

Abstract Submitted
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Optically Detected Scanned Probe Magnetic Resonance Imaging¹

CHRISTOPHER WOLFE, VIDYA BHALLAMUDI, HAILONG WANG, CHUNHUI DU, SERGEI MANUILOV, ROHAN ADUR, FENGYUAN YANG, P. CHRIS HAMMEL, The Ohio State University Department of Physics — Magnetic resonance is a powerful tool for studying magnetic properties and dynamics of spin systems. Scanned magnetic probes can induce spatially localized resonance due to the strong magnetic field and gradient near the magnetic tip.^{2,3} Nitrogen vacancy centers (NV) in diamond provide a sensitive means of measuring magnetic fields at the nanoscale. We report preliminary results towards using the high sensitivity of NV detection with a scanned magnetic probe to study local magnetic phenomena.

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