

Abstract Submitted
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Ferromagnetism in Mn-implanted HOPG¹ SAMARESH GUCHHAIT, The University of Texas at Austin, HENDRIK OHL DAG, Stanford Synchrotron Radiation Lightsource, DOMINGO FERRER, SANJAY BANERJEE, The University of Texas at Austin — 20 keV energy Mn ions were implanted on HOPG samples at 300°C. SQUID magnetometer measurements show ferromagnetic ordering and magnetic hysteresis at very low temperatures. Mn K-edge XAS spectra show presence of Mn and O in our sample and XMCD data shows ferromagnetic ordering of Mn at 14 K, but not at 300 K. SIMS data show presence of Mn and O with carbon, besides other elements. Raman spectroscopy results indicate disorder graphite phase and high resolution TEM images confirm amorphous Mn-implanted region with presence of nanocrystallites.

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