Post-doctoral fellowships in Attosecond Physics

PULSE Institute, Stanford University, and SLAC National Accelerator Lab, Menlo Park, California, USA

Stanford PULSE Institute invites applications for postdoctoral fellowships in the area of experimental attosecond and strong-field physics. Successful candidates will have opportunities to lead research projects in the area of high-harmonics from solids, which is currently one of the frontiers of Attosecond Physics. In addition to the possibility of generating attosecond pulse in compact experimental setups high-harmonics are novel probe of atomic and electronic structure in both the real and reciprocal space. High-harmonics also provide a new window to view intense laser-matter interactions, nonlinear optical response, and phase transitions in bulk as well as in two-dimensional and engineered materials. By taking advantage of the microscopic generation mechanism high-harmonics can probe excited state electron dynamics in materials with attosecond resolution.

Our research highlights can be found at this link: https://ultrafast.stanford.edu/hhg-frontier-high-order-harmonic-generation

Selected recent publications:


The PULSE Institute is a Stanford Independent Laboratory that provides world leadership in Ultrafast Science, including Attosecond and Strong-field
Physics. It is home to several laboratories equipped with state-of-the-art high-intensity mid-infrared laser systems and is in close proximity to the Linac Coherent Light Source, the world’s first x-ray free-electron laser. The researchers take advantage of these unique resources and a very collaborative research environment. Our candidates are expected to have a recent Ph.D. degree in physics, chemistry, ultrafast laser science or related field with experience in one or more of the following areas: high-harmonic spectroscopy, attosecond pulse metrology, nonlinear optics, ultrafast time-resolved photoemission and femtosecond spectroscopy in either solid or gas targets.

These fellowships carry competitive salary and benefits initially for a one-year term and may be renewable up to three years depending upon future funding situations and performance of the candidates. Interested candidates should email a CV with the name and contact information of three references to shambhu@slac.stanford.edu.

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