



**Showcasing research from Professor Ming Yang's group, the State Key Laboratory of Inorganic Synthesis and Preparative Chemistry, College of Chemistry, Jilin University, Jilin, China.**

**Anisotropy-dependent chirality transfer from cellulose nanocrystals to  $\beta$ -FeOOH nanowhiskers**

Polysaccharides are closely associated with biogenic iron oxide in biomineralization. Using cellulose nanocrystals as both templates and chiral ligands, we demonstrate that this interaction not only guides mineralization but also induces chirality transfer at the molecular level. Oriented attachment of  $\beta$ -FeOOH nanoparticles on the surface of cellulose nanocrystals leads to highly aligned chiral nanowhiskers with an anisotropy-dependent g-factor, driven by enhanced dipole-dipole interactions. Incorporation of  $\beta$ -FeOOH also modifies the magnetic response of cellulose helical photonic films, highlighting strong coupling between the mineral phase and the chiral matrix.

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**As featured in:**



See Ming Yang *et al.*,  
*Chem. Sci.*, 2025, **16**, 10255.