Electronic Supplementary Material (ESI) for Polymer Chemistry

Supporting Information

Polyurea microcapsules with photocleavable shell: UV-triggered release

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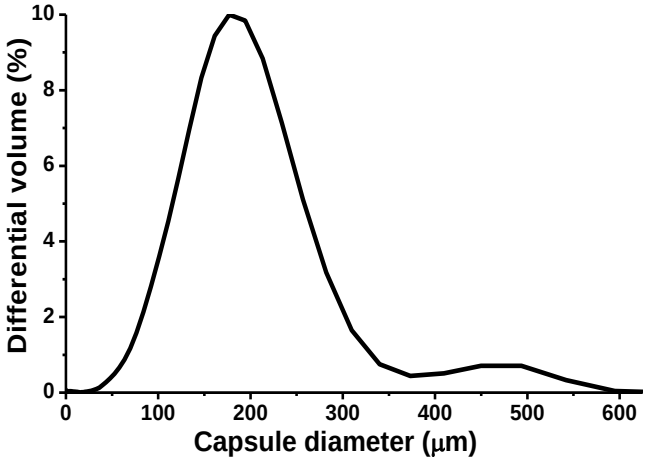

Figure S1. Differential volume distribution curve of particle diameter of microcapsules. (d_{10}: 94 μm, d_{50}: 175 μm, d_{90}: 273 μm)

Particle size analyses: were performed with a LS 200 Coulter particle size analyzer containing a small volume module using the Fraunhofer differential equation. In the captions, d_{10}, d_{50} and d_{90} stand for the percentage of the particles in the sample, which have a diameter less than a given particle diameter. For example, d_{10} indicates that 10 percent of the particles have a diameter less than 94 μm.

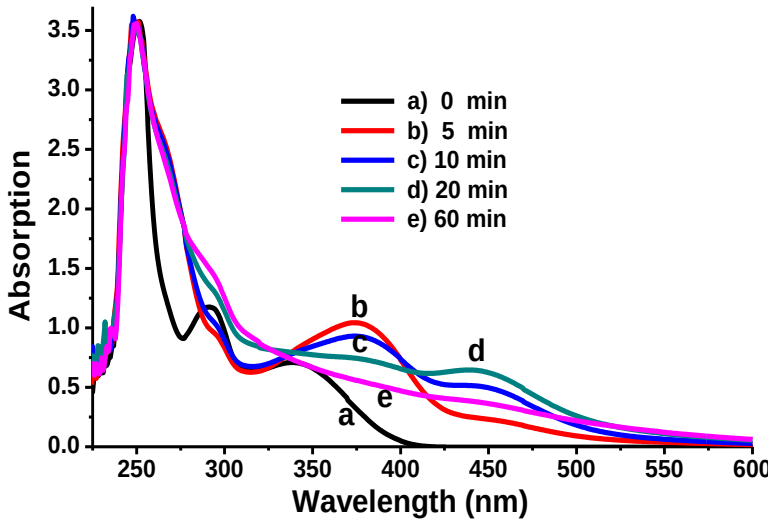

Figure S2. A) UV spectra of the NVOC-based diisocyanate oligomer in DMSO (1 mg mL^{-1}) after different UV irradiation times (0-60 min).

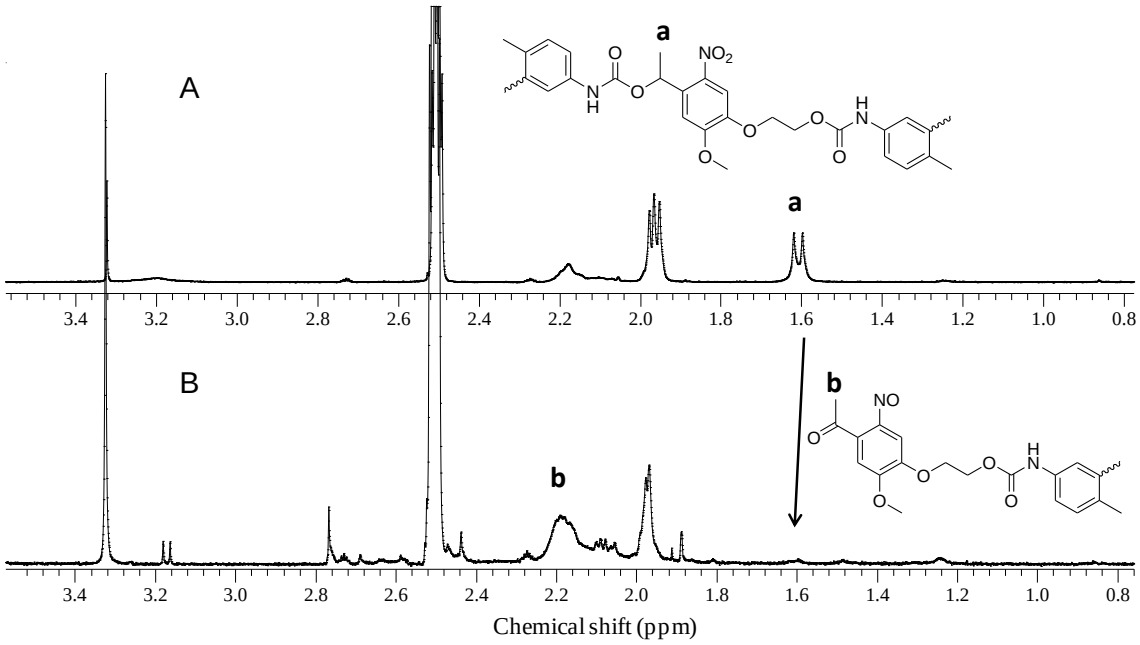

Figure S3. ^{1}H NMR spectrum of NVOC-based diisocyanate oligomer in d-DMSO (10 mg mL^{-1}) A) before UV-irradiation, B) after 4 hours of UV-irradiation.

