

Supporting Information

Enzyme Immobilization Inside the Porous Wood Structure a Natural Scaffold for Continuous Flow Biocatalysis

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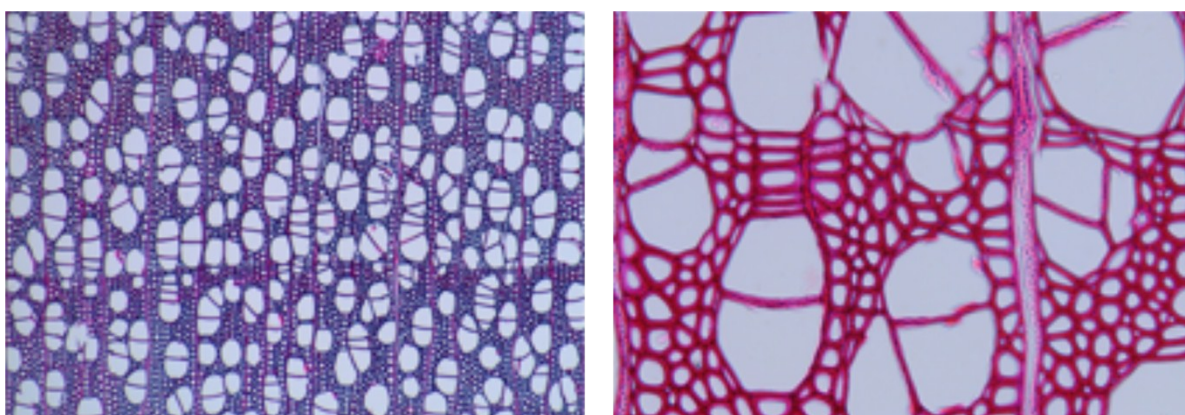


Figure S1: Images of the microstructure of poplar wood acquired with an optical microscope. The images show dyed thin cuts of cross sections of the wood. The vessels are well visible as big pores, as well as the overall porosity. The magnifications are 40x on the left and 200x on the right.^[1]

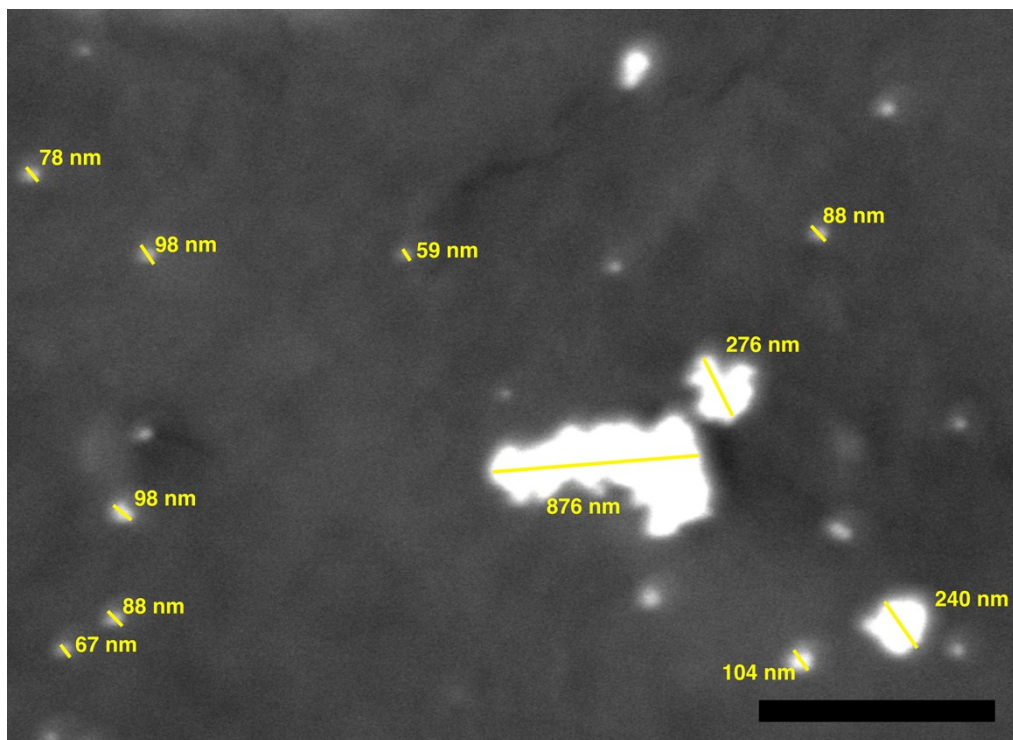


Figure S2: Exemplary SEM micrograph of Au@wood. The yellow lines mark particle diameters as they were measured for particle size determination with the software ImageJ. The diameter values of the individual particles are also given in yellow. The scale bar depicts 1 μm .

