

Abstract Submitted
for the MAR05 Meeting of
The American Physical Society

Spin current and magneto-electric effect in non-collinear magnets HOSHO KATSURA, Tokyo University, NAOTO NAGAOSA, Tokyo University, ALEXANDER BALATSKY — A new mechanism of the magneto-electric (ME) effect based on the spin supercurrent is theoretically proposed for non-collinear magnets. The close analogy between the superconductors (charge current) and magnets (spin current) is drawn to derive the distribution of the spin supercurrent and the resultant electric polarization. Applications to various spiral magnets are discussed.

Alexander Balatsky
Los Alamos National Laboratory

Date submitted: 01 Dec 2004

Electronic form version 1.4