

## Biographical Sketch

### Steven J. Baldelli

#### A. PROFESSIONAL PREPARATION

Framingham State College, Framingham, MA	Chemistry	B.S.	1992
Tufts University, Medford, MA	Chemistry	Ph.D.	1998
University of California, Berkeley, Berkeley, CA	Chemistry	Postdoc	1998 – 2001

#### B. APPOINTMENTS

2014—present	Professor, Department of Chemistry, University of Houston
2007 – 2104	Associate Professor, Department of Chemistry, University of Houston
2002-2013	Visiting Professor, Royal Institute of Technology, Stockholm Sweden
2009	Visiting Professor, Nagoya University, Nagoya, Japan
2001 – 2007	Assistant Professor, Department of Chemistry, University of Houston

#### C. PRODUCTS

##### 5 Publications Most Closely Related To The Proposed Project:

1. "Compressive Broad-Band Hyperspectral Sum Frequency Generation Microscopy to Study Functionalized Surfaces" Zheng, D.-S.; Lu, L.-Y.; Li, Y.; Kelly, K. F.; Baldelli, S. *J. Phys. Chem. Lett.* **2016**, *7*, 1781-1787.
2. "Chemical Imaging of Self-Assembled Monolayers on Copper Using Compressive Hyperspectral Sum Frequency Generation Microscopy" Zheng, D.-S.; Lu, L.; Kelly, K. F.; Baldelli, S. *J. Phys. Chem. B* **2017**, *122*, 464.
3. "Grain Structures and Boundaries on Microcrystalline Copper Covered with an Octadecanethiol Monolayer Revealed by Sum Frequency Generation Microscopy" Fang, M.; Baldelli, S. *J. Phys. Chem. Lett.* **2015**, *6*, 1454-1460.
4. "Sum Frequency Generation Spectroscopy-Compressive Sensing Microscopy" Cai, X. J.; Hu, B.; Sun, T.; Kelly, K. F.; Baldelli, S. *J. Chem. Phys.* **2011**, *135*, 194202.
5. "Chemical Microscopy of Surfaces by Sum Frequency Generation Imaging" Cimatu, K.; Baldelli, S. *J. Phys. Chem. C* **2009**, *113*, 16575.

##### 5 Other Significant Publications:

1. "Roles of oxygen for methanol adsorption on polycrystalline copper surface revealed by sum frequency generation imaging microscopy" Fang, M.; Santos, G.; Chen, X.-l.; Baldelli, S. *Surf. Sci.* **2015**, *468*, 35–41.
2. "Surface-Induced Heterogeneity Analysis of an Alkanethiol Monolayer on Microcrystalline Copper Surface Using Sum Frequency Generation Imaging Microscopy" Fang, M.; Baldelli, S. *J. Phys. Chem. C* **2017**, *121*, 1591-1601.
3. "Chemical Imaging of Corrosion: Sum Frequency Generation Imaging Microscopy of Cyanide on Gold at the Solid-Liquid Interface" Cimatu, K.; Baldelli, S. *J. Am. Chem. Soc.* **2008**, *130*, 8030.
4. "Study of the Wetting of Paraffin Films on Metal Surface in Dynamic Dip-coating Process Using Compressive-Sensing Sum-Frequency Generation Microscopy" Sun, Z.; Zheng, D.-S.; Baldelli, S. submitted **2018**.
5. "Distortion Correction for a Brewster Angle Microscope Using an Optical Grating" Sun, Z.; Zheng, D.-S.; Baldelli, S. *Anal. Chem.* **2017**, *89*, 2186-2190.

#### **D. SYNERGISTIC ACTIVITIES**

1. Site director with UH Welch scholar program (2010- present) and NSF-REU program.
2. Provide research opportunities for undergraduates at UH.
3. Membership in American Chemical Society and Electrochemical Society (24+ years).