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EDUCATION

Postdoc, Chemistry & Bioscience (Advisor: Dr. Jay, T. Groves) University of California, Berkeley, CA	09/2011
Ph.D., Chemical Engineering (Advisor: Dr. Michael. A. Bevan) Texas A&M University, College Station, TX	05/2006
M.S., Chemical Engineering (Advisor: Dr. Chien-Lih Chiang) National Cheng Kung University, Tainan, Taiwan	06/2000
B.S., Chemical Engineering National Cheng Kung University, Tainan, Taiwan	06/1998

PROFESSIONAL EXPERIENCE

Research experience

Texas A&M University, Department of Chemical Engineering, College Station, TX <i>Assistant Professor</i>	09/2013–present
Houston Methodist Research Institute, Department of Nanomedicine, Houston, TX <i>Research Associate I (supervisor: Dr. Xuewu Liu & Dr. Ye Hu)</i>	10/2011–08/2013
University of California, Department of Chemistry, Berkeley, CA & Lawrence Berkeley National Laboratory, Physical Biosciences Division, Berkeley, CA <i>Postdoctoral Fellow (supervisor: Dr. Jay. T. Groves)</i>	10/2007–09/2011
Texas A&M University, Department of Chemical Engineering, College Station, TX <i>Research Assistant & Research Associate (supervisor: Dr. Michael. A. Bevan)</i>	06/2001–05/2007
National Cheng Kung University, Department of Chemical Engineering, Tainan, Taiwan <i>Research Assistant (supervisor: Dr. Chien-Lih Chiang)</i>	06/1997–07/2000

Industrial experience

Synamen Corp., San Francisco, CA <i>Consultant</i>	08/2009–06/2010
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AWARDS

1. Outstanding Performance Presentation of 2013 Annual Symposium-the Society of Chinese Bioscientists in America.

PUBLICATIONS

Peer-reviewed publications

1. Iversen, L., Tu, H.-L., Lin, W.-C, Christensen, S.M., Abel, S.M., Iwig, J., Wu, H.-J., Gureasko, J., Yu, C.-H., Rhodes, C., Petit, R. S., Stamou, D., Chakraborty, A.K., Kuriyan, J., Groves, J.T., "Ras activation by SOS: Allosteric regulation by altered fluctuation dynamics", vol. 345, pp.50-54, **Science**. (2014).
2. Fan, J., Niu, S., Dong, A., Shi, J., Fine, D., Wu, H.-J., Tian, Y. et al., "Nanopore film based enrichment and quantification of low abundance hepcidin from human bodily fluids," **Nanomedicine: Nanotechnology, Biology and Medicine**, vol. 10, pp. 879-888. (2014) [Cover Article].

