

## Stretchy and strong polyurethane–urea supramolecular (PUUS) hydrogels with various stimuli-responsive behaviours: the effect of chain-extender

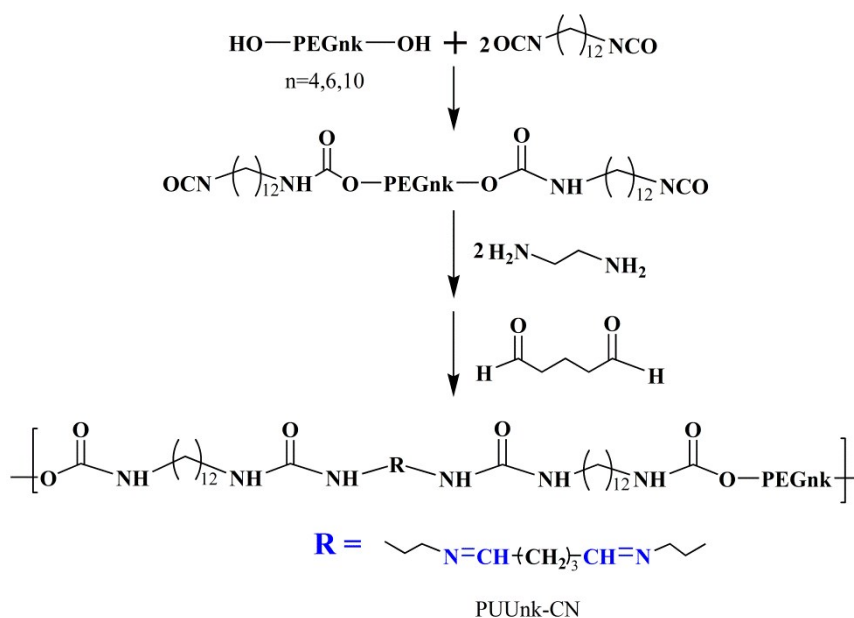
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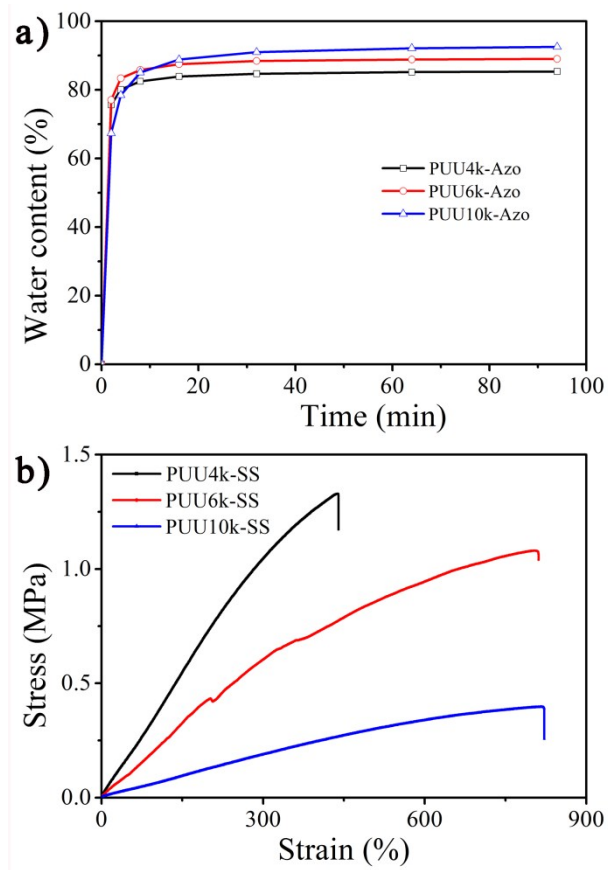
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**Scheme S1.** Synthetic procedure of the PUUnk-CN copolymers.

**Table S1.** The weight average molecular weight ( $M_w$ ) and polydistribution index (PDI) of PUUnk-R copolymers

	PUU4k-CH	PUU4k-Py	PUU4k-SS	PUU4k-Azo	PUU4k-CN
$M_w$ (g/mol)	170,000	312,000	275,000	293,000	435,000
PDI	1.8	2.7	2.3	2.5	2.8
		PUU6k-Py	PUU6k-SS	PUU6k-Azo	PUU6k-CN
$M_w$ (g/mol)		294000	370000	480000	480000
PDI		1.9	2.2	3.6	2.3
		PUU10k-Py	PUU10k-SS	PUU10k-Azo	PUU6k-CN
$M_w$ (g/mol)		451000	460000	950000	580000
PDI		2.1	2.8	3.3	2.4



**Fig S1.** a) Time dependent water swelling ratio curves of the PUUnk-Azo dry films and b) tensile testing curves of the equilibrium swollen PUUnk-SS based PUUS hydrogels.