

Postdoc position in materials theory for excited states and quantum dynamics at UC Santa Cruz

DESCRIPTION

The Ping Group (<http://yuanping.chemistry.ucsc.edu/>) at the University of California, Santa Cruz (UCSC) invites applications for a Postdoctoral Scholar of condensed matter and material theory. Under the direction of Assistant Professor Yuan Ping, the Postdoctoral Scholar will: 1) develop and apply advanced electronic structure methods for excited state dynamics in emerging materials such as spin qubits in 2D materials and topological systems; 2) develop theory and implement codes for open quantum dynamics with many-body interactions built on our recent work (J. Xu et al, Nat. Commun. 11, 2780 (2020) and <https://arxiv.org/abs/2012.08711>) for spintronics and quantum information science applications.

Applicants with expertise in condensed matter theory, materials theory, or physical chemistry and significant experience in any of the following areas are strongly encouraged to apply: developing first-principles methods for excited states and correlated electrons in solids such as Green's function methods (GW/BSE, DMFT), TDDFT, electron-phonon couplings, spin dynamics, and experience in massively-parallel numerical implementations for advanced electronic structure methods.

ACADEMIC TITLE

Postdoctoral Scholar

SALARY

Commensurate with qualifications and experience.

BASIC QUALIFICATIONS

- Ph.D. (or equivalent foreign degree) in physics, physical chemistry, materials science, or related field at the time of application.

POSITION AVAILABLE

As soon as possible after initial review of the applications.

DURATION OF POSITION

Initial appointment will be 100% for one year. Reappointment can be considered contingent upon the availability of work and appropriate funding up to three years or more.

APPLY by sending email to: yuanping@ucsc.edu

Documents/Materials

- Letter of application that briefly summarizes your qualifications and interest in the position (required).
- Curriculum vitae (required) Including list of publications.

Reference Requirement

Applicants must provide the names and contact information of their references (a minimum of 3 are required and a maximum of 5 will be accepted). The hiring unit will request confidential letters* from the references of those applicants who are under serious consideration.

Bio: Yuan Ping received her B.Sc. degree from University of Science and Technology of China in 2007 and her Ph.D. from UC Davis under Giulia Galli (currently at U. Chicago) in 2013. She was a materials postdoctoral fellow in JCAP at Caltech from 2013 to 2016, under William Goddard III. In the summer of 2016, she joined in the faculty at UC Santa Cruz as an assistant professor in Chemistry department and affiliated professor in Physics department. Ping's research group focuses on many-body perturbation theory for electronic excitation and exciton recombination, and open quantum dynamics for spin and electron relaxation from first-principles for applications in quantum information science and energy conversion. Ping is a recipient of Hellman fellows in 2018, Nature Research award (shortlist) in 2020, Air Force YIP in 2021, and ACS Open Eye COMP Award in 2021.

Ping group website:

<https://yuanping.chemistry.ucsc.edu/>