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【666】 Bulk Magnon Modes in Cu₂OSeO₃ Detected by Brillouin Light Scattering Microscopy at Low Temperature

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The chiral ferrimagnet Cu₂OSeO₃ hosts topologically protected spin textures known as magnetic skyrmion lattices and exhibit characteristic magnon band structures. We conducted scanning Brillouin light scattering (BLS) spectroscopy on bulk-shape single crystals of Cu₂OSeO₃ at low temperature with magnetic field applied along (100). Multiple magnon modes were observed in conical and field-polarized state and attributed to bulk magnon modes with a high wavevector of up to $k = 35.6$ rad/micrometer. BLS studies hence enable one to explore anisotropic characteristics of magnon bandstructures for differently oriented Cu₂OSeO₃ crystals. This work is support by SNSF via 171003 and DFG TRR80.

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