Open Postdoctoral Position

Project: Theoretical investigations of physical and chemical phenomena at interfaces of water with hydrophobic media

We solicit applications for a postdoctoral position in Professor Himanshu Mishra’s research Group (Interfacial Lab) at King Abdullah University of Science and Technology (KAUST), Saudi Arabia (https://interfaciallab.kaust.edu.sa).

Job Description: We seek to complement our multi-scale and multi-disciplinary research program with computer simulations to gain mechanistic insights into our experiments. Described below are specific examples of ongoing research projects:

1. Specific-ion effects on the organization/disruption of dipalmitoylphosphatidylcholine (DPPC) monolayers at the air-water interface; mass transfer of water vapor through superhydrophobic nanochannels.
2. Force-distance spectroscopy of perfluorodecyltrichlorosilane (FDTS) terminated mica films in electrolytes; characterizing amyloid deposition and prevention on model surfaces; isothermal titration calorimetry.
3. Hydrophobicity of nano-/micro-textured and mechanisms underlying water imbibition/condensation over time.

Our collaborators include, Professor Charlotte Hauser (KAUST), Dr. Steve Donaldson (Ecole Normale Superieure, Paris), Professor Jacob Israelachvili (UCSB), Professor Bill Goddard (Caltech), Professor Adri van Duin (U Penn), Prof. Bill Goddard (Caltech) Prof. Ran Friedman (Linnaeus Univ.), Dr. Tod Pascal (LBNL, UC Berkeley), Prof. Rich Saykally (UC Berkeley), Prof. Clay Radke (UC Berkeley).

Please send the CV to Himanshu.Mishra@kaust.edu.sa
Expectations:

1. The candidate should have a solid grasp on various toolkits of theoretical and computational chemistry, including statistical mechanics, thermodynamics, *ab initio* methods and classical molecular dynamics.
2. Strong computer programming skills
3. Independent, Curiosity-driven, dedicated, and a team player
4. Very hard working
5. Strong communication, analytical, and scientific writing skills
6. Interface between our Group and various theorists colleagues simulating our experiments

The position is ideal for an independent computational chemist/physicist because of unhindered access to a vast amount of experimental data from our complementary experiments along with unparalleled access to the computational resources at the KAUST Supercomputing Laboratory.

KAUST offers excellent academic and social atmosphere. Postdocs and PhD scholars enjoy highly competitive salaries and benefits, along with a truly global exposure through colleagues from over 100 nationalities. **Join us for an adventure!**

For further information about KAUST, the Supercomputing Lab, postdoctoral life/benefits, social life, etc., please visit:

- [https://www.hpc.kaust.edu.sa/](https://www.hpc.kaust.edu.sa/)
- [https://interfaciallab.kaust.edu.sa/Pages/Home.aspx](https://interfaciallab.kaust.edu.sa/Pages/Home.aspx)
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