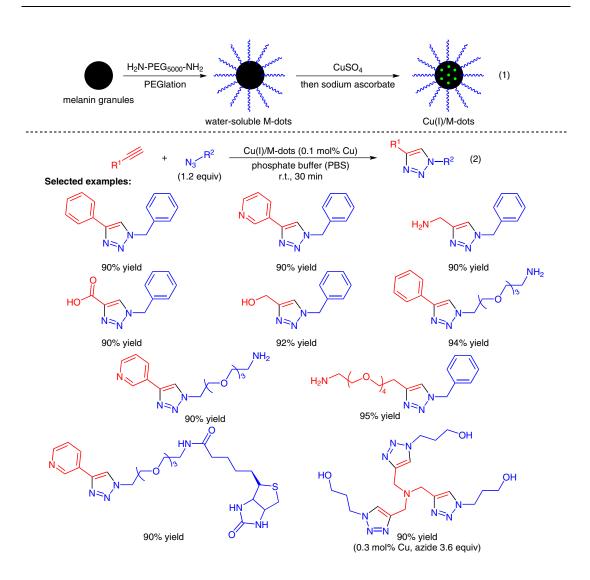
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Recyclable Cu(I)/Melanin Dots for Cycloaddition, Bioconjugation and Cell Labelling *Chem. Sci.* **2016**, *7*, 5888–5892.

## Azide-Alkyne Cycloaddition with a Melanin-Supported Copper(I) Catalyst



Significance: A copper(I) catalyst supported on poly(ethylene glycol) (PEG) grafted melanin granules [Cu(I)/M-dots], prepared by the method shown in eq. 1, catalyzed an azide–alkyne cycloaddition in phosphate-buffered saline at room temperature during 30 minutes to give the corresponding triazoles in ≤95% yield (eq. 2).

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**Comment:** In the azide—alkyne cycloaddition of amino-PEG<sub>3</sub> azide with ethynylbenzene, the Cu(I)/M-dots catalyst was recovered by centrifugation and reused six times without significant loss of its catalytic activity. The Cu(I)/M-dots-catalyzed azide—alkyne cycloaddition was also used in bioconjugation and cell labeling.

Category

Polymer-Supported Synthesis

Key words

copper

azides

alkynes

triazoles

click chemistry

