Electronic Supplementary Material (ESI) for Polymer Chemistry.

Supporting Information

Photo-switching of surface wettability on micropatterned photopolymers for fast transport of water droplets over a long-distance

Elisabeth Rossegger,[a] Dieter Nees,[b] Simon Turisser,[a] Simone Radl,[a] Thomas Griesser,[c] and Sandra Schlögl[a,*]

[a]*Polymer Competence Center Leoben GmbH, Roseggerstrasse 12, A-8700 Leoben, Austria*

e-mail: sandra.schloegl@pccl.at

[b]*Joanneum Research GmbH, Franz-Pichler-Strasse 30, A-8160 Weiz, Austria*

[c]*Institute of Chemistry of Polymeric Materials, Montanuniversitaet Leoben, Otto Glöckel-Strasse 2, A-8700 Leoben, Austria*

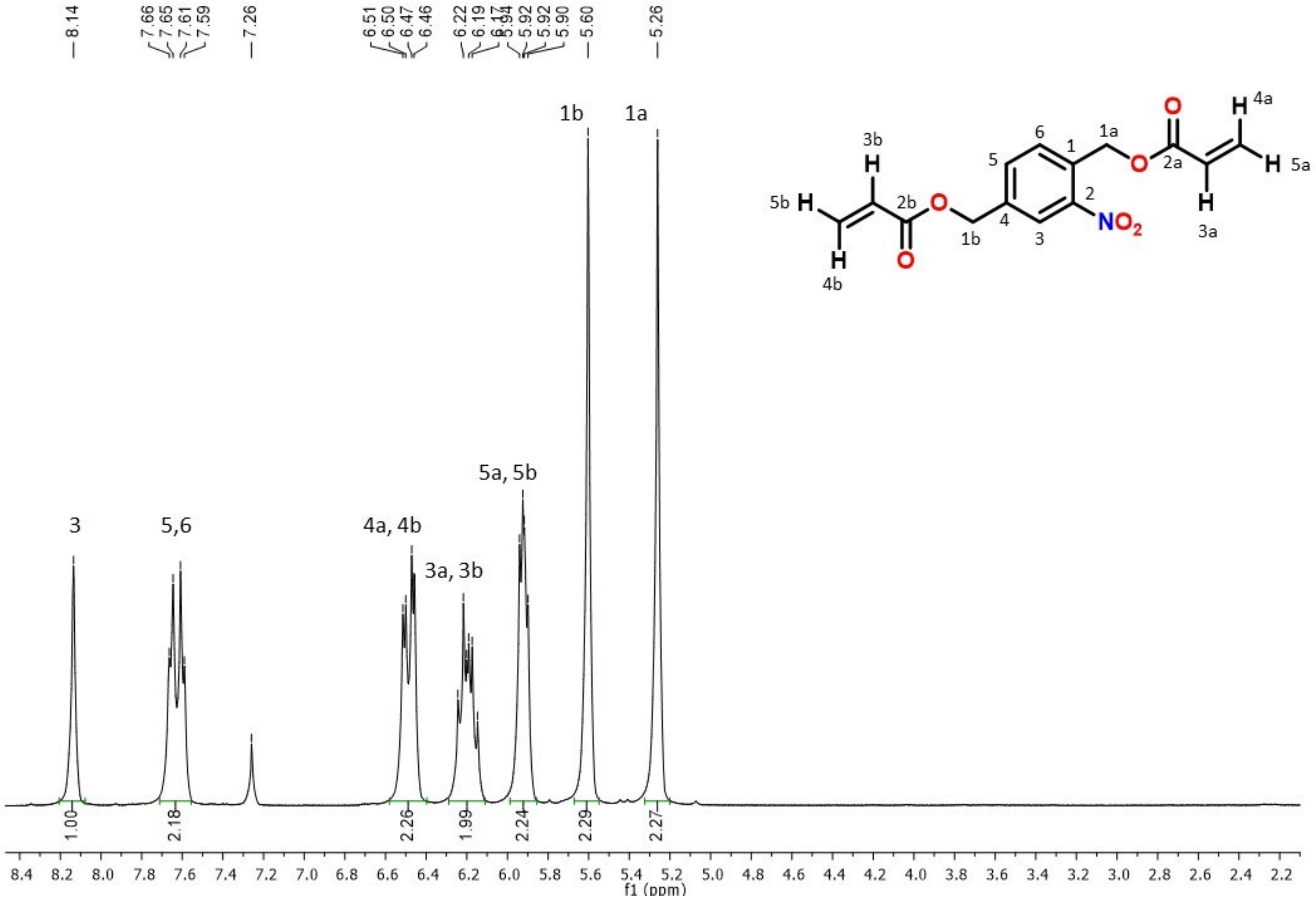

Figure S1 – ^{1}H NMR spectrum of acrylate-**NBE**

