

SAMUEL JOSEPH LORD, PH. D.

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OBJECTIVE

Biophysicist and physical chemist seeking a scientist position in research and development.

CORE EXPERTISE & SUMMARY OF ACCOMPLISHMENTS

- Specialist in fluorescence microscopy and cell imaging
- Extensive knowledge in spectroscopy, biophysical techniques, and surface patterning
- Coauthored 18 peer-reviewed journal articles, letters, proceedings, reviews, and book chapters (seven first-author)
- Research highlighted in *Nature*, *C&E News*, and F1000
- Invented novel photoactivatable probes and applied for a patent
- Received a national fellowship awarded to only one postdoctoral researcher every other year
- Worked on three different multidisciplinary teams of researchers, resulting in several research publications

EDUCATION

Ph. D. in Chemistry: Stanford University **2010**

research advisor Professor W. E. Moerner, dissertation on single-molecule spectroscopy

B. S. in Chemistry: University of North Carolina, Chapel Hill **2004**

graduated with Honors and with Distinction, research advisor Professor Sergei S. Sheiko

AWARDS AND HONORS

Eighth Biennial Irving S. Sigal Postdoctoral Fellowship, American Chemical Society	2010-2012
First Biennial Sessler Graduate Student Leadership Award, Stanford	2008
Bio-X Travel Award Subsidy, Stanford	2008
Undergraduate Award for Excellence in Physical Chemistry, UNC	2004
Hypercube Scholar, UNC	2004
CPIMA Research Fellow, Stanford	2003
Thompson Undergraduate Research Award, UNC	2003
National Starch and Chemical Company Award, UNC	2002

POSITIONS & EXPERIENCE

Postdoctoral Research Fellowship, University of California, Berkeley CA **2010-present**

Advisor: Professor Jay T. Groves, Chemistry & HHMI

- *Revealed spatial mechanics of signal transduction in living cells*
- *Coordinated purchase of new microscope and built the laser excitation platform*
- *Wrote and awarded a postdoctoral research fellowship that provided independent funding*

Ph. D. Research, Stanford University, Stanford CA

2004–2010

Advisor: Professor W. E. Moerner, Chemistry

- *Designed and characterized a new class of photoactivatable and single-molecule fluorophores*
- *Submitted patent application number US 2010-0029952-A1*
- *Example publication: Lord, et al. J. Am. Chem. Soc. **2008**, 130(29), 9204–9205*

B. S. Research, University of North Carolina, Chapel Hill NC

2002–2004

Advisor: Professor Sergei S. Sheiko, Chemistry

- *Discovered a new conformation of single polymer chains on surfaces*
- *Worked independently with guidance from advisor*
- *Wrote an honors thesis on my research in polymer physics*
- *Published a first-author paper as an undergraduate: Lord, et al. Macromolecules **2004**, 37(11), 4235–4240*

Summer Research Fellowship, Stanford University, Stanford CA

2003

Advisors: Professors Eric S. G. Shaqfeh and Steven Chu

- *Successfully imaged single DNA chains under flow and studied polymer physics and bulk rheology*

SERVICE & TEAMWORK

- Worked on interdisciplinary research teams, in collaboration with chemists and biologists
- Led biweekly team meetings
- Recognized for leadership and service as a graduate student
- Coordinated Student-Hosted Physical Chemistry Seminars (4 years)
- Founded Stanford Chemical Physics Journal Club (4 years)
- Elected member, Chemistry Student Affairs Committee (2 years)
- Group responsibilities, including Laser Safety Officer and Chemical Safety Officer
- Platform co-chair, Biophysical Society 54th Annual Meeting
- Volunteer emergency medical technician (EMT) in high school and college

TEACHING

- Guest lecturer for advanced biophysical chemistry; taught two lectures on molecular fluorescence
- Teaching assistant for statistical mechanics, physical chemistry lab, and intro chemistry; designed and taught problem sessions and weekly lab lectures; prepared and graded exams and homework
- Head teaching assistant for intro chemistry lab; taught one lab section and weekly lab intro for all students; supervised multiple sections and other teaching assistants
- Mentor for several undergraduate and graduate researchers on my projects
- Other teaching experience includes tutoring in chemistry and math, mentoring middle school students for science fair, and camp counselor at an educational program

TECHNICAL SKILLS SUMMARY

Microscopy: fluorescence microscopy, single-molecule spectroscopy, lasers, optics, atomic force microscopy

Physical Chemistry and Analytical Chemistry: supported lipid bilayers, biosensors, HPLC–MS, gel electrophoresis, Langmuir-Blodgett troughs, rheology, polymer physics

Cell Biology: biophysics, cell culture, live-cell imaging, cancer research, mechanobiology

Computer Analysis: ImageJ image analysis, Micro-Manager microscope acquisition, Matlab, Gaussian quantum mechanical calculations