

Postdoctoral Positions Available

Several NIH-funded postdoctoral positions available immediately in Prof. Xiaohua Huang's [Genomics and Systems Biotechnology Laboratory](http://genomics.ucsd.edu) (<http://genomics.ucsd.edu>) in the [Department of Bioengineering, University of California at San Diego, La Jolla, California, USA](#). Prof. Huang's research currently focuses on the development of the future-generation genome sequencing technologies, and microfluidic devices/systems for high-throughput single-cell analyses, and systems biology. The successful development of the so-called "\$1000 genome sequencing technologies" will revolutionize basic biomedical research and enable pharmacogenomics and personalized medicine. This represents a once-in-a-lifetime challenge. We are seeking highly motivated, talented and creative postdoctoral researchers with ambition and strong work ethic to join us in these exciting multidisciplinary endeavors. Interested candidates should send a copy of CV, statement of research interests and the names of two references to Prof. Xiaohua Huang at x2huang@ucsd.edu. Positions are available for the four following areas:

1. Organic and Polymer Synthesis, Surface Chemistry

A candidate with a Ph.D. degree in Chemistry or Chemical Engineering is needed for the solid-phase synthesis of novel fluorescence nucleotides for genome sequencing applications. The candidate should have expertise and extensive experience in organic synthesis, purification and characterization of products. Familiarity with solid-phase synthesis, peptide, oligonucleotide and polymer synthesis, HPLC, TLC and MALDI-TOF is desirable. The candidate is also expected to participate in developing a next-generation genome sequencing technology (<http://www.nih.gov/news/health/aug2008/nhgri-20.htm>).

2. Optics, Lasers, Instrumentation & Single Molecule Fluorescence Microscopy.

The candidates should have a Ph.D. degree in either Physics, Chemistry, Biophysics, Electrical Engineering, Materials Science and Engineering, or other related discipline. The ideal candidate is expected to have expertise and hands-on experience in optics, lasers, electronics and instrumentation, and to be familiar with fluorescence microscopy. Experience with single molecule imaging, FRET and TIRF is highly desirable. The recruited postdoctor is expected to lead our team effort in developing a state-of-the-art instrument for high-speed single molecule fluorescence imaging using TIRF and FRET to study protein dynamics and chemo-mechanical energy transduction using engineered chemo-mechanical nanosensors.

3. Protein Chemistry, Biochemistry and Engineering

Qualified candidates should have a degree in either Molecular Biology, Chemistry, Biochemistry, Chemical Engineering, Bioengineering, or related disciplines. The candidate is expected to have extensive experience in molecular biology techniques, protein chemistry, *in vivo* and/or *in vitro* protein expression; protein conjugation, labeling and purification; Familiarity with molecular evolution technique, molecular dynamic simulations, protein mass spectrometry, HPLC/FPLC is a plus. The recruited postdoctor will lead our effort in engineering proteins with chemo-mechanical nanosensors or unique enzymatic properties for genome sequencing applications, and for studying protein dynamics, chemo-mechanical energy transduction in semiconductor or biomimetic nano-machineries.

4. Micro-&Nano-fabrication; Microfluidics for High-Throughput Systems Biology

We seek a candidate with a Ph.D. degree in either Physics, Chemistry, Biophysics, Chemical Engineering, Bioengineering, Electrical Engineering, Materials Science and Engineering, or other engineering disciplines. The candidate is expected to have extensive hands-on experience in micro and nanofabrication techniques such as photolithography and soft lithography, and microfluidics. The recruited postdoctor is expected to lead our effort in the design and fabrication of microfluidic devices for single-cell proteomic and genomic analysis, and for the assembly of single molecule and protein arrays.