Abstract Submitted
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Phase Behavior, Synchronization, and Emergent Flows of Spinning Magnetic Colloids VISHAL SONI, SOFIA MAGKIRIADOU, University of Chicago, BENNY C. VAN ZUIDEN, Leiden University, THEODORE HUECKEL, New York University, VINCENZO VITELLI, Leiden University, STEFANO SACANNA, New York University, WILLIAM T.M. IRVINE, University of Chicago — We study the collective motion, phase behavior, and synchronization of colloidal particles spun by a rotating magnetic field. We tune the inter-particle interactions, spinning speed, and particle shape, while imaging the orientation of each particle over time. I will discuss the observed phase transitions in structure and synchronicity, as well as the collective dynamics of the system.

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