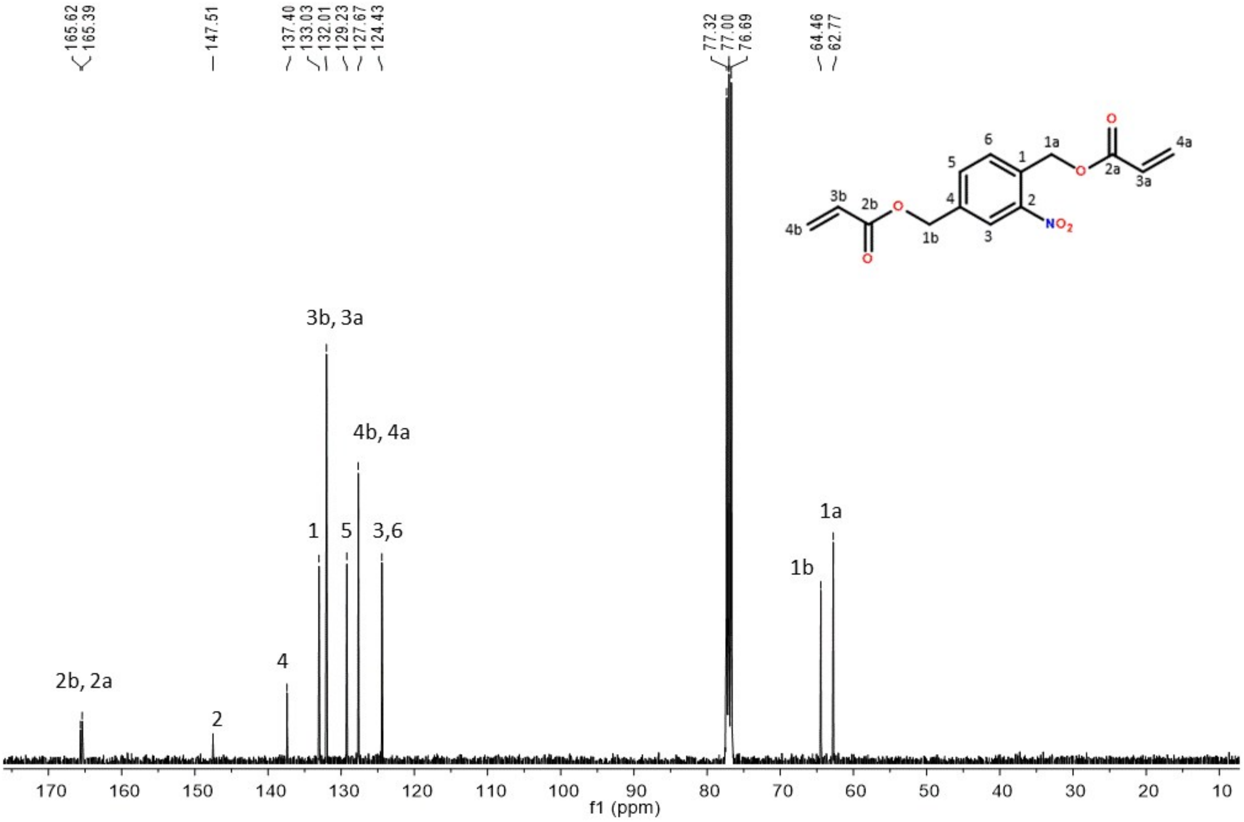

Figure S2 – ^{13}C NMR spectrum of acrylate-**NBE**

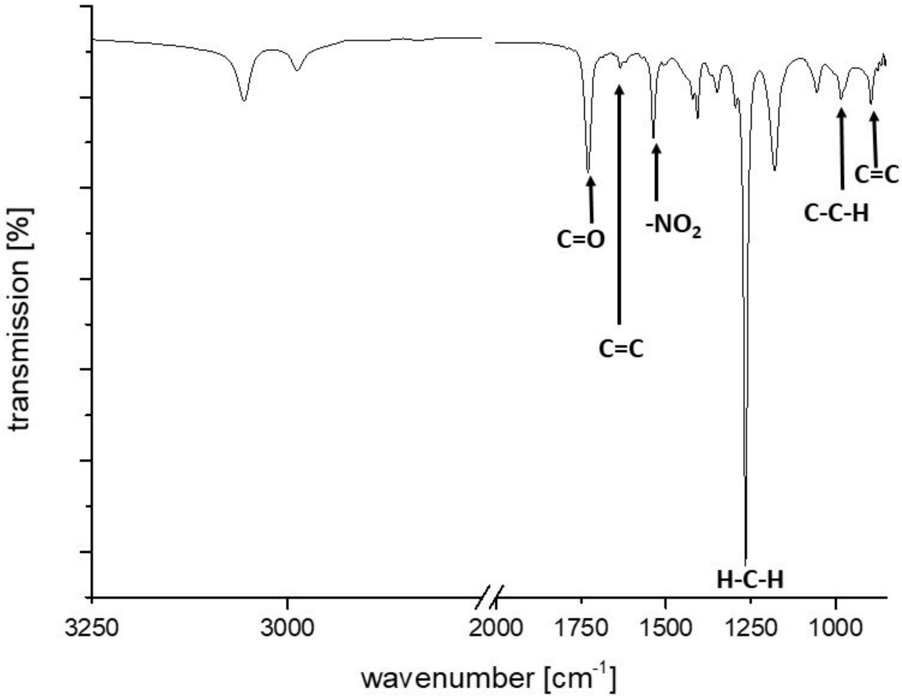

Figure S3 – FT-IR spectrum of acrylate-**NBE**

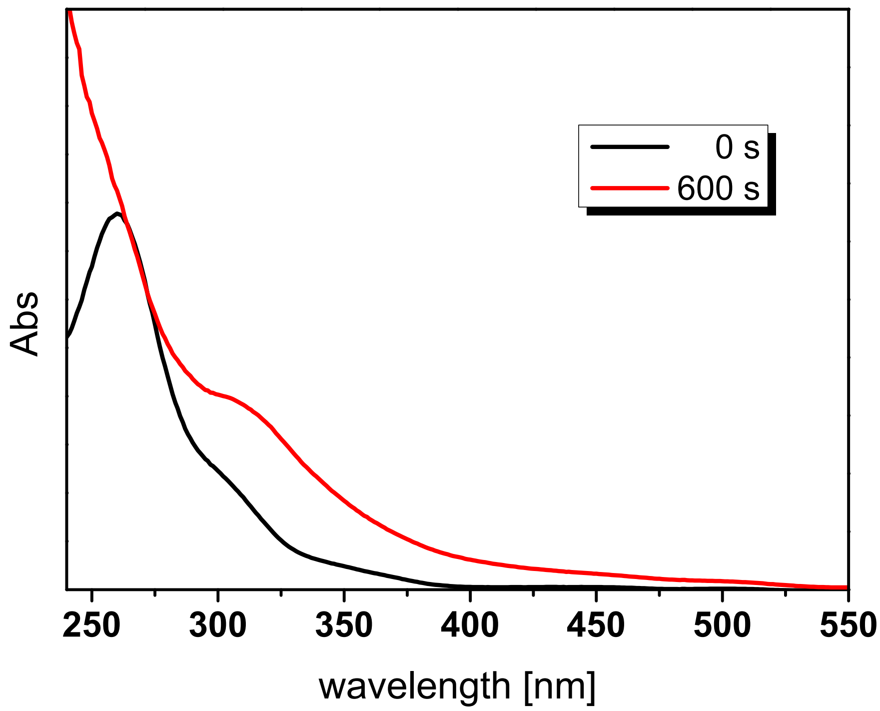

Figure S4 – Following the UV-vis absorbance of acrylate-**NBE** (10 mg/mL in acetonitrile) upon UV exposure (269 mW/cm²).

