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Dynamically polarized material studies at UNH

The UNH nuclear physics group operates a 5 Tesla, 1 Kelvin Dynamic Nuclear Polarization Lab. We have performed enhanced polarization measurements on Butanol, Propanediol, thermosetting polymers and deuterated analogs using commercially available radicals. We will present max polarizations obtained along with polarization relaxation times. We will also discuss a temperature controlled process we utilize to solidify anhydrous ammonia, and the methods we've implemented to characterize the material. The goal of this effort is to create a crystalline solid with improved thermal and mechanical properties compared to the amorphous solid typically used in scattering experiments.

Summary

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Session Classification: Solid Polarized Targets

Track Classification: Solid Polarized Targets