

# Stanford

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## Matthew Gebbie

Postdoctoral Research Fellow, Materials Science and Engineering

 Curriculum Vitae available Online

### Bio

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#### HONORS AND AWARDS

- GLAM Postdoctoral Fellow, Geballe Laboratory for Advanced Materials, Stanford (2016-2018)
- Member, US Delegation to 2015 Lindau Nobel Laureate Interdisciplinary Meeting, National Science Foundation (2015)
- Science and Engineering Fellow, NSF Center for Nanotechnology in Society, UCSB (2011-2015)
- Honorable Mention, NSF Graduate Research Fellowship, National Science Foundation (2011)

#### BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Elected Council Member, Stanford University Postdoctoral Association (2017 - present)

#### PROFESSIONAL EDUCATION

- Doctor of Philosophy, University of California Santa Barbara (2016)
- Bachelor of Science, North Carolina State Univ At Raleigh (2010)

#### STANFORD ADVISORS

- Nicholas Melosh, Postdoctoral Faculty Sponsor
- Nicholas Melosh, Postdoctoral Research Mentor

### Publications

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#### PUBLICATIONS

- **Experimental measurement of the diamond nucleation landscape reveals classical and nonclassical features.** *Proceedings of the National Academy of Sciences of the United States of America*  
Gebbie, M. A., Ishiwata, H., McQuade, P. J., Petrak, V., Taylor, A., Freiwald, C., Dahl, J. E., Carlson, R. M., Fokin, A. A., Schreiner, P. R., Shen, Z., Nesladek, M., Melosh, et al  
2018
- **Tuning underwater adhesion with cation- $\pi$  interactions** *NATURE CHEMISTRY*  
Gebbie, M. A., Wei, W., Schrader, A. M., Cristiani, T. R., Dobbs, H. A., Idso, M., Chmelka, B. F., Waite, J. H., Israelachvili, J. N.  
2017; 9 (5): 473-479
- **Long range electrostatic forces in ionic liquids.** *Chemical communications*  
Gebbie, M. A., Smith, A. M., Dobbs, H. A., Lee, A. A., Warr, G. G., Banquy, X., Valtiner, M., Rutland, M. W., Israelachvili, J. N., Perkin, S., Atkin, R.  
2017; 53 (7): 1214-1224
- **Long-range electrostatic screening in ionic liquids** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Gebbie, M. A., Dobbs, H. A., Valtiner, M., Israelachvili, J. N.

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2015; 112 (24): 7432-7437

- **Bridging adhesion of mussel-inspired peptides: role of charge, chain length, and surface type.** *Langmuir*  
Wei, W., Yu, J., Gebbie, M. A., Tan, Y., Martinez Rodriguez, N. R., Israelachvili, J. N., Waite, J. H.  
2015; 31 (3): 1105-1112
- **Ionic liquids behave as dilute electrolyte solutions** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Gebbie, M. A., Valtiner, M., Banquy, X., Fox, E. T., Henderson, W. A., Israelachvili, J. N.  
2013; 110 (24): 9674-9679
- **Interaction Forces between Supported Lipid Bilayers in the Presence of PEGylated Polymers** *BIOMACROMOLECULES*  
Banquy, X., Lee, D. W., Kristiansen, K., Gebbie, M. A., Israelachvili, J. N.  
2016; 17 (1): 88-97
- **Effects of Surfactants and Polyelectrolytes on the Interaction between a Negatively Charged Surface and a Hydrophobic Polymer Surface** *LANGMUIR*  
Rapp, M. V., Donaldson, S. H., Gebbie, M. A., Gizaw, Y., Koenig, P., Roiter, Y., Israelachvili, J. N.  
2015; 31 (29): 8013-8021
- **Hydrophobic, Electrostatic, and Dynamic Polymer Forces at Silicone Surfaces Modified with Long-Chain Bolaform Surfactants** *SMALL*  
Rapp, M. V., Donaldson, S. H., Gebbie, M. A., Das, S., Kaufman, Y., Gizaw, Y., Koenig, P., Roiter, Y., Israelachvili, J. N.  
2015; 11 (17): 2058-2068
- **Developing a General Interaction Potential for Hydrophobic and Hydrophilic Interactions** *LANGMUIR*  
Donaldson, S. H., Royne, A., Kristiansen, K., Rapp, M. V., Das, S., Gebbie, M. A., Lee, D. W., Stock, P., Valtiner, M., Israelachvili, J.  
2015; 31 (7): 2051-2064
- **Electrochemical control of specific adhesion between amine-functionalized polymers and noble metal electrode interfaces** *MATERIALS AND CORROSION-WERKSTOFFE UND KORROSION*  
Donaldson, S. H., Utzig, T., Gebbie, M. A., Raman, S., Shrestha, B. R., Israelachvili, J. N., Valtiner, M.  
2014; 65 (4): 362-369
- **The Intersection of Interfacial Forces and Electrochemical Reactions** *JOURNAL OF PHYSICAL CHEMISTRY B*  
Israelachvili, J. N., Kristiansen, K., Gebbie, M. A., Lee, D. W., Donaldson, S. H., Das, S., Rapp, M. V., Banquy, X., Valtiner, M., Yu, J.  
2013; 117 (51): 16369-16387
- **Asymmetric Electrostatic and Hydrophobic-Hydrophilic Interaction Forces between Mica Surfaces and Silicone Polymer Thin Films** *ACS NANO*  
Donaldson, S. H., Das, S., Gebbie, M. A., Rapp, M., Jones, L. C., Roiter, Y., Koenig, P. H., Gizaw, Y., Israelachvili, J. N.  
2013; 7 (11): 10094-10104
- **Reply to Perkin et al.: Experimental observations demonstrate that ionic liquids form both bound (Stern) and diffuse electric double layers** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Gebbie, M. A., Valtiner, M., Banquy, X., Henderson, W. A., Israelachvili, J. N.  
2013; 110 (44): E4122-E4122
- **Interactions and visualization of bio-mimetic membrane detachment at smooth and nano-rough gold electrode surfaces** *SOFT MATTER*  
Donaldson, S. H., Valtiner, M., Gebbie, M. A., Haradad, J., Israelachvili, J. N.  
2013; 9 (21): 5231-5238
- **Hydrophobic Forces, Electrostatic Steering, and Acid-Base Bridging between Atomically Smooth Self-Assembled Monolayers and End-Functionalized PEGolated Lipid Bilayers** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*  
Valtiner, M., Donaldson, S. H., Gebbie, M. A., Israelachvili, J. N.  
2012; 134 (3): 1746-1753