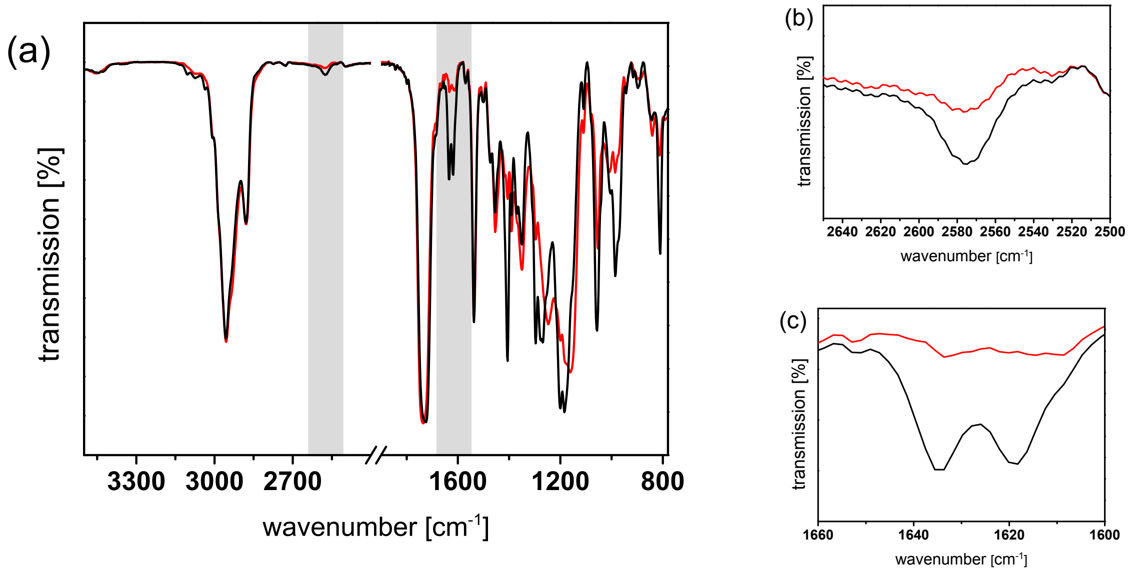

Figure S5 – (a) FT-IR spectra of resin 25SH-AD prior to (*black line*) and after photo-curing (*red line*). IR bands of the characteristic (b) thiol and (c) acrylate groups magnified out of the FT-IR spectra. Irradiation was carried out with visible light (λ = 420 - 450 nm, 3.2 mW/cm²) under air.

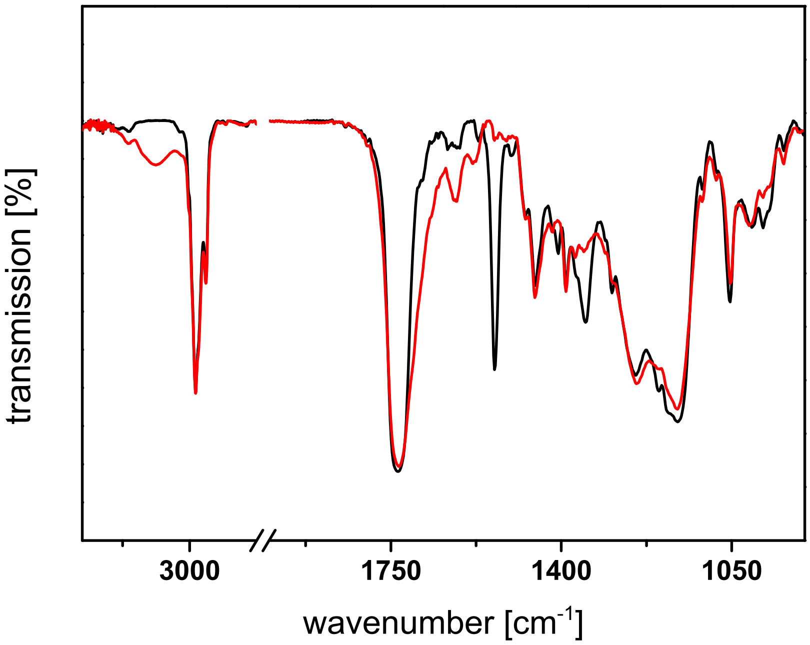

Figure S6 – (a) FT-IR spectra of photocured resin 25SH-AD prior to (*black line*) and after photocleavage (*red line*). Irradiation was carried out with UV light (λ = 250 - 470 nm, 269 mW/cm²) under air.

