Generalized Density of States for Confined Molecular Oxygen from Inelastic Neutron Scattering

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Inelastic neutron scattering measurements were carried out on condensed bulk and confined molecular oxygen using the disc chopper spectrometer (DCS) at the Center for High Resolution Neutron Scattering at NIST. Depending on cooling rate we find that we are able to suppress crystallization in pores with 130Å diameter. Slower cooling allows crystallization, but the density of states reveal a mixing of crystal excitations from different phases.

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