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HAO WU

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Education

Harvard University *2015-Present*
Doctor of Philosophy in Chemistry
(Expected 2020)

University of California, Berkeley *2011-2014*
Bachelor of Science in Chemistry with High Honors
GPA: 3.86/4 .00
Dean's Honor List *2011-2013*

Skills

- Extensive experience in building optical setups and writing control codes.
- Extensive programming experience: Python, MATLAB, LabView, C++ and Mathematica.
- Experience with neuronal culture, rodent brain dissections and lentivirus production.

Research Experience

Graduate Researcher Cohen Group, Harvard University *2016-2017*
- Developed neuronal voltage circuit-mapping system that projecting patterned light on neurons expressing channelrhodopsins and genetically encoded voltage indicators (GEVIs), and implemented digital micromirror array (DMD) and spatial light modulator (SLM).

Associate Specialist Molecular Foundry, Lawrence Berkeley National Laboratory *2015*
- Developed FoundryScopeCL, a software and hardware data acquisition (DAQ) system in python that is optimized for customization and automation in scanning electron microscopy.

Research Assistant in Physical Chemistry Ginsberg Group, UC Berkeley *2013-2015*
- Built and developed a complete set of instruments and software package to study and analyze the local linear absorption behavior of organic photovoltaic (OPV) films.
- Proposed and implemented a model to solve grain boundary composition of OPV thin films.
- Built and programmed power-monitoring and signal analysis units for femtosecond laser.
- Developed new method to drop cast thin OPV films with controllable thickness.
- Designed method to encapsulate samples in oxygen-free environment.

Research Assistant in Statistical Mechanics Geissler Group, UC Berkeley *2014*
- Implemented coarse-grain Monte Carlo simulations to study the behavior of photosynthetic proteins on thylakoid membranes.
- Collaborated with experimental biophysicists to study the repair mechanism of photosystem II.

Research Assistant in Genetics Institute of Genetics, Fudan University *2008-2009*
- Screened heat-resistant *Rosa chinensis* by studying the transcription of mRNAs.
- Carried out RNA total isolation, conducted RT-PCR and electrophoresis.

Teaching Experience

Teaching Fellow	PS 10, PS 11	Harvard University	*2016*
Undergraduate Student Instructor	Chem 4A, Chem 4B	UC Berkeley	*2013-2014*

Publications

Bischak C. G.; Hetherington, C. L.; **Wu, H**.; Aloni, S.; Ogletree, D. F.; Limmer, D. T.; Ginsberg , N.S., Origin of photoinduced phase separation in hybrid perovskites. *Nano Lett.*, **2017**, 17, 1028-1033.

Wong, C. Y.; Cotts, B. L.; **Wu, H**.; Ginsberg , N.S., Exciton dynamics reveals aggregates with intermolecular order at hidden interfaces in solution-cast organic semiconducting films. *Nat. Commun.*, **2015**, 6.

Sharifzadeh, S.,; Wong, C. Y.; **Wu, H**.; Cotts, B. L.; Kronik, L.; Ginsberg , N.S.; Neaton, J. B., Relating the physical structure and optoelectronic function of crystalline TIPS-pentacene *Adv. Funct. Mater.,* **2015**, 25, 2038-46.

Wong, C. Y.; Penwell, S. B.; Cotts, B. L.; Noriega, R.; **Wu, H.**; Ginsberg, N.S., Revealing exciton dynamics in a small-molecule organic semiconducting film with sub-domain transient absorption microscopy. *J. Phys. Chem. C*, **2013**, 117, 22111-22.