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【838】 Broadband spin-wave spectroscopy performed on single crystals of the insulating chiral magnet Cu_2OSeO_3

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The chiral ferrimagnet Cu_2OSeO_3 hosts topologically protected spin textures known as magnetic skyrmions. It has been shown to provide novel functionality in microwave technology due to e.g. dichroism. We conducted broadband spin-wave spectroscopy on different single crystals of Cu_2OSeO_3 with magnetic fields applied in different orientations. In the field-polarized phase at 5K we observe numerous sharp resonances that we attribute to discretized spin waves in the mm-long crystals. Their observation substantiates a very low damping parameter which is key for microwave applications. Support by DFG TRR80, DFG FOR960, ERC Advanced Grant 291079 (TOPFIT) and SNSF Sinergia Network NanoSkyrmionics CRSII5 171003 is acknowledged.

Author: Ms CHE, Ping (École polytechnique fédérale de Lausanne)

Co-authors: Dr STASINOPOULOS, Ioannis (Technische Universität München); Dr BAUER, Andreas (Physik Department E51, Technische Universität München); Dr WAIZNER, Johannes (Institut für Theoretische Physik, Universität zu Köln); Dr BERGER, Helmuth (École polytechnique fédérale de Lausanne); Dr GARST, Markus (Institut für Theoretische Physik, Technische Universität Dresden); Prof. PFLEIDERER, Christian (Physik Department E51, Technische Universität München); GRUNDLER, Dirk (EPFL)

Presenter: Ms CHE, Ping (École polytechnique fédérale de Lausanne)

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