Supporting Information

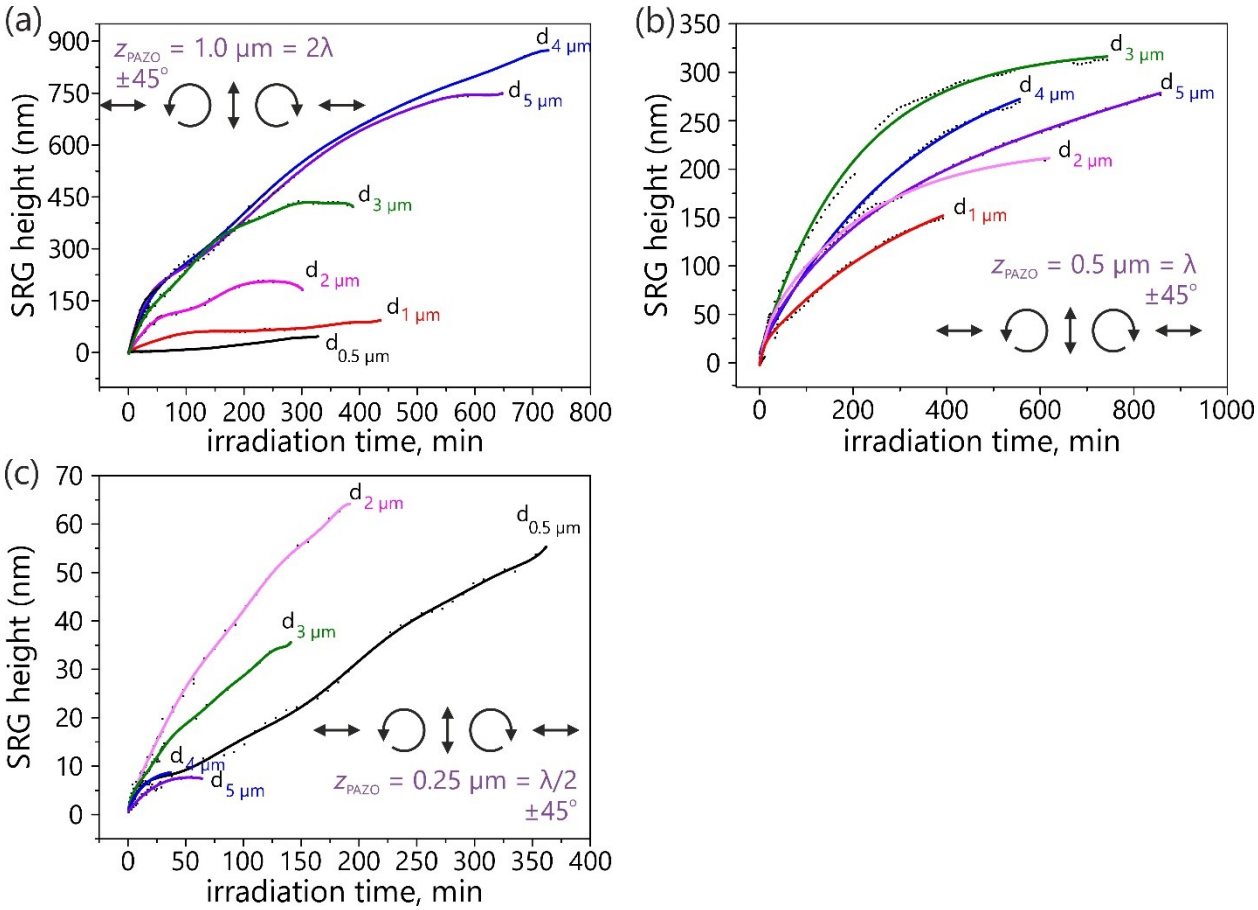

Figure S1. Dependence of SRG height on grating periodicity ‘d’ and film thickness ‘z’ for PAZO film using ±45o interference pattern. (a) Grating growth kinetic for different periodicities using 1.0 µm thick PAZO film. (b) Relation between d and h for 1.0 µm thick PAZO film. (c) Grating growth kinetic for different periodicities using 0.5 µm thick PAZO film. (d) Relation between ‘d’ and ‘h’ for 0.5 µm thick PAZO film. (c) Grating growth kinetic for different periodicities using 0.25 µm thick PAZO film. (d) Relation between ‘d’ and ‘h’ for 0.25 µm thick PAZO film. Intensity (100 mW/cm2). -

