



**NOVEL PACKAGING
SOLUTIONS**



CATBIOBLOCKS: CATTAIL BIOMASS FOR SUSTAINABLE PACKAGING AND EMULSIONS



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Cattail plants are explored as an alternative to wood for making bio-based materials for both emulsions and sustainable packaging.

Drained peat croplands are among Europe's largest land-use emission sources; in Finland alone they release around ten million tonnes of CO₂ a year. Raising the water table and growing cattail (*Typha*) instead can cut emissions by up to 35 tonnes of CO₂ equivalent per hectare annually – but the crop needs a market. CatBioBlocks turns cattail stems into the same lignocellulosic building blocks as wood: alkaline pulping separates cellulose and lignin, which become cellulose nanofibrils and lignin nanoparticles for Pickering emulsion stabilisation and fibre-based packaging. The demonstrator is a cosmetic emulsion in a bio-based jar. A FinnCERES project with Aalto University, VTT and Luke.

