



“THE STRONGEST MATERIAL IN THE UNIVERSE- NEUTRON STAR CRUSTS”

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Stars freeze. After their deaths in supernova, the outer layers of neutron stars freeze and form a solid. In some ways, this makes neutron stars like the earth, with a thin solid crust enveloping a liquid core. To interpret observations of neutron stars and constrain nuclear theory the 'astromaterials' in this crust must be understood. Broadly speaking, this crust has two components. Near the top, nuclei form Coulomb crystals, solid crystal lattices. Deeper, at the crust-core boundary, nuclei rearrange and form exotic shapes called "nuclear pasta." In this talk, I will discuss recent work studying the structure and properties of these materials with molecular dynamics simulations, including results that suggest that nuclear pasta may be the strongest material known in the universe.

Tuesday, October 16, 2018

4:00 pm

Roger W. Finlay Conference Room

Coffee and Cookies at 3:50 pm