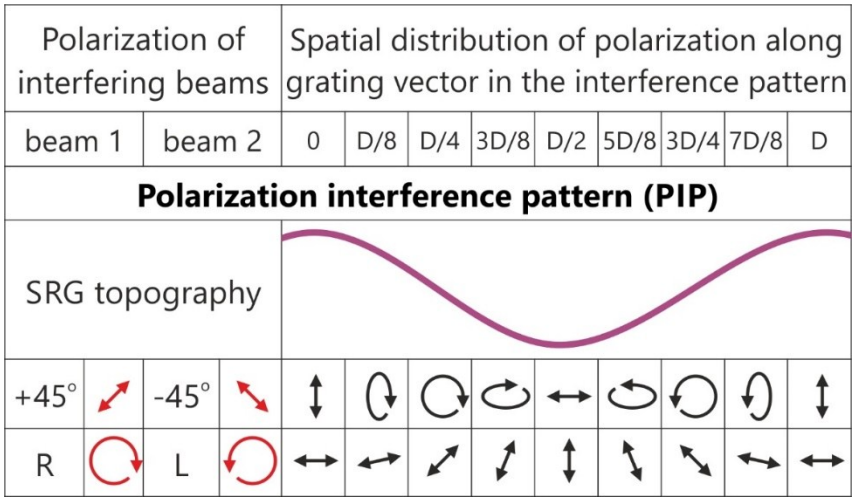

Figure S2. Scheme of the sample plane and the grating vector direction (x-axis). Spatial distributions of polarizations along the grating vector of all interference patterns used in the current investigation, for small interference angle (θ). The SRG topography for different interference patterns as a function of electrical field vector is shown as a magenta curve. L – left circularly polarized; R – right circularly polarized. For polarization interference patterns (PIPs) the intensity along grating vector remains constant (*I*).

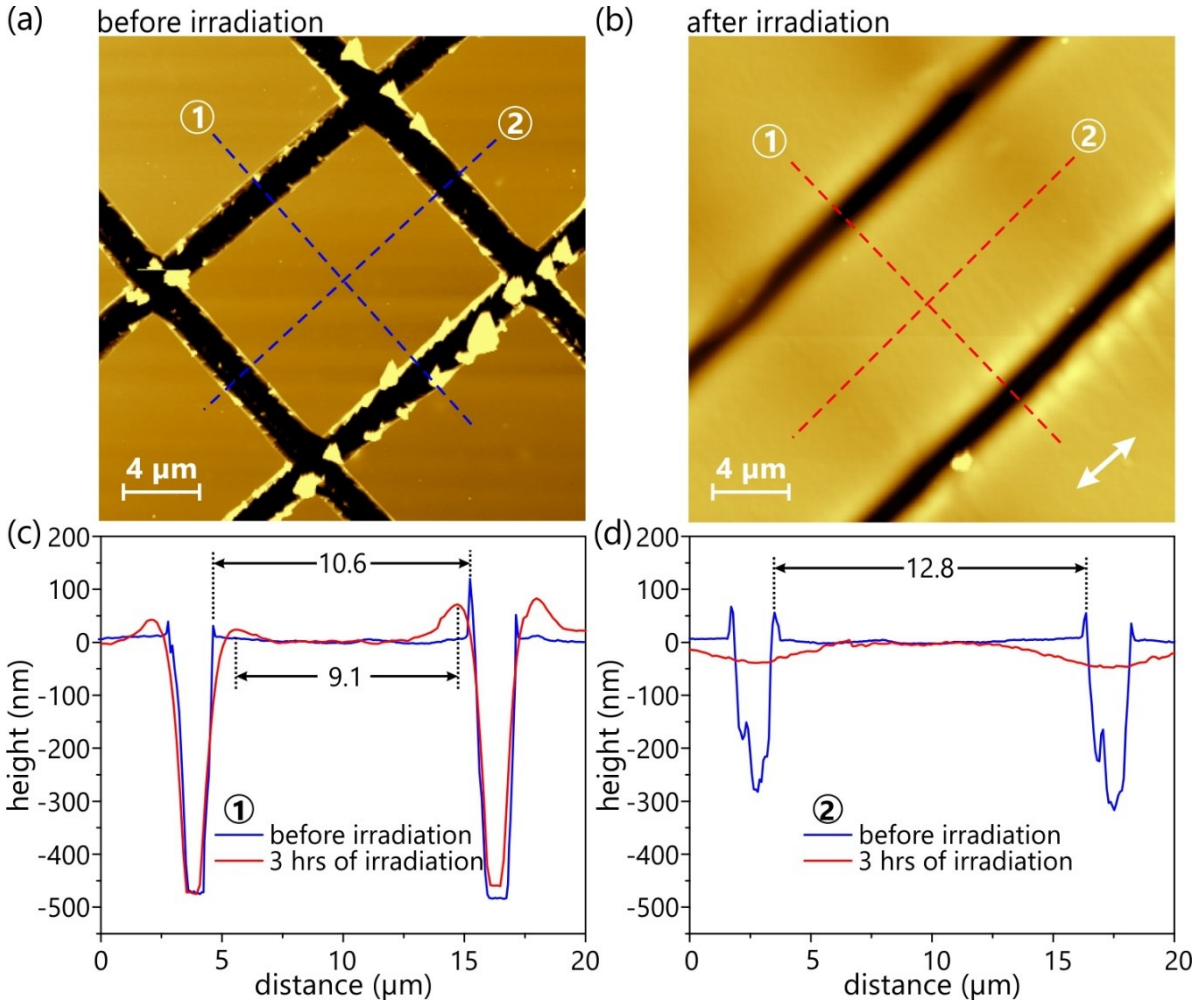

Figure S3. Polarization dependent mass-transport of Azo-PCMS. (a) Rectangular peace cut out of polymer film using AFM tip lithography is shown before irradiation. (b) Topography of the Azo-PSI film after irradiation. (c), (d) AFM cross-sectional analysis of the rectangular width before (blue curve) and after (red curve) irradiation. The direction of the polarization is marked by the white arrow.

