



Showcasing research from Professor Lan's laboratory,
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Electrochemical oxidation of lignin model compounds over
metal oxyhydroxides on nickel foam

The authors develop nickel oxyhydroxide on nickel foam as the working electrode for electro-oxidative cleavage of the lignin β -O-4 ethers. The yield of veratric acids reach 93% and the selectivity is beyond 95%. The manuscript reveals the different reaction pathways between phenolic and non-phenolic structures: The non-phenolic structure undergoes C β -C γ /C β -O or C α -C β cleavage, predominantly producing benzoic acids, while the phenolic structure is rapidly oxidized into dicarboxylic acids over NiOOH.

As featured in:



See Zeng Xu, Lan Wu *et al.*,
Green Chem., 2024, **26**, 7759.