

# Alfredo Quinto Hernández

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Department of Chemistry and Biochemistry  
University of California, Santa Barbara  
Santa Barbara, California, 93106-9510, USA

Email: [aquinto@chem.ucsb.edu](mailto:aquinto@chem.ucsb.edu)  
Wodtke Lab Phone: (805) 893 5035  
Fax: (805) 893 4120

## Degrees and Honors

- 2005- **Ph. D. in Physical Chemistry**, University of California, Santa Barbara  
CONACYT - UCMEXUS Fellow.
- 2004 **B. A. in Philosophy**, School of Philosophy and Letters, Universidad Nacional Autónoma de México.
- 2001 **José María Morelos y Pavón Prize** in Scientific Research and Education, presented by the Governor of the State of Morelos, México.
- 2001 **Master of Science in Chemistry**, School of Chemistry, Universidad Nacional Autónoma de México.
- 1999 **National Youth Prize in Academic Activities**, presented by the President of México.
- 1998 **Academic Excellence Award** - Best engineer graduated, presented by the National Association of Faculties and Schools of Engineering-México.
- 1998 **B.Sc. in Chemical Engineering**, Graduated with Honors, Instituto Tecnológico de Zacatepec, Morelos, México.
- 1997 **Medal to the Academic Merit**, Instituto Tecnológico de Zacatepec.
- 1997 **Best Grade Point Average**, Chemical Engineering Program, Instituto Tecnológico de Zacatepec.
- 1995-1997  
Several **First, Second and Third Places** in Mathematics, Physics and Chemistry contests in the National Competitions of Basic Sciences of the Institutes of Technology (DGIT-México).

## Appointments and Teaching Experience

- 2006 to present Research Assistant with Alec M. Wodtke, U. C. Santa Barbara.
- 2005-2006 Teaching Assistant in Physical and General Chemistry, Chemistry and Biochemistry Department, U. C. Santa Barbara.
- 2003-2005 Head of the Chemical and Biochemical Engineering Department Instituto Tecnológico de Zacatepec, Morelos, México.
- 2001 Lecturer in Inorganic Chemistry, Monterrey Institute of Technology and Higher Education-ITESM, Campus Mexico City.
- 1999-2000 Research Assistant, Materials Research Institute, Universidad Nacional Autónoma de México.

1998 – 2005      Lecturer–Department of Chemical and Biochemical Engineering.  
Several lectures in Physical, Organic and Analytical Chemistry,  
Mathematics, Programming and Transport Phenomena.

### Research Publications

1. *Observation of photochemical C-N bond cleavage in CH<sub>3</sub>N<sub>3</sub>, a new photochemical route to cyclic-N<sub>3</sub>*, C. Larson, Y. Ji, P. C. Samartzis, A. Quinto-Hernandez, J.J.-Min Lin, T. T. Ching, C. Chaudhuri, S. H. Lee and A. M. Wodtke (in press).
2. *Dissociative photoionization of CIN<sub>3</sub> using high-resolution synchrotron radiation: The N-Cl bond energy in CIN<sub>3</sub>*, A. Quinto-Hernandez, Y. Y. Lee, T. P. Huang, W. C. Pan, J. J. Min Lin, P. Bobadova-Parvanova, K. Morokuma, P. C. Samartzis and A. M. Wodtke, Int. J. Mass Spect., Vol. 265, Issues 2-3, 2007, Pages 261-266, Jean H. Futrell Honour Issue.
3. A. Quinto-Hernandez, M. C. Piña-Barba, Revista Mexicana de Física (Mexican Journal of Physics), 49, 121, (2003).
4. A. Quinto-Hernandez, L. A. Arau-Roffiel, Información Tecnológica (Technological Information-Chile), 10, 265, (1999).
5. A. Quinto-Hernandez, L. A. Arau-Roffiel, T. Castrejón-Rosales, Avances en Ingeniería Química (Advances in Chemical Engineering-Mexico), 7, 129, (1998).

### Research Projects

- Thermodynamics of nitrogen compounds through high resolution photoionization mass spectrometry via VUV synchrotron radiation.
- Identification of unstable radicals by flame Chemistry and VUV synchrotron radiation.
- Velocity Map Imaging Spectroscopy of azides.
- Synthesis and characterization of bioceramics based on calcium phosphate and ZrO<sub>2</sub> by TEM, SEM, X-rays diffraction, FTIR and Thermogravimetry.

### Scientific and Educational Stays

2006 and 2007      BL21B U9-CGM Spectroscopy Beamline and BL21A U9  
White Light Beamline, National Synchrotron Radiation  
Research Center, Hsinchu, Taiwan, Republic of China.

- 2006 Molecular-Beam Flame Endstation, National Synchrotron Radiation Laboratory, University of Science and Technology of China, Hefei, Anhui, People's Republic of China.
- 1998 Osaka University of Foreign Studies, Japanese Language Training, Osaka, Japan.
- 1997 Industrial Supervisor Assistant, Department of Production, Roche-Syntex S.A. de C.V., Jiutepec, Morelos, México.

### Language and Technical Skills

**Language:** English (advanced), French and Japanese (Intermediate).

**Software:** C, FORTRAN, UNIX, Gaussian, Mathematica, LabView, TINKER, SIMION.

**Training:** High Resolution Photoionization Mass Spectrometry  
Photofragmentation-Translational Spectroscopy  
Velocity Map Imaging Spectroscopy  
Scanning and Transmission Electron Microscopy  
FT Infrared  
X-Rays Diffraction.