Non linear physical properties in chiral magnets

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Construction of molecule-based magnets, which belongs to chiral space groups, is currently a challenging target. The physical characteristics of current interest involve optical properties, particularly with respect to natural optical activity[1-8]. In the case of a magnet with non-centrosymmetric structure, the space-inversion and time-reversal symmetry are simultaneously broken. Moreover, when a magnet is characterized by chiral structure, the magnetic structure of the crystal is expected to be a chiral spin structure. These magnets display not only asymmetric magnetic anisotropy but also various types of magneto-optical phenomena such as the non-linear magneto-optical effect and magneto-chiral dichroism [9-10]. Non linear physical properties will be presented and discussed.

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