

Abstract Submitted  
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**Upper Critical Field in the Molecular Organic Superconductor (DMET)<sub>2</sub>I<sub>3</sub>**<sup>1</sup> PASHUPATI DHAKAL<sup>2</sup>, Boston College, HARUKAZU YOSHINO, Osaka City University, JEONG IL OH, Boston College, KOICHI KIKUCHI, Tokyo Metropolitan University, MICHAEL J. NAUGHTON, Boston College — We report the temperature dependence of the upper critical magnetic field in the quasi-one-dimensional molecular organic superconductor (DMET)<sub>2</sub>I<sub>3</sub>, for magnetic field applied along the intrachain, interchain, and interplane directions. The upper critical field tends to saturation at low temperature for field in all directions and does not exceed the Pauli paramagnetic limit. Thus the superconductivity appears to be conventional spin singlet, in contrast to the status of the isostructural Bechgaard salts. Furthermore, we will discuss a magnetic field-induced dimensional crossover effect in the normal metallic state leading to a magnetoresistance minimum for the field parallel to the most conducting plane. This result will be useful to understand the nature of superconductivity in the molecular organic conductors.

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<sup>2</sup>Current Address: Jefferson Lab, Newport News, VA

Pashupati Dhakal  
Boston College

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