

Abstract Submitted
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Magnetic Ordering In Superconducting Nb-doped Bi₂Se₃ PAUL CORBAE, BENJAMIN LAWSON, GANG LI, FAN YU, TOMOYA ASABA, COLIN TINSMAN, Univ of Michigan - Ann Arbor, YUSHENG QUI, YEW SAN HOR, Missouri University of Science and Technology, LU LI, Univ of Michigan - Ann Arbor — Coexistence of superconductivity and magnetic order has been suggested by early studies of topological superconductor candidate, niobium doped Bi₂Se₃. In order to elucidate the interesting physics of this coexistence, we performed highly sensitive torque magnetometry to study the materials magnetization. We observed a bump feature in the magnetization around 8 Tesla in both the superconducting and non-superconducting samples. This is distinct from the paramagnetic torque response of the parent compound, Bi₂Se₃, suggesting some interesting magnetic order in Nb-doped Bi₂Se₃.

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