Supplementary Material (ESI) for Soft Matter
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Photo-Sensitive PMMA Microgels: Light-Triggered Swelling and Degradation

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Supporting Information

Time-dependent UV-vis spectra of the photoreactions of the photodegradable crosslinkers upon irradiation of solutions in THF ($c = 1.5 \cdot 10^{-4}$ mol/L) with UV light of the wavelengths $\lambda = 315$ -390 nm.

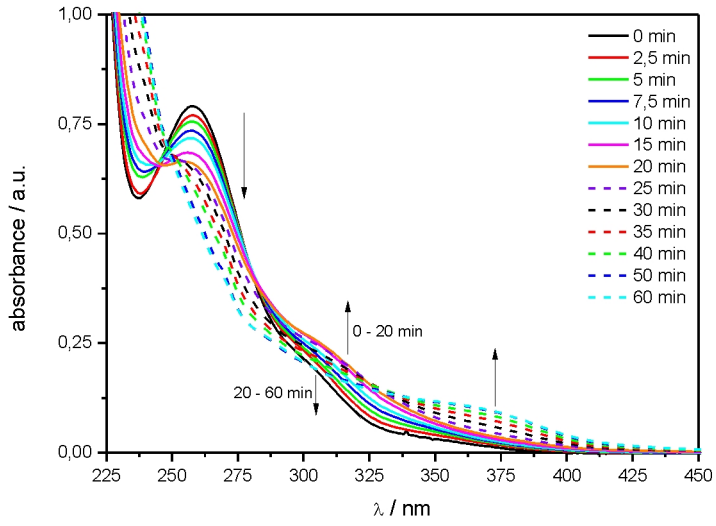

Figure S1a: Time-dependent UV-vis spectra of the photoreactions of the photodegradable crosslinker CL-1A.

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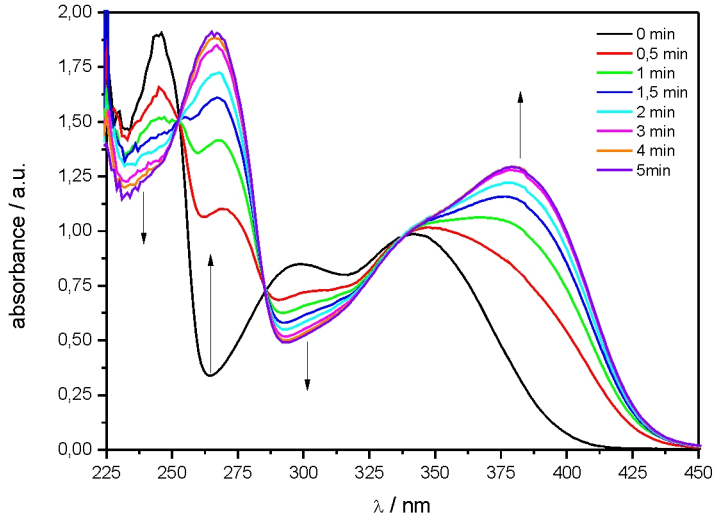

Figure S1b: Time-dependent UV-vis spectra of the photodegradation of the *o*-nitrobenzyl carbamate of the photodegradable crosslinker CL-4B.

Molecular structures of the dimeric azobenzene compounds formed as side products of the photoreaction.

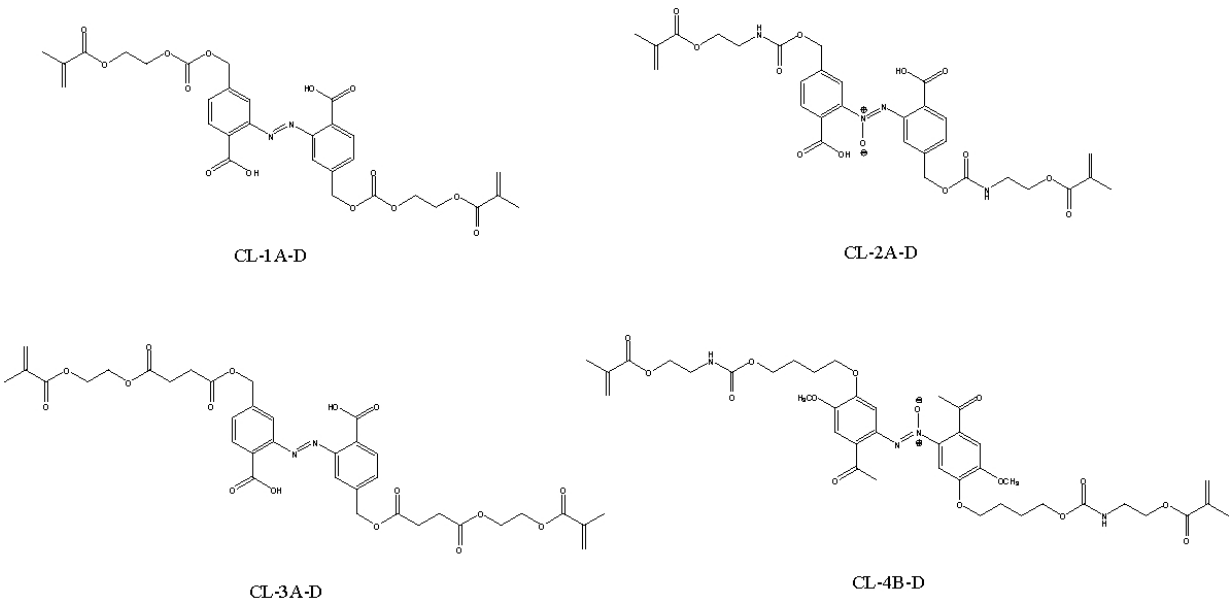

Figure S2: Structures of the dimeric azobenzene and azoxy benzene compounds.

