

Electronic Supplementary Information (ESI)

Conformal phase masks made of polyurethane acrylate with optimized elastic modulus for 3D nanopatterning

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SUPPORTING TABLE AND CAPTION

Table S1 The basic properties of c-PUA monomer (20wt% TMP(EO)15TA).

Property	Value	Unit
Color	154	APHA
Viscosity (at 25 °C)	2639	cPs
Refractive index	1.479	-
Specific gravity (at 25 °C)	1.1111	-
Moisture content	0.034	%

SUPPORTING FIGURES AND CAPTIONS

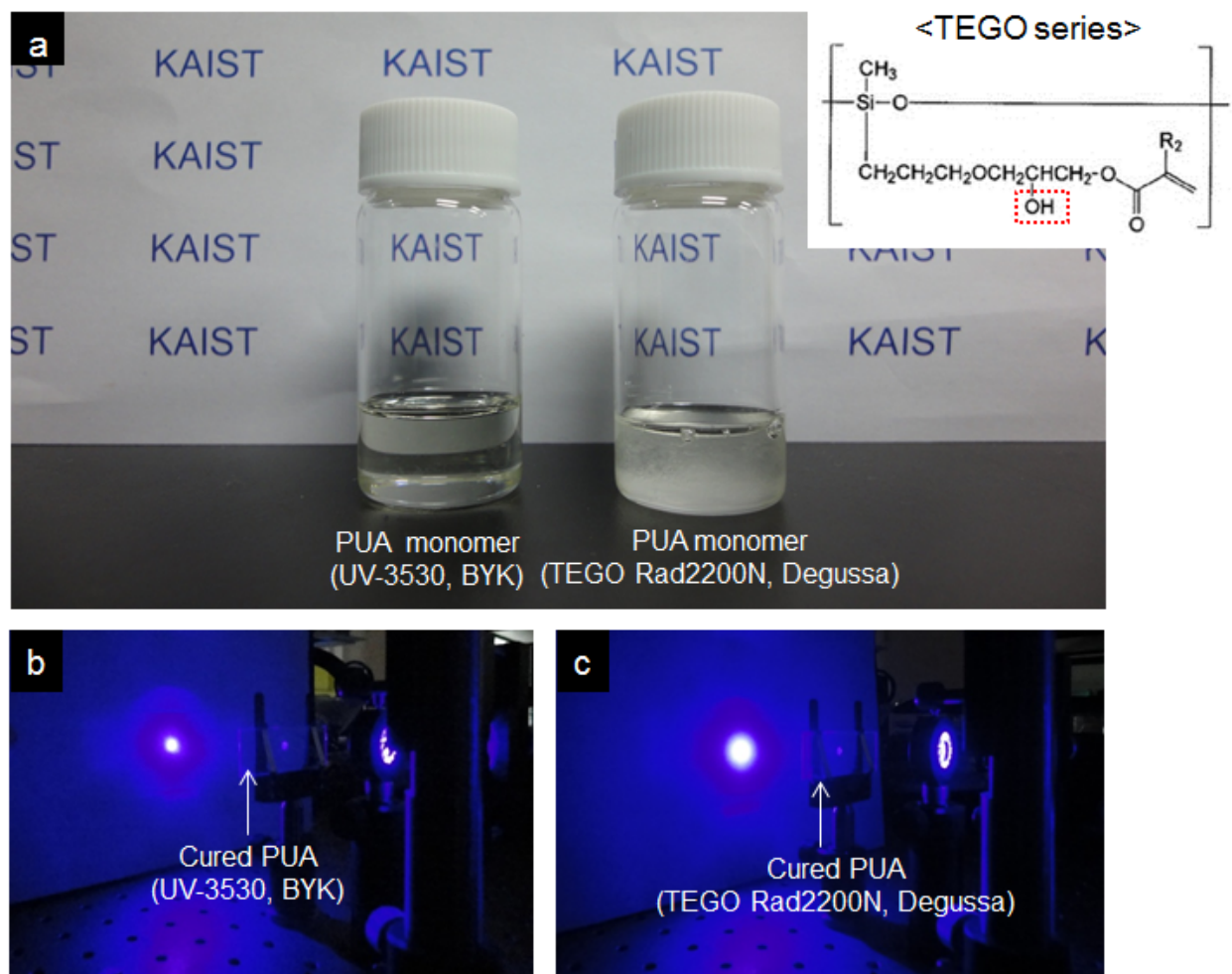


Fig. S1 (a) Two different liquid PUA monomers containing the releasing agents of UV-3530 and TEGO Rad2200N (Inset: A chemical structure of TEGO series).^[1] (b) Comparison of light distributions diffused from haze of cured PUA films.

