

Andrew L. Cooksy

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a. Professional Preparation:

Harvard College	chemistry and physics	B.A. 1984
University of California, Berkeley	chemistry	Ph.D. 1990
Harvard-Smithsonian Center for Astrophysics	molecular astrophysics	1990–1993
Department of Chemistry, Harvard University	mm-wave spectroscopy	1990–1993

b. Appointments:

- **2005–2006:** Visiting scientist, University of Oxford.
- **2002–** : Associate Director, Computational Sciences Research Center, SDSU.
- **2001–** : Associate Professor, Department of Chemistry, SDSU.
- **1999–2001:** Assistant Professor, Department of Chemistry, SDSU.
- **1999** : Associate Professor, Department of Chemistry, University of Mississippi.
- **1993–1999** : Assistant Professor, Department of Chemistry, U. Miss.

c. Publications: Related:

- (1) D. Xu, J. Stare, and A. L. Cooksy, “Solving the Vibrational Schrödinger Equation on an Arbitrary Multidimensional Potential Energy Surface by the Finite Element Method,” *Comput. Phys. Commun.* (in press), 2009
- (2) D. B. Grotjahn, E. J. Kragulj, C. D. Zeinalipour-Yazdi, V. Miranda-Soto, D. A. Lev, and A. L. Cooksy, “Finding the Proton in a Key Intermediate of anti-Markovnikov Alkyne Hydration by a Bifunctional Catalyst,” *J. Am. Chem. Soc.* **130**, 10860–10861 (2008)
- (3) D. B. Grotjahn, V. Miranda-Soto, E. J. Kragulj, D. A. Lev, G. Erdogan, X. Zeng, and A. L. Cooksy, “Hydrogen Bond Acceptance of Bifunctional Ligands in an Alkyne-Metal π Complex,” *J. Am. Chem. Soc.* **130**, 20–21 (2008)
- (4) D. Xu and A. L. Cooksy, “Ab Initio Study of the Torsional Motion in Tolane,” *J. Molec. Struct. (THEOCHEM)* **815**, 119–125 (2007)
- (5) M. G. Moreno-Armenta and A. L. Cooksy, “Ab Initio Study of the Cyclooctatetraenyl Radical,” *J. Phys. Chem. A* **109**, 3391–3395 (2005)

Additional:

- (1) C. D. Zeinalipour-Yazdi, A. L. Cooksy, and A. M. Efstathiou, “CO Adsorption on Transition Metal Clusters: Trends from Density Functional Theory,” *Surf. Sci.* **602**, 1858–1862 (2008)

- (2) A. M. E. Constantinos D. Zeinalipour-Yazdi, Andrew L. Cooksy, "A Diffuse Reflectance Infrared Fourier-Transform Spectra and Density Functional Theory Study of CO Adsorption on Rh/ γ -Al₂O₃," *J. Phys. Chem. C* **111**, 13872–13878 (2007)
- (3) D. B. Grotjahn, X. Zeng, A. L. Cooksy, W. S. Kassel, A. G. DiPasquale, L. N. Zakharov, and A. L. Rheingold, "Experimental and Computational Study of the Transformation of Terminal Alkynes to Vinylidene Ligands on trans-(Chloro)bis-(phosphine)Rh Fragments and Effects of Phosphine Substituents," *Organomet.* **26**, 3385–3402 (2007)
- (4) D. A. Gillett, A. L. Cooksy, and J. M. Brown, "Infrared Laser Magnetic Resonance Spectroscopy of the ν_3 Fundamental and Associated Hot Bands of the NCO Free Radical," *J. Molec. Spectrosc.* **239**, 190–200 (2006)
- (5) R. Lui and A. L. Cooksy, "Computational Study of Aqueous Reactions in Tocopherol Regeneration," *J. Chem. Theor. Comput.* **2**, 1395–1402 (2006)

d. Synergistic Activities:

- (1) 2009 Cyberbridge Institute Faculty mentor, assisting high school teacher teams to develop interdisciplinary lesson plans centered on scientific research topics.
- (2) Development of an innovative, intuition-based physical chemistry course for undergraduates, with accompanying textbook to be published by Prentice-Hall.
- (3) Member, Organizing Committee for the 29th International Free Radicals Symposium; Big Sky, Montana; August 2007.
- (4) Sponsor of physical chemistry and computational chemistry lab demos for visiting high school and community college field trips, college open houses.
- (5) Graduate physical chemistry lecturer at the Instituto Tecnológico de Tijuana.

e. Collaborators and Affiliations:

Collaborators last 48 months

John M. Brown (Oxford)
 Gerardo Aguirre (Tecnológico Tijuana)
 C. A. Gottlieb (Center for Astrophysics)
 D. B. Grotjahn (SDSU)
 M. C. McCarthy (Center for Astrophysics)
 S. E. Novick (Wesleyan College)
 Mike Jackson (Central Wash. U.)
 M. B. Bergdahl (SDSU)

Peter Kovacic (SDSU)
 David Gillett (Oxford)
 Jesus Flores (UNAM, Mexico)
Students advised last 5 years
 Peter Zajac (PhD SDSU)
 C. Hinton (U. Utah)
 R. Wong (Hewlett-Packard)
 D. Xu (UCSD)
 R. Lui (Citicorp)

Totals: 5 graduate students; 0 postdocs.

Advisors R. J. Saykally (U. C. Berkeley Department of Chemistry); P. Thaddeus (Harvard-Smithsonian Center for Astrophysics); W. Klemperer (Harvard University Department of Chemistry).