



第 103 回トポロジカル物質科学セミナー
Topological Materials Science Seminar
(103)

**Enhancement of the upper critical field in disordered
transition metal dichalcogenide monolayers**

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**Place: Room C325, Faculty of Engineering Building C, 3F,
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Date: July 25 (Thursday), 2019

Time: 16:30-18:00

Abstract:

We calculate the effect of impurities on the superconducting phase diagram of transition metal dichalcogenide monolayers in the presence of an in-plane magnetic field. Due to strong intrinsic spin-orbit coupling, the upper critical field greatly surpasses the Pauli limit at low temperatures. We find that it is insensitive to intravalley scattering and, ultimately, limited by intervalley scattering.