

CURRICULUM VITAE  
**Daniel G. Kuroda**



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**Education:** B.S. Chemistry - *University of Buenos Aires (UBA)*, Argentina. April, 2002  
Undergraduate Research Director - Prof. Ernesto Marceca  
Research Topic - *Study of Ion-molecule Atmospheric Reactions by Mass Spectrometry*

Ph.D. Chemistry - *University of Florida*, May 2008  
Ph.D. Director - Prof. Valeria D. Kleiman  
Thesis title - *In the quest of manipulating light-matter interactions: Coherent control of two photon induced processes in solution*

Postdoctoral - *University of Pennsylvania*, August 2008- July 2013  
Postdoctoral Research Director: Prof. Robin M. Hochstrasser (deceased)  
Research topic - *2D IR spectroscopy of small molecules and ions in condensed phase*

**Professional History:**

2013 - Present Assistant Professor, *Louisiana State University*  
1999 - 2000 Laboratory Technician, INQUIMAE, School of Science, University of Buenos Aires, Argentina.  
1999 - 2000 High School Teacher, *Philips Argentina Technical High School*, Buenos Aires, Argentina

**Honors & Awards:**

*At Louisiana State University*

2014 - Fellow of the National Academy of Education in Science 2014-2015.

*At University of Florida:*

2007 - Student Travel Grant Award. American Physical Society, Frontiers in Optics 2007 - Laser Science XXIII, San Jose, CA.  
2006 - Physical Chemistry Student Poster Award. American Chemical Society Spring 2006 National Meeting, Atlanta, Ga.  
2005 - Teaching award. Physical Chemistry Division, Department of Chemistry, University of Florida.  
2005 - Proctor & Gamble Research Award for excellence in graduate research. Department of Chemistry, University of Florida.

*At University of Buenos Aires:*

2000 - University of Buenos Aires scholarship (BECA UBA) for undergraduate research.  
Universidad the Buenos Aires. Buenos Aires Argentina.

### Professional Activities:

Member of the *American Chemical Society and American Physical Society.*

### Refereed Publications:

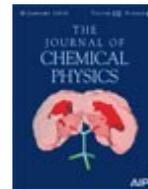
1- Kuroda DG, Kleiman VD “Quantum Control of Two-Photon Fluorescence in Solution”. Eds.: R. J. D. Miller, A. M. Weiner, P. Corkum, D. M. Jonas, Springer Series in Chemical Physics, Vol 88 (Springer Berlin), **2007**. ISBN: 978-3-540-68779-5.

2- Kuroda DG, Singh CP, Peng ZH, Kleiman VD. “Mapping Excited-State Dynamics by Coherent Control of a Dendrimer's Photoemission Efficiency”. *SCIENCE*, **2009**, 326, 5950, 263-267.



3- Vorobyev DY, Kuo CH, Chen JX, Kuroda DG, Scott JN, Vanderkooi JM, Hochstrasser RM. “Ultrafast Vibrational Spectroscopy of a Degenerate Mode of Guanidinium Chloride“. *Journal of Physical Chemistry B*, **2009**, 113, 46, 15382-15391.

4- Kuroda, DG; Vorobyev, DY; Hochstrasser, RM. “Ultrafast relaxation and 2D IR of the aqueous trifluorocarboxylate ion”. *Journal of Chemical Physics*, **2010**, 132, 4, 044501. **FRONT COVER ARTICLE.**



5- Vorobyev DY, Kuo CH, Kuroda DG, Scott JN, Vanderkooi JM, Hochstrasser RM. “Water-Induced Relaxation of a Degenerate Vibration of Guanidium Using 2D IR Echo Spectroscopy”. *Journal of Physical Chemistry B*, **2010**, 114, 8, 2944-2953.

6- Kuroda DG, Singh CP, Peng ZH, and Kleiman VD. “Exploring the role of phase modulation on photoluminescence yield”. *Faraday Discussions*, **2011**, 153, 61-72.

7- Kuroda DG, Hochstrasser RM, “2D IR spectral signature and hydration of the oxalate dianion”, *Journal of Chemical Physics*, **2011**, 135, 204502.

8- Kuroda DG, Hochstrasser RM, “Dynamic structures of aqueous oxalate and the effects of counterions seen by 2D IR”, *Physical Chemistry Chemical Physics*, **2012**, 14, 6219-6224.

9- Kuroda DG, Singh PK, Hochstrasser RM, “Differential Hydration of Tricyanomethanide Observed by Time Resolved Vibrational Spectroscopy”, *Journal of Physical Chemistry B*, **2013**, 117, 4354–4364.

