Christine K. Payne

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Education

2003 **Ph.D. in Physical Chemistry, University of California, Berkeley**
Advisor: Professor Charles B. Harris
Ultrafast infrared spectroscopy of organometallic reactions in solution.

1998 **B.S. in Chemistry, University of Chicago**
Advisors: Professor James R. Norris and Norbert F. Scherer
Molecular dynamics simulations and spectroscopy of the photosynthetic reaction pathway.

Professional Appointments

2007- **Assistant Professor**, School of Chemistry and Biochemistry,
Georgia Institute of Technology.

2003 - 2006 **Postdoctoral Fellow**, Department of Chemistry and Chemical Biology,
Harvard University; Advisor: Professor Xiaowei Zhuang

Honors

2008 ACS PROGRESS-Dreyfus Lectureship Award
2007 Research Scholar Development Award; NIH
2004 Ruth L. Kirschstein National Research Service Award; NIH Postdoctoral Fellow

Professional Affiliations

2003- Biophysical Society, member
1999- American Chemical Society, member

Additional Activities

2009 Symposium Organizer, "Live Cell Imaging," Optical Society of America Laser Science Annual Meeting, San Jose, CA; October 11-15, 2009
2008- Vice-Chair, Biophysical Subdivision, Division of Physical Chemistry, ACS
2007- Co-Organizer, Atlanta Area Chemical Physics (AACP) Seminar Series

Selected Publications (of 17 total, * indicates Georgia Tech publication)

1.* "Pyrenebutyrate-mediated delivery of quantum dots across the plasma membrane of living cells," A.E. Jablonski, W.H. Humphries IV, C.K. Payne, *J. Phys. Chem. B*, **113**, 405-408 (2009).

2.* "Imaging gene delivery with fluorescence microscopy," C.K. Payne, *Nanomedicine*, **2**, 847-860 (2007).

3.* "Cellular binding, motion, and internalization of synthetic gene delivery polymers," G.T. Hess, W.H. Humphries IV, N.C. Fay, and C.K. Payne, *Biochim. Biophys. Acta, Mol. Cell Res.*, **1773**, 1583-1588 (2007).

4. "Internalization and trafficking of cell surface proteoglycans and proteoglycan-binding ligands," C.K. Payne, S.A. Jones, C. Chen, and X. Zhuang, *Traffic*, **8**, 389-401 (2007).

5. "Nanophotonic light sources for fluorescence spectroscopy and cellular imaging," O. Hayden and C.K. Payne, *Ang. Chem. Int. Ed*., **44**, 1395-1398 (2005).

6. "Intramolecular rearrangements on ultrafast timescales: Femtosecond infrared studies of ring slip in (η^1-C_5Cl_5)$Mn(CO)_5$," C.K. Payne, P.T. Snee, H. Yang, K.T. Kotz, L.L. Schafer, T.D. Tilley, and C.B. Harris, *J. Am. Chem. Soc.* **123**, 7425-7426 (2001).

7. "Femtosecond infrared studies of a prototypical one-electron oxidative-addition reaction: Chlorine atom abstraction by the $Re(CO)_5$ radical," H. Yang, P.T. Snee, K.T. Kotz, C.K. Payne, and C.B. Harris, *J. Am. Chem. Soc.* **121**, 9227-9228 (1999).