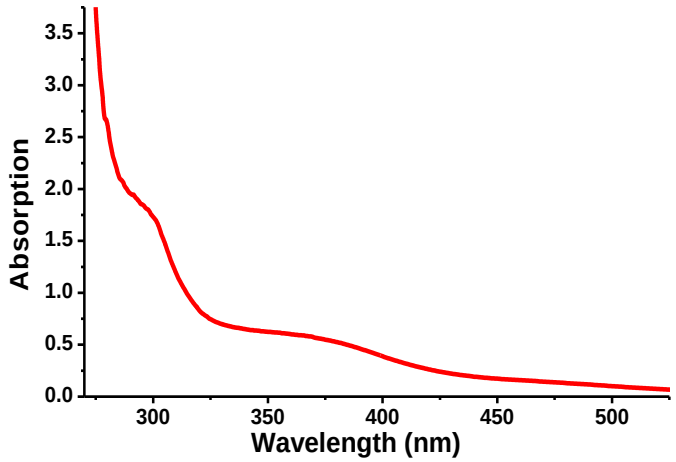

Figure S4. UV spectrum of the NVOC-based diisocyanate oligomer in d-DMSO (10 mg mL^{-1}) after 4 hours of UV irradiation.

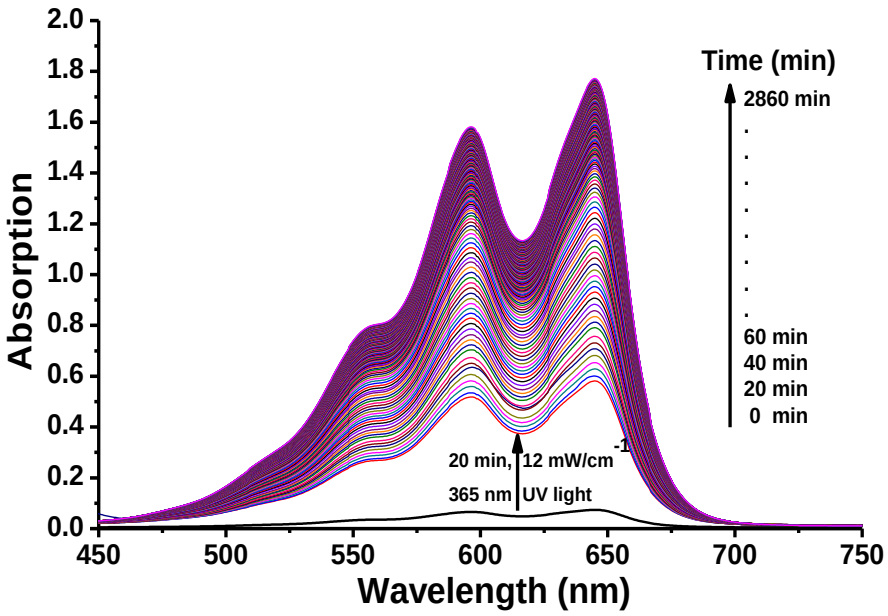

Figure S5. Release of the dye (solvent blue 35) from microcapsules in hexane solution monitored by changes in the dye absorbance at 597 and 645 nm. Figure shows the absorption of hexane solution before UV-irradiation and after 20 min UV-irradiation which was then followed for the next 48 hours.

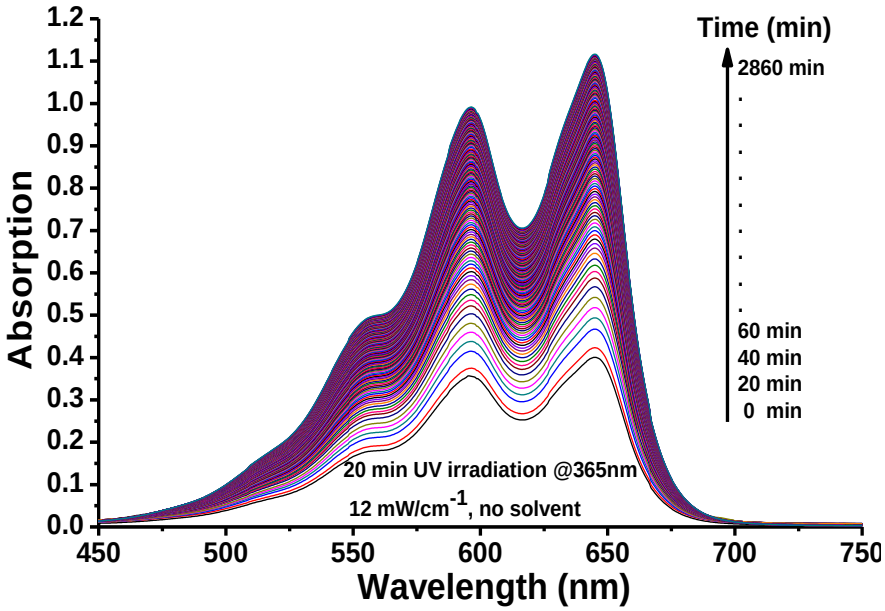

Figure S6. Release of the dye (solvent blue 35) from microcapsules in hexane solution monitored by changes in the dye absorbance at 597 and 645 nm after 20 min UV-irradiation on the solid microcapsules. After UV-irradiation on solid microcapsules, microcapsules were dispersed in hexane and the absorption of hexane solution was monitored for 48 hours.