10- Kuroda DG, Bauman JD, Challa JR, Patel D, Troxler T, Das K, Arnold E, Hochstrasser RM, “Snapshot of the equilibrium dynamics of a drug bound to HIV-



1 reverse transcriptase”, Nature Chemistry, **2013**, 5, 174–181. **FRONT COVER ARTICLE.**

11- Chntonov L, Kuroda DG, Ghosh A, Ma J, Hochstrasser RM, “Quantum beats and coherence decay in degenerate states split by solvation”, Journal of Physical Chemistry Letters, **2013**, 4 , 1866–1871.

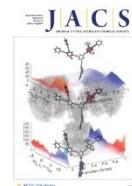
12- Singh PK, Kuroda DG, Hochstrasser RM, “An Ion’s Perspective on the Molecular Motions of Nanoconfined Water: A Two-Dimensional Infrared Spectroscopy Study”, Journal of Physical Chemistry B, **2013**, 117, 9775–9784.

13- Kuroda DG, Abdo M, Chntonov L, Smith AB, III, Hochstrasser RM, “Vibrational dynamics of a non-degenerate ultrafast rotor: the (C12,C13)-oxalate ion”, Journal of Chemical Physics, **2013**, 139, 164514.

14- Chntonov L, Kumar R, Kuroda DG, “Non-linear infrared spectroscopy of the water bending mode: Direct experimental evidence of hydration shell reorganization?”, Physical Chemistry Chemical Physics, **2014**, 16, 13172-13181.

15- Li T, Cui Y, Mathaga J, Kumar J, Kuroda DG, “Hydration and vibrational dynamics of betaine (N,N,N-trimethylglycine)”, Journal of Chemical Physics, **2015**, Journal of Chemical Physics, 2015, 142, 212438.

16- Galindo JF, Atas E, Altan A, Kuroda DG, Fernandez-Alberti S, Tretiak S, Roitberg AE, Kleiman VD, “Dynamics of Energy Transfer in a Conjugated Dendrimer Driven by Ultrafast Localization of Excitations”, J. Am. Chem. Soc., **2015**, 137, 11637-11644. **FRONT COVER ARTICLE.**



17- Guerin AC, Riley K, Rupnik K, Kuroda DG, “Determining the Energetics of the Hydrogen Bond through FTIR: A Hands-On Physical Chemistry Lab Experiment”, Journal of Chemical Education, **2016**, 93, 1124-1129.

18- Wahlers J, Fulfer KD, Harding DP, Kuroda DG, Kumar R, Jorn R, “Solvation Structure and Concentration in Glyme-Based Sodium Electrolytes: A Combined Spectroscopic and Computational Study”. Journal of Physical Chemistry C, **2016**, 120, 17949-17959.

19- Fulfer KD, Kuroda DG, “Solvation Structure and Dynamics of the Lithium Ion in Organic Carbonate-Based Electrolytes: A Time-Dependent Infrared Spectroscopy Study”, Journal of Physical Chemistry C, **2016**, 120, 24011-24022.

20- Cui Y, Ma J, Kuroda DG, “Solvation Dynamics of an Ionic Probed in Choline Chloride-based Deep Eutectic Solvents”, Physical Chemistry Chemical Physics, 2016, DOI: 10.1039/C6CP06318G.

### **Other Publications and Books:**

- 1- Produced the graphics and pictures, and experimental setups for the general Chemistry book: “*Química 2. Química en acción*”, Aldabe, Bonazzola, Aramendía, Lacreu, Sara Aldabe, Pedro Aramendia, Ediciones Colihue SRL, **2004**, ISBN 9505813449.
- 2- Polarization anisotropy effects for degenerate vibrational levels, book chapter in *Ultrafast Infrared Vibrational Spectroscopy*, Kuroda DG, Hochstrasser RM. Editor: Michael D. Fayer. CRC Press, **2013**, ISBN: 1466510137.

### **Outreach/Synergistic Activities:**

- 1- Reviewer for Journal of Physical Chemistry, Journal of Chemical Physics, Journal of the Physical Chemistry Letters, Chemical Reviews, and Chemistry - A European Journal.
- 2- External reviewer for scientific proposals for the Department of Energy and Army Research Office.
- 3- National academies education fellow in the life sciences (2014).
- 4- Baton Rouge Shell 4<sup>th</sup> Energy Camp, July 2016, presentation of class describing the link between energy and chemistry.
- 5- Participation in undergraduate and graduate student panels for promoting science and STEM education for Student Affiliates of the American Chemical Society of LSU and LSU NOBCCHE Chapter.

### **Graduate and postdoctoral advisors**

Ph.D. advisor: Valeria D. Kleiman, University of Florida.

Postdoctoral advisor: Robin M. Hochstrasser, University of Pennsylvania (Deceased).

### **Graduate and post-Graduate Advisees**

No doctoral students that have graduated.

Current Ph.D. students: Yaowen Cui, Jianbo Ma, Xiaoliu Zhang, Susith R Galle Kankanamge.

Postdoctoral scholars: Kristen D. Fulfer (2015-present)