

**Title:** "Chiral magnetic effect and natural optical activity in metals with or without Weyl points"

**Abstract:** "I will consider the phenomenon of natural optical activity, and related chiral magnetic effect in metals with low carrier concentration. It will be shown that it is the orbital magnetic moment of quasiparticles in a helical metal that is responsible for their natural optical activity, and thus the chiral magnetic effect. While for purely static magnetic fields the chiral magnetic effect is known to have a topological origin and to be related to the presence of Berry curvature monopoles (Weyl points) in the band structure, I will show that the existence of Berry monopoles is not required for the dynamic chiral magnetic effect to appear; the latter is thus not unique to Weyl metals. Prospects for experimental detection of the aforementioned phenomena will also be discussed."

**Reference:** J. Ma, and D. Pesin, PRB 92, 235205 (2015)