Electronic Supplementary Material (ESI) for Polymer Chemistry.

Supporting Information

Combination of photoinduced copper (I) catalyzed click chemistry and photosol-gel reaction for the synthesis of hybrid materials

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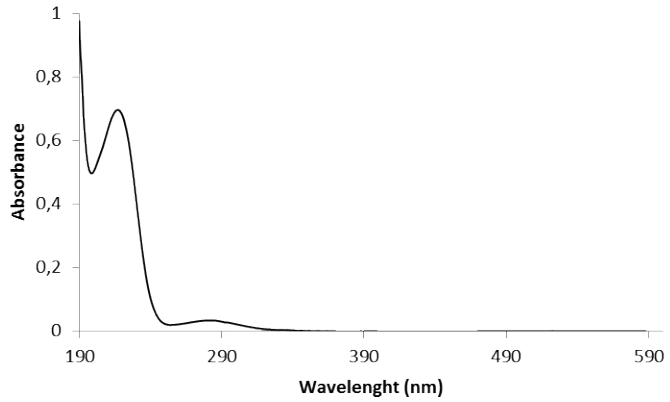

Fig. S1 Absorption spectrum of ethyl 2-azidopropionate in acetonitrile (concentration: 1.10^{-3} mol.L^{-1}).

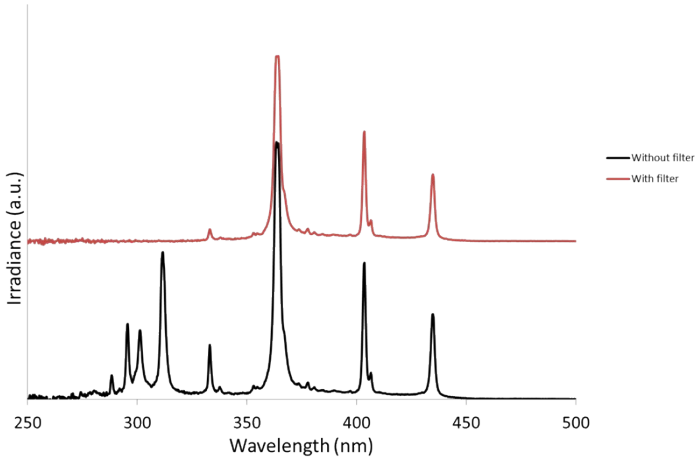

Fig. S2 Emission spectrum of Hg-Xe lamp equipped with a 365 nm reflector, with and without borosilicate glass plate used as cutoff filter.

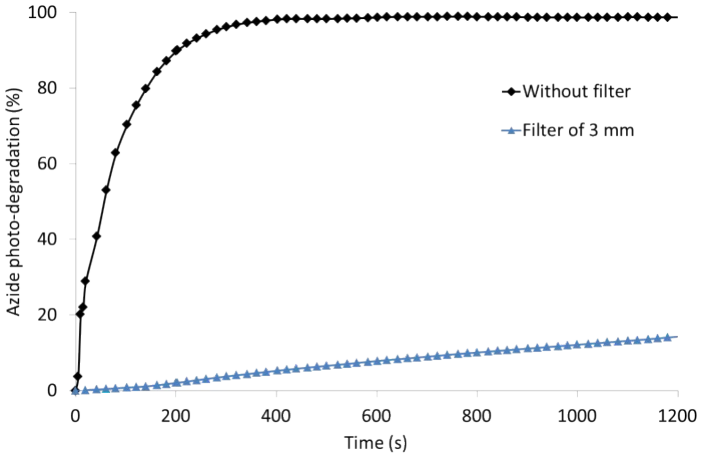

Fig. S3 Photodegradation of ethyl 2-azidopropionate followed by RT FTIR. The azide precursor was laminated between two BaF_2 pellets and submitted to UV irradiation with and without borosilicate glass plate cutting all wavelengths below 300 nm.