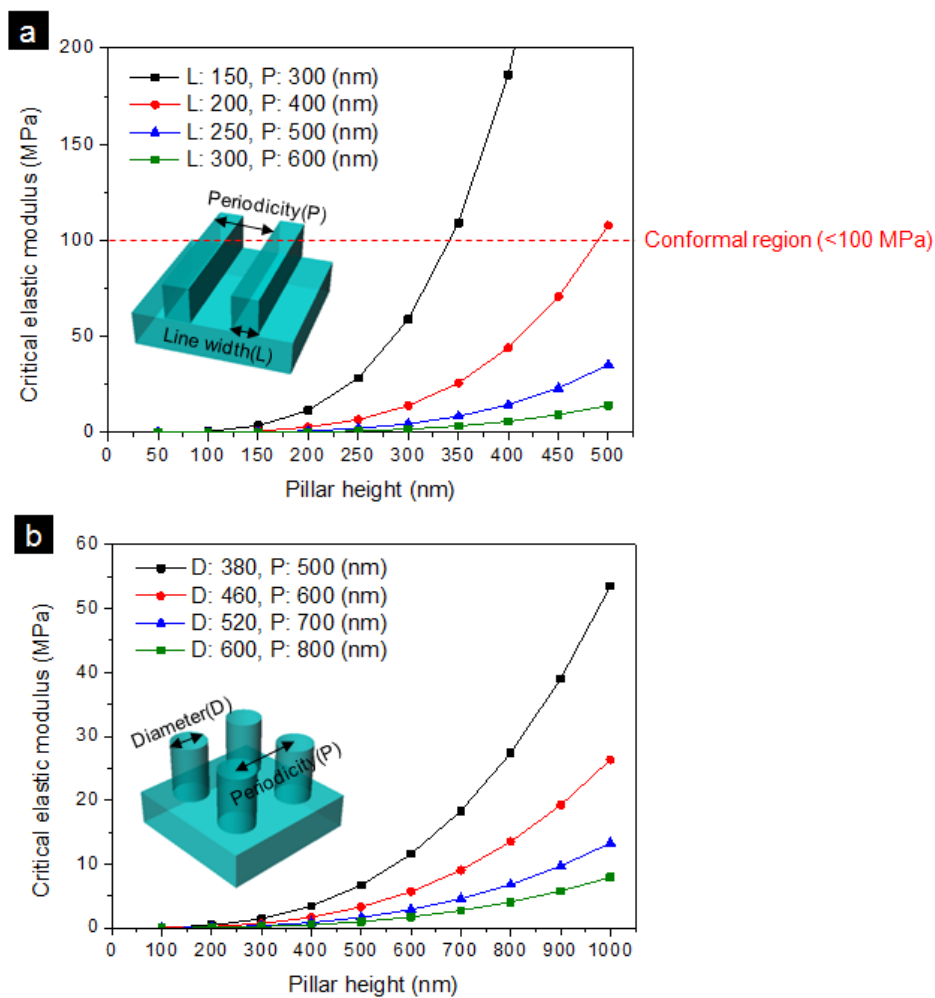


Fig. S2 A calculated critical elastic modulus for (a) line and space patterns (b) square dot arrays (duty cycle: ~50%).

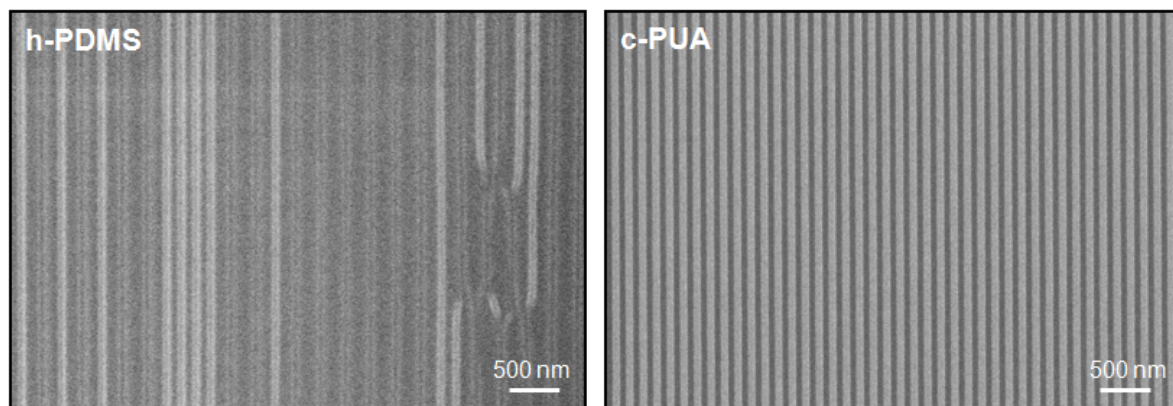


Fig. S3 Comparison of replication capability between h-PDMS and c-PUA. The used pattern includes line structures with a width of ~ 150 nm and a height of ~ 200 nm.

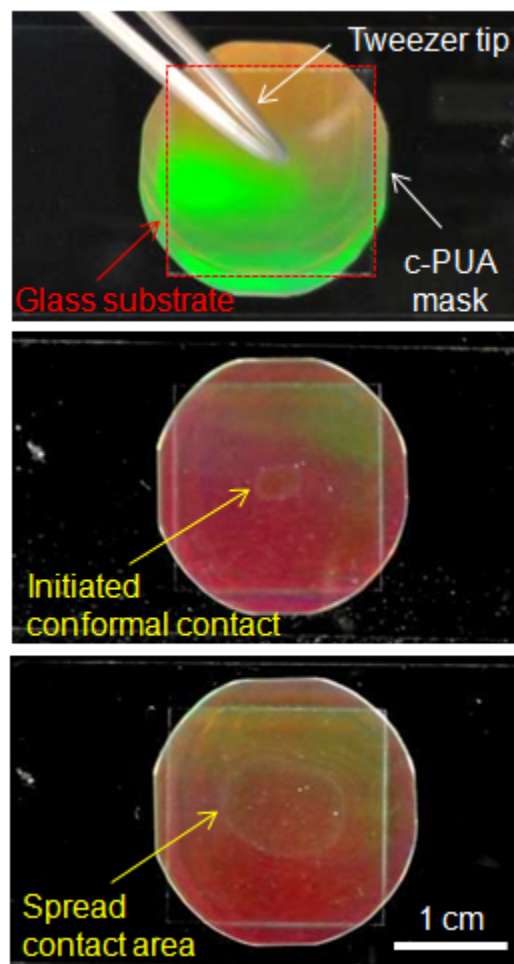


Fig. S4 Optical images of contact propagation between a c-PUA phase mask supported by a thick slide glass (~2 mm) and a substrate.