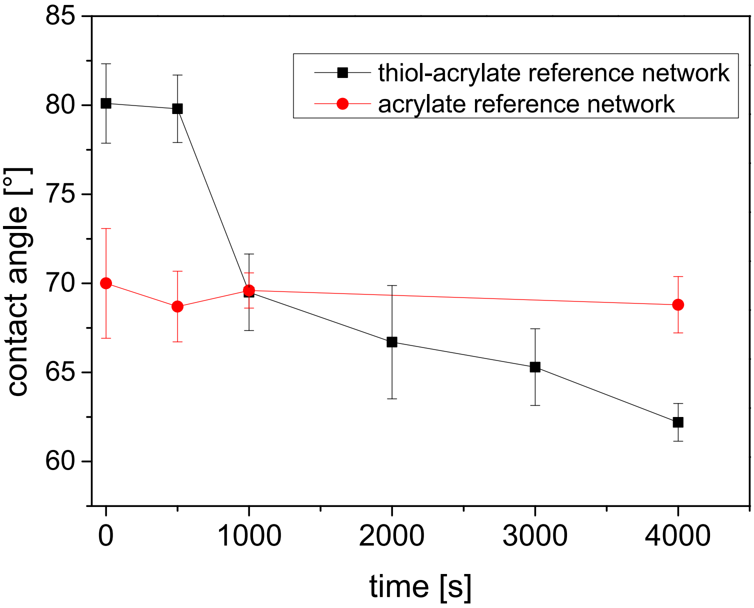

Figure S7 – Static water contact angles of cured acrylate and thiol-acrylate systems comprising no photo-sensitive *o*-NBE groups versus exposure time (269 mW/cm², λ < 400 nm). The thiol-acrylate formulation contained 75 mol% isobornyl acrylate, 25 mol% PETMP and 2.5 wt% BAPO. The acrylate formulation contained isobornyl acrylate and 2.5 wt% BAPO.

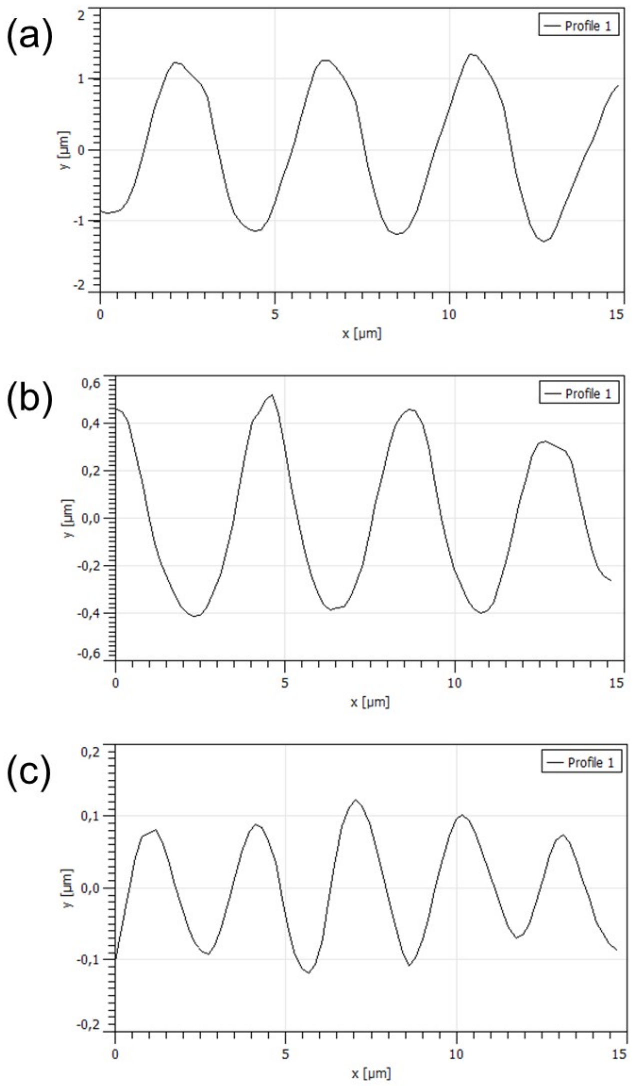

Figure S8 – Topography profiles obtained from AFM micrographs of the needle-like micropatterns inscribed in resin 25SH-AD (comprising 25 mol% PETMP) by visible light assisted NIL after (a) 0, (b) 1000 and (c) 1500 s of UV exposure (269 mW/cm^2) under air.