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Cellulose-copper as bio-supported recyclable catalyst for the clickable azide-alkyne [3+2] cycloaddition reaction in water

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Abstract

Naturally-occurring cellulose has been employed as a bio-support macromolecule for the immobilization of either copper(I) or copper(II) ions in order to click azide and alkyne derivatives in water. Under such a click regime, 1,4-disubstitued-1,2,3-triazoles were obtained regioselectively in excellent yields at room temperature. The reaction work-up is simple and the bio-heterogeneous catalyst that has been fully characterized by AAS, SEM, EDX

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