



Showcasing collaborative research from the groups of Professors Serena DeBeer (Max Planck Institute for Chemical Energy Conversion, Germany) and Vincent Eijsink (Norwegian University of Life Sciences, Norway).

Structural and electronic modulations of lytic polysaccharide monooxygenase (LPMO) upon chitin binding: insights from X-ray spectroscopy

Due to their role in the decomposition of insoluble polysaccharides, lytic polysaccharide monooxygenases (LPMOs) have gained significant interest for their potential in biotechnological applications. These interfacial enzymes utilize a unique monocopper center to activate high energy C–H bonds. An improved understanding of LPMO function may hold the key to designing catalysts for C–H bond activation. DeBeer and co-workers investigate structural and electronic modulations at the Cu site of a chitin-active LPMO through the lens of X-ray spectroscopy, uncovering interaction dynamics between the active site and its substrate.

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### As featured in:



See Vincent G. H. Eijsink, Serena DeBeer *et al.*, *Chem. Sci.*, 2025, **16**, 22952.