- Reported by **Science Translational Medicine (Editors' Choice)**, vol. 6, Issue 227, p. 227ec44 (2014), DOI: 10.1126/scitranslmed.3008861
3. Wu, H.-J., Li, Y., Fan, J., Deng, Z., Zhao, H., Graviss, E. A., Liu, X., Ferrari, M., Ma, X., Hu, Y., "Antibody-Free Detection of Mycobacterium tuberculosis Antigen Using Customized Nanotraps," **Analytical Chemistry**, 86:1988-1996. (2014)
Highlighted in **Chemical & Engineering News**, 2014;
<http://cen.acs.org/articles/92/web/2014/02/Diagnosing-Tuberculosis-Nanotrap.html>
 4. Wang, Z., Fine, D., Wu, H.-J., Schmulen, J., Hu, Y., Godin, B., Zhang, J.X., Liu, X., "Ciliated micropillars for the microfluidic-based isolation of nanoscale lipid vesicles," **Lab-on-a-chip**, 13:2879-2882. (2013)
 5. Fine, D., Grattoni, A., Goodall, R., Wu, H.-J., Srinivasan, S., Ferrari, M., et al., "Silicon Micro- and Nanofabrication for Medicine", **Advanced Healthcare Materials**, 2:632-666 (2013). [Cover Article]
 6. Fan, J., Huang, Y., Finoulst, I., Wu, H.-J., Deng, Z., Xu, R., Ferrari, R., Shen, H., Hu, Y., "Serum Biomarkers for Pulmonary Metastatic Melanoma Identified by means of a Nanopore-based Assay," **Cancer Letter**, 334: 202-10 (2013).
 7. Wu, H.-J., Henzie, J., Lin, W.-C., Rhodes, C., Li, Z., Thorner, J., Yang, P., Groves, J.T., "Membrane-Protein Binding Measured with Solution-Phase Plasmonic Nanocube Sensors," **Nature Methods**, 9:1189-91 (2012).
 8. Fan, J., Gallagher, J.W., Wu, H.-J., Landry, M.G., Sakamoto, J., Ferrari, M., Hu, Y., "Low molecular weight protein enrichment on mesoporous silica thin films for biomarker discovery," **Journal of Visualized Experiments**, 62:e3876 (2012).
 9. Yu, Y., Fay, N.C., Smoligovets, A., Wu, H.-J., Groves, J.T., "Myosin IIA modulates T cell receptor transport and casl phosphorylation during early immunological synapse formation," **PLOS ONE**, 7:e30704 (2012).
 10. Smoligovets, A., Wu, H.-J., Smith, A., Petit, R., Groves, J.T., "Characterization of dynamic actin associations with T-cell receptor microclusters in primary T cells," **Journal of Cell Science**, 125:735-42 (2012).
 11. Yu, C., Wu, H.-J., Kaizuka, Y., Vale, R.D., Groves, J.T., "Altered actin centripetal retrograde flow in physically restricted immunological synapses," **PLOS ONE**, 5(7):e11878 (2010).
 12. Gomez, E.W., Clack, N.G., Wu, H.-J., Groves, J.T., "Like-charge interactions between colloidal particles are asymmetric with respect to sign," **Soft Matter**, 5:1931-36 (2009).
 13. Wu, H.-J., Shah, S., Beckham, R.E., Meissner, K.E., Bevan, M.A., "Resonant effects in evanescent wave scattering of polydisperse colloids," **Langmuir**, 24:13790-795 (2008).
 14. Everett, W.N., Wu, H.-J., Anekal, S.G., Bevan, M.A., "Diffusing colloidal probes of protein and synthetic macromolecule interactions," **Biophysical Journal**, 92:1005-13 (2007).
 15. Wu, H.-J., Everett, W.N., Anekal, S.G., Bevan, M.A., "Mapping patterned potential energy landscapes with diffusing colloidal probes," **Langmuir**, 22:6826-36 (2006).
 16. Wu, H.-J., Pangburn, T.O., Beckham, R.E., Bevan, M.A., "Measurement and Interpretation of Particle-Particle and Particle-Wall Interactions in Levitated Colloidal Ensembles," **Langmuir**, 21:9879-88 (2005).
 17. Wu, H.-J., Bevan, M.A., "Direct measurement of single and ensemble average particle-surface potential energy profiles," **Langmuir**, 21:1244-54 (2005).
 18. Hwang K., Wu, H.-J., Bevan, M.A., "Specific ion-dependent attraction and phase behavior of polymer-coated colloids," **Langmuir**, 20:11393-401 (2004).

PATENTS

1. Groves, J.T., Clack, N.G., Salaita, K.S., Wu, H.-J., "Particle-Based Electrostatic Sensing and Detection," U.S. Patent Application No: 12/939,088 (filed 2010).
2. Groves, J.T., Wu, H.-J., "Solution-Phase Plasmonic Nanocube Sensors for Membrane-Protein Binding," U.S. Patent Application No: 61/712,749 (filed 2012).
3. Wu, H.-J., Fan, J., Ma, X., Sun, T., Hu, Y., "Novel Methods for Detecting Tuberculosis," U.S. Patent Application No: 61/732,266 (filed 2012).
4. Wu, H.-J., Fan, J., Ma, X., Sun, T., Hu, Y. "OTT201224 - A novel strategy for ESAT-6 detection and measurement from human biological fluids by nanoporous silica chips" (filed 2014)