

Biographical Sketch: Mark Alan Young, Associate Professor of Chemistry

I. Professional Preparation:

Postdoc., (Physical Chemistry, Kinetics) University of California Berkeley, 1990
Postdoc., (Physical Chemistry, Laser Spectroscopy) Colorado State University, 1989
Ph.D., (Physical Chemistry) University of California, Berkeley, 1988
A.B., (Chemistry) Princeton University, 1979

II. Professional Appointments:

Associate Professor of Chemistry, University of Iowa; 1997-Present
Visiting Professor, Department of Chemistry and Biochemistry, University of Colorado, Boulder; 1998
Assistant Professor of Chemistry, University of Iowa; 1990-1997

III. Selected Ten Highest Impact Publications (55 total):

1. Preszler Prince, A.; Grassian, V.H.; Kleiber, P.D.; Young, M.A. Heterogeneous Conversion of Calcite Aerosol by Nitric Acid. *Physical Chemistry Chemical Physics* **2006**, 5, 622-634.
2. Hudson, P.K.; Gibson, E.R.; Young, M.A.; Kleiber, P.D.; Grassian, V.H. A Newly Designed and Constructed Instrument for Coupled Infrared Extinction and Size Distribution Measurements of Aerosols. *Aerosol Science and Technology* **2007**, 41, 701-710.
3. Curtis, D.B.; Aycibin, M.; Young, M.A.; Grassian, V.H.; Kleiber, P.D. Simultaneous Measurement of Light Scattering Properties and Particle Size Distribution for Aerosols: Application to Ammonium Sulfate and Quartz Aerosol Particles. *Atmospheric Environment* **2007**, 41, 4748-4758.
4. Hudson, P.K.; Young, M.A., Kleiber, P.D.; Grassian, V.H. Coupled Infrared Extinction And Size Distribution Measurements of Several Non-Clay Components of Mineral Dust Aerosol (Quartz, Calcite, and Dolomite). *Atmospheric Environment* **2008**, 42, 5991-5999.
5. Cwierthny, D.M.; Young, M.A.; Grassian, V.H. Heterogeneous Chemistry and Photochemistry of Mineral Dust Aerosol. *Annual Reviews of Physical Chemistry* **2008**, 59, 27-51.
6. Navea, N.G.; Stanier, C.O., Young, M.A.; Grassian, V.H. Heterogeneous Uptake of Octamethylcyclotetrasiloxane (D₄) and Decamethylcyclopentasiloxane (D₅) onto Mineral Dust Aerosol Under Variable RH Conditions. *Atmospheric Environment* **2009** 43, 4060-4069.
7. Kleiber, P.D.; Grassian, V.H.; Young, M.A.; Hudson, P.K. T-Matrix Studies of Aerosol Particle Shape Effects on IR Resonance Spectral Line Profiles and Comparison with an Experiment. *Journal of Geophysical Research* **2009**, 114, doi:10.1029/2009jd012710.
8. Meland, B.; Kleiber, P.D.; Grassian, V.H.; Young, M.A. Correlated IR Spectroscopy and Visible Light Scattering Measurements of Mineral Dust Aerosol. *Journal of Geophysical Research* **2010**, 115, doi:10.1029/2010JD014389.
9. Hudson, P.K.; Young, M.A., Kleiber, P.D.; Grassian, "V.H. Infrared Extinction and Size Distribution Measurements of Mineral Dust Aerosol" a book chapter in *Fundamentals and Applications of Aerosol Spectroscopy*, Eds. J.P. Reid and R. Signorell **2010** CRC Press.
10. Chen, H.; Stanier, C.O.; Young, M.A.; Grassian, V.H. A Kinetic Study of Ozone Decomposition on Illuminated Oxide Surfaces. *Journal of Physical Chemistry A* **2011**, 115, 11979-11987.

IV. Synergistic Activities:

1. Developed an interdisciplinary course in environmental and atmospheric chemistry.
2. Member of the multidisciplinary Optical Science and Technology Center (OSTC), Center for Global and Regional Environmental Research (CGRER), and Nanoscience and Nanotechnology Institute at University of Iowa (NNI@UI).
3. PI on multi-user proposals to acquire mass spectrometry and laser instrumentation for environmental/atmospheric research.

V. Engagement:

1. Service on NIH study sections
 - a. NIH Challenge Grant Review Panel (June, 2009)

2. Service on NSF panels
 - a. NSF-MRI Panel Review (Oct. 15 -16, 2009; July 14-15, 2010)
3. Symposium organizer
 - a. Symposium organizer, Midwest Regional American Chemical Society Meeting, Iowa City (October 21-24, 2009)
4. List of journals and agencies that you review for
 - a. Referee:
 - i. Environmental Technology,
 - ii. Journal of Physical Chemistry,
 - iii. Journal of Colloid and Interfacial Science,
 - iv. Journal of the American Industrial Hygiene Society,
 - v. Journal of the American Chemical Society,
 - vi. Journal of Mass Spectrometry and Ion Processes,
 - vii. Physical Chemistry Chemical Physics,
 - viii. Atmospheric Environment,
 - ix. Chemical Communications,
 - x. Journal of Environmental Monitoring
 - b. Reviewer:
 - i. Research Corporation,
 - ii. National Science Foundation,
 - iii. Cooperative Grants Program of the U.S. Civilian Research and Development Foundation (CRDF),
 - iv. American Chemical Society,
 - v. Natural Environment Research Council (UK),
 - vi. NIH