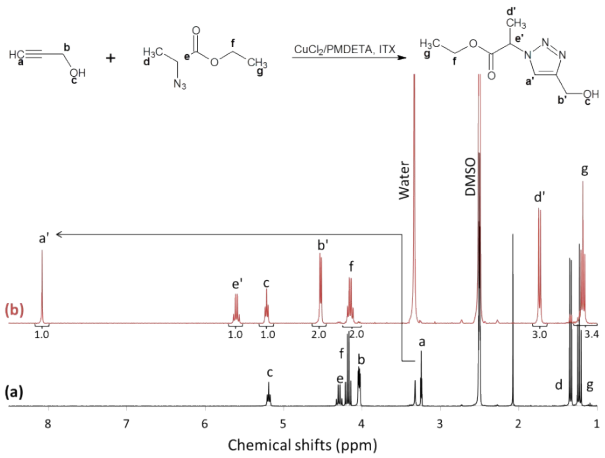

Fig. S4 ^{1}H NMR spectrum in DMSO-d of (a) the photoinduced click reaction before irradiation and (b) product of reaction after 20 min of irradiation. (Ethyl 2-azidopropionate/propargyl alcohol 1/1.1 molar ratio, 3.5 wt% $CuCl_2$/PMDETA and 2.0 wt% ITX).

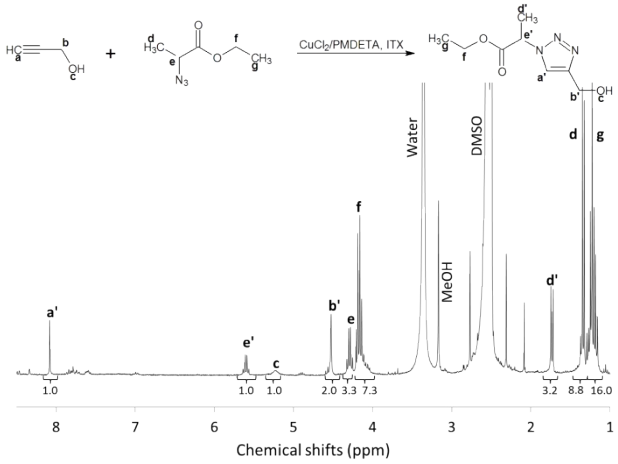

Fig. S5 ^{1}H NMR spectrum in DMSO-d of photoinduced click product obtained during the concomitant reaction. (Irradiation: UV conveyor, H lamp, 600 mW/cm^2/pass, 20 passes.)

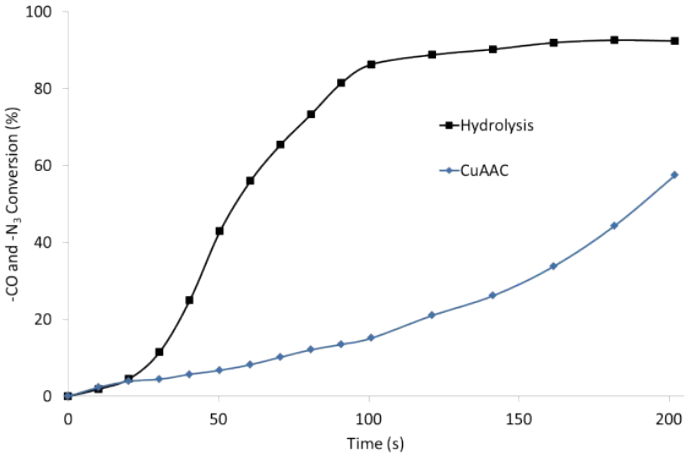

Fig. S6 Simultaneous sol-gel photopolymerization of PDMOS and photoinduced click reaction followed by RT FTIR under conveyor belt. (PDMOS /ethyl 2-azidopropionate in a ratio of (1/1) wt% , ethyl 2-azidopropionate/propargyl alcohol (1/1.1) molar ratio, 3 wt% of I250, 2 wt% of ITX, 1.5 mol eq. of H_2O, 55.5 wt% of MeOH and 3.5 wt% of $CuCl_2$/PMDETA. Irradiation condition: UV conveyor, H lamp, 600 mW/cm^2/pass, 20 passes.)