trenary, "Spectroscopic Identification of Surface Species during Hydrogenation of Acetylene at Ambient Pressure on Pt(111)", *ACS Catalysis*, 5, 4725-4733 (2015). DOI: 10.1021/acscatal.5b00942

Yuan Ren, Iradwikanari Waluyo, Jun Yin, and Michael Trenary, "Spectroscopic Characterization of C₂H_x Intermediates from the Dissociation of Vinyl Iodide on Pt(111)", *Surf. Sci.* 637-638, 29-34 (2015). July. DOI: 10.1016/j.susc.2015.02.013.

Xiaofeng Hu, Jun Yin, Randall J. Meyer, and Michael Trenary, "Kinetics of Aminocarbyne Formation on Pt(111)", *J Phys Chem C*, 119, 14506-14512 (2015). DOI: 10.1021/jp507026k

Kedar Manandhar, Weronika Walkosz, Yuan Ren, Shigeki Otani, Peter Zapol and Michael Trenary, "Structure and reactivity of molecularly adsorbed ammonia on the ZrB₂(0001) surface", *J Phys Chem C*, 118, 29260-29269 (2014). DOI:10.1021/jp505406r