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HPLC elugrams of the photoreaction of the photodegradable crosslinkers upon irradiation of solutions in THF ($c = 1.5 \cdot 10^{-4}$ mol/L) with UV light of the wavelengths $\lambda = 315$ -390 nm.

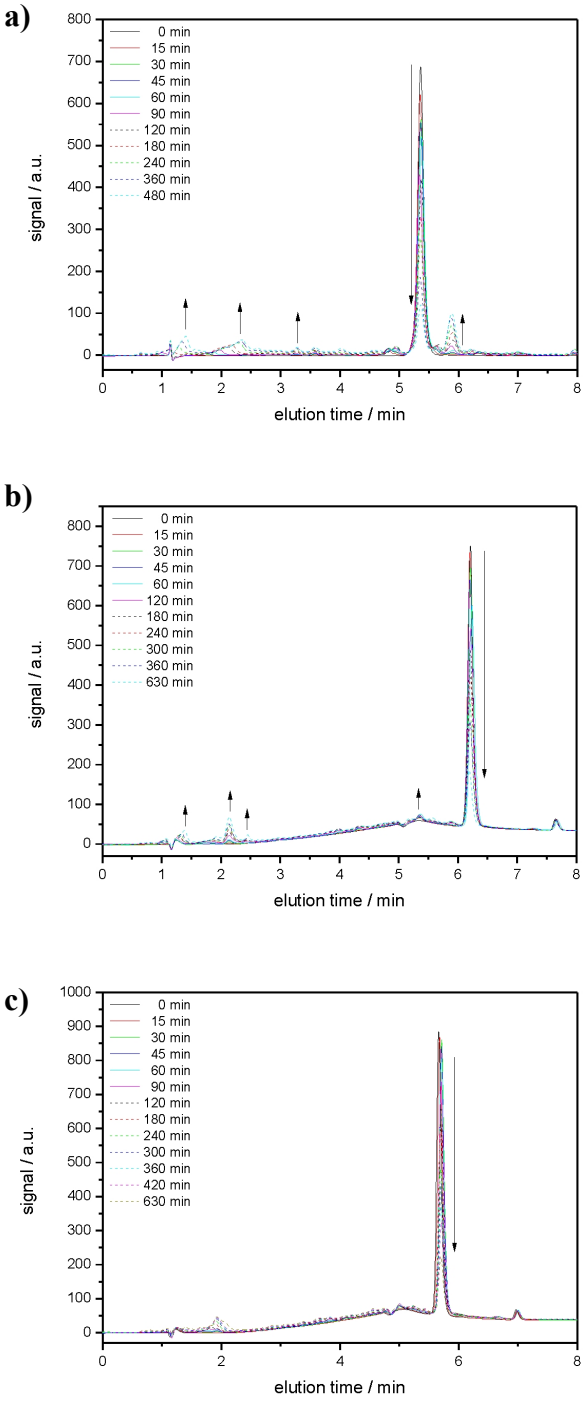

Figure S3: Time dependent HPLC elugrams of the photoreaction in THF of a) CL-1A, b) CL-2A and c) CL-3A.

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SEM pictures of PMMA reference particles MG-0 and MG-X after irradiation in $CHCl_3$ with broadband UV-light for 750 s and 1200 s.

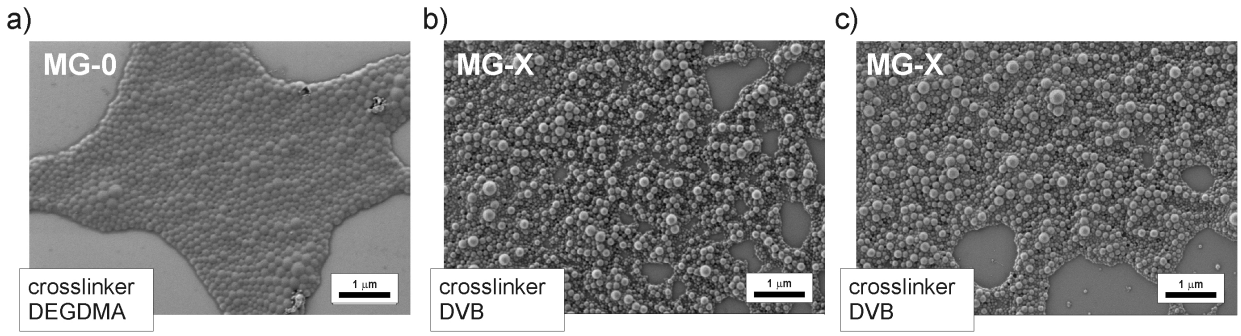

Figure S4: SEM pictures of PMMA reference particles after irradiation in $CHCl_3$ (λ = 200 – 600 nm; I = 95 mW/cm^2) a) MG-0 after 1200 s; b) MG-X after 750 s and c) MG-X after 1200 s of irradiation.