

Abstract Submitted
for the MAR13 Meeting of
The American Physical Society

Dislocations in topological phases of matter and their topological terms AKIHIRO TANAKA, TORU KIKUCHI, National Institute for Materials Science — When dislocations are present in topological insulators/superconductors and their variants, they are known to endow subgap boundstates. We revisit their physics from the viewpoint of topological field theories, discussing several issues among which are 1) the interplay of the Nieh-Yan torsional invariant with other topological terms, 2) possible appearance of Nieh-Yan-like terms in nonlinear sigma models of competing orders, 3) the subtle controversy on the absence/existence of Callan-Harvey-like anomaly-inflow in the dual formulation.

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Date submitted: 09 Nov 2012

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