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Seminar

Materials Science & Engineering

Presents:

Miao Liu

Ph.D. Candidate, Materials Science & Engineering, University of Utah

"Bistability of Nanoscale Ag Islands on a Si(111)-(4x1)-In Surface Induced by Anisotropic Stress"

This work presents a combined experimental and theoretical study of stability of Ag nanoislands grown on Si(111)-(4x1)-In surface. Our collaborator found in their experiments that two stability regimes exist: a conventional regime at low temperature where only one island shape is stable, and an unconventional regime at room temperature (RT) where isotropic compact islands coexist with anisotropic elongated ones. We performed First-principles calculations to show the unusal bistability at RT arises from the fact that the Ag nanoislands are under anisotropic stress, supporting a recent theoretical prediction by Zandvliet and van Gastel [Phys. Rev. Lett. 99, 136103 (2007)].

ALSO

Rujie Sun

Ph.D. Candidate, Materials Science & Engineering, University of Utah

"Fabrication of Parylene-based Microfluidic Capacitor Sensor"

Surface stress-based sensors are a relatively new class of sensors that has immense potential for chemical and biological sensing. In this seminar talk, design and fabrication of novel parylene micro membrane surface stress sensor will be introduced, which exploits low mechanical stiffness of polymers. This kind of sensor requires very limited masks and very low-temperature processes.

Wednesday October 21, 2009
4:10-5:00 p.m.
1230 WEB