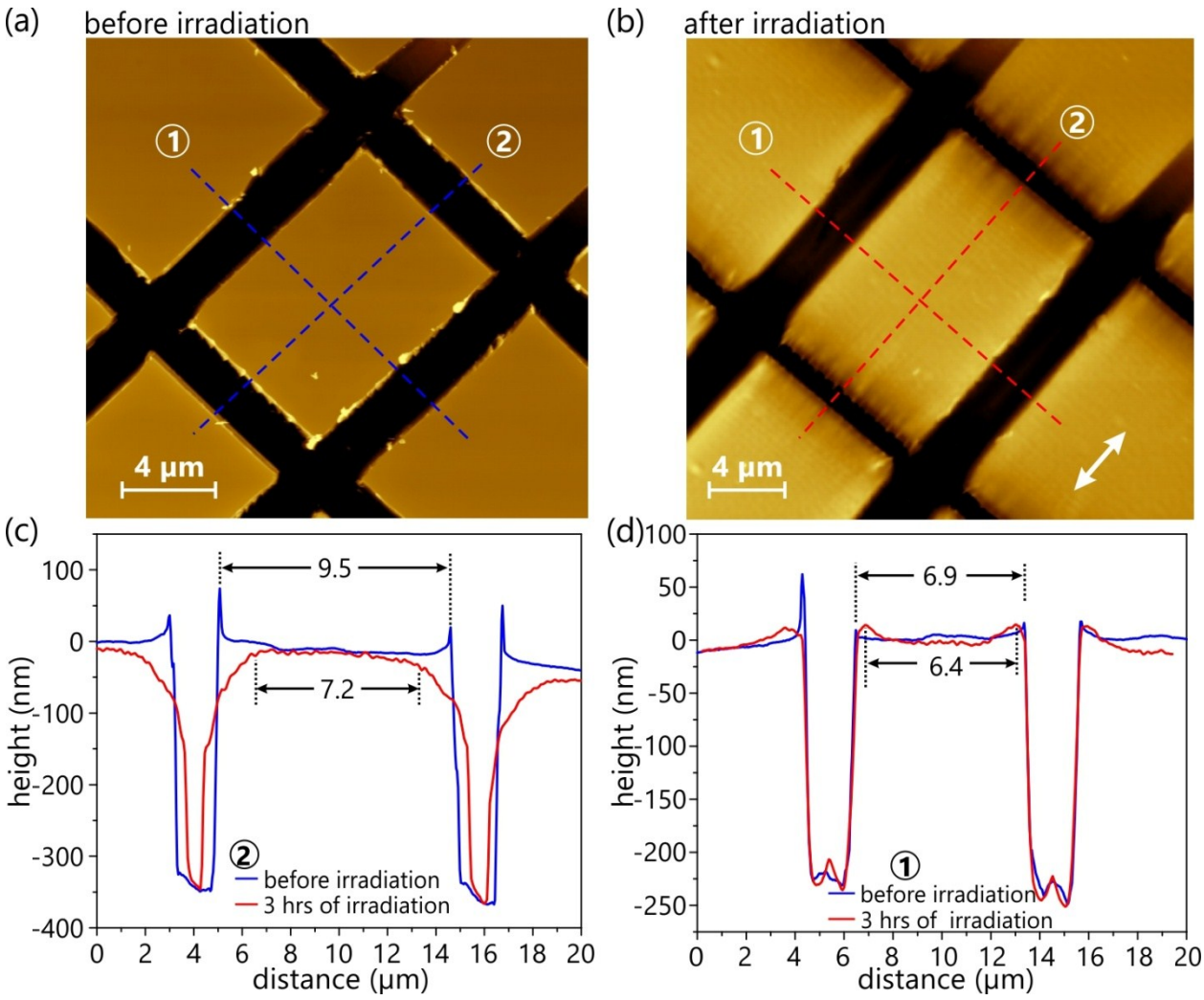

Figure S4. Polarization dependent mass-transport of PAZO. (a) Rectangular peace cut out of polymer film using AFM tip lithography is shown before irradiation. (b) Topography of the PAZO film after irradiation. (c), (d) AFM cross-sectional analysis of the rectangular width before (blue curve) and after (red curve) irradiation. The direction of the polarization is marked by the white arrow.