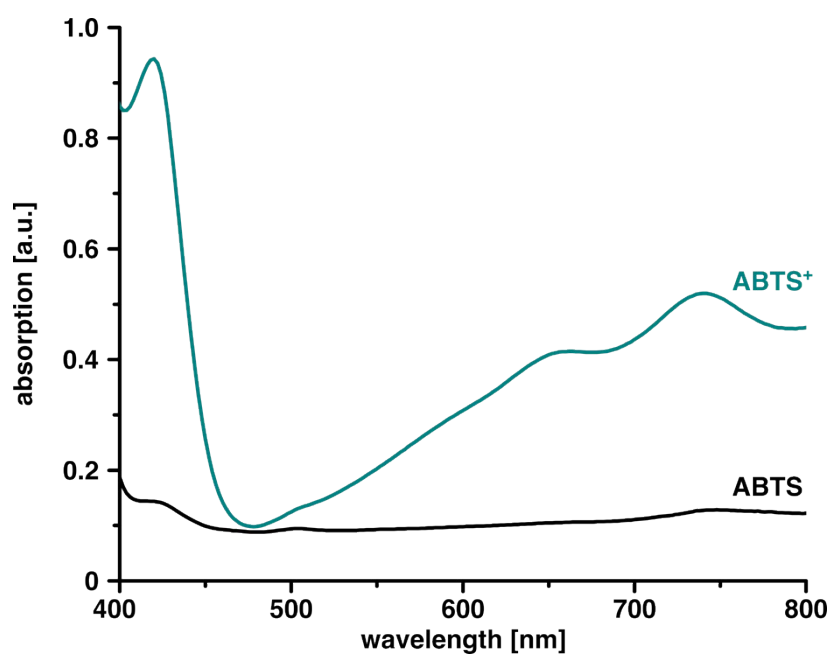


Figure S3: Absorption spectra of ABTS (black line) and ABTS⁺ (green line).

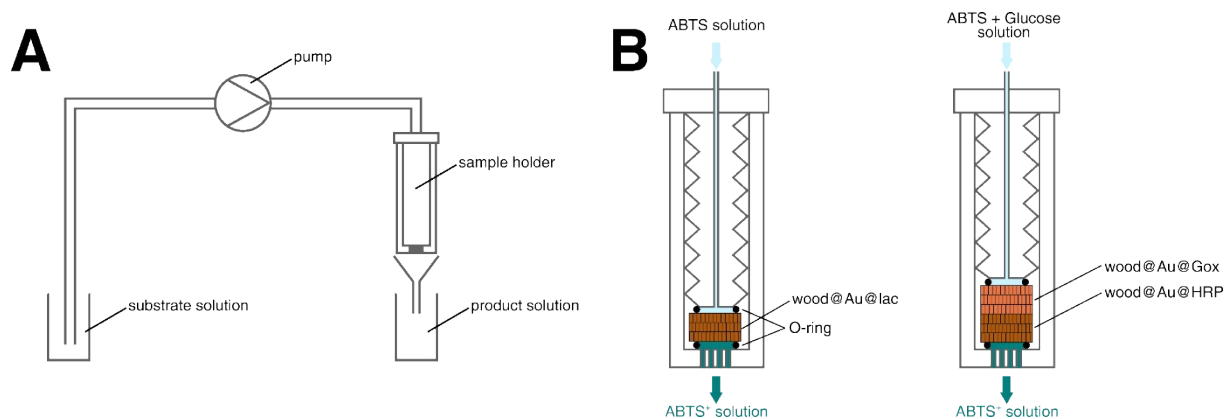


Figure S4: Schematic drawings of (A) the flow-through set-up where a peristaltic pump transports the substrate solution into the sample holder and the product solution is collected from the sample holder in a vial and (B) the sample holder that was used in the flow-through experiments. The sample holder allows for the insertion of a variable amount of samples and ensures a flow-through of the substrate solution through the samples. For wood@Au@lac (left), three samples were mounted into the holder and a solution of ABTS was used as substrate solution. For the cascade reaction (right), three samples of wood@Au@Gox and three samples of wood@Au@HRP were used in a way that the substrate solution first came in contact with the three samples wood@Au@Gox and subsequently with wood@Au@HRP. A solution of ABTS and glucose was used as a substrate solution.

[1] Xylothek, Institute for Building Materials (IfB), ETH Zürich, Switzerland; images by Stéphane Croptier.