

Supporting Information

**Thermo-Responsive Single-Chain Cyclized/Knotted Polymers for Cell
Encapsulation**

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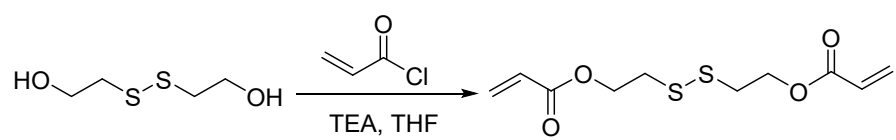


Figure S1. Reaction scheme for the synthesis of DSDA

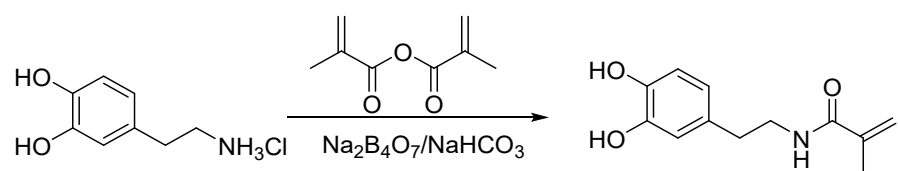


Figure S2. Reaction scheme for the synthesis of DMA

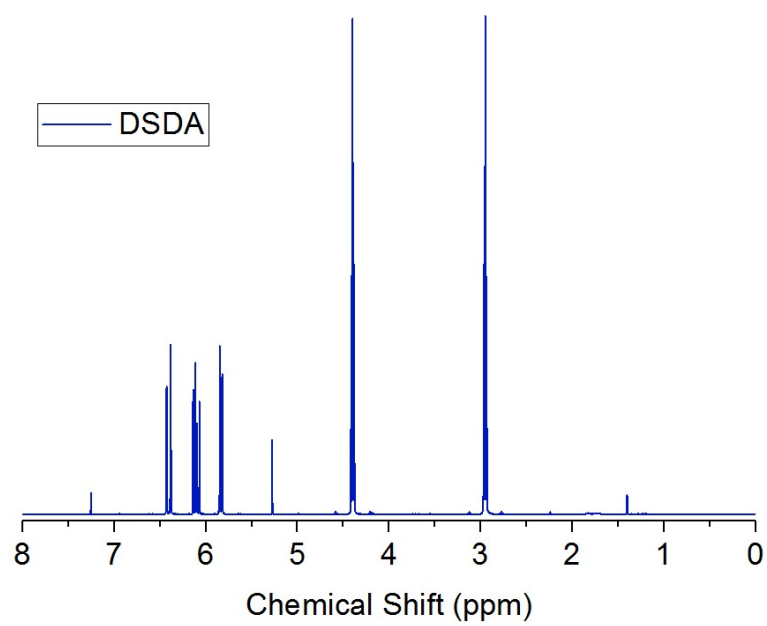


Figure S3. ^1H NMR spectrum of DSDA

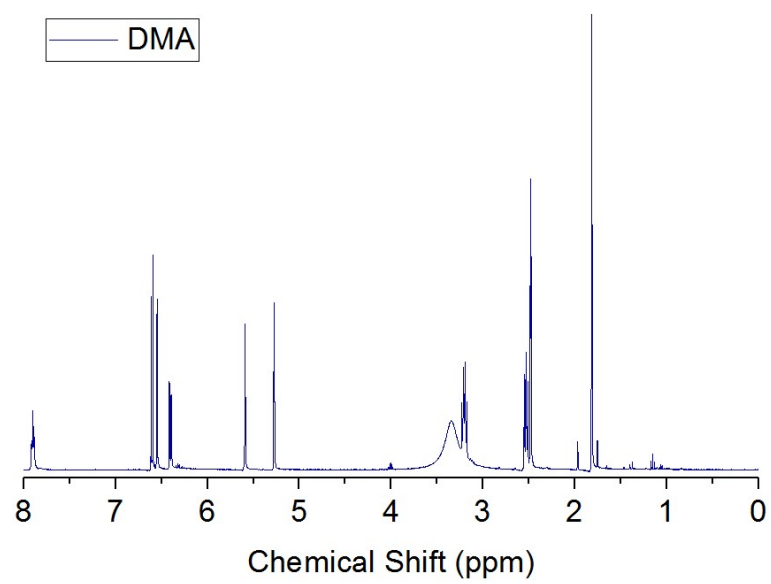


Figure S4. ^1H NMR spectrum of DMA

Table S1. Monomer combination and feed ratio for the synthesis of SCKPs

PEGDA700 (mole)	PEGDA575 (mole)	DEGDA (mole)	DSDA (mole)	DMA (mole)
50	50	/	/	/
25	75	/	/	/
100	/	/	/	/
/	75	25	/	/
/	50	50	/	/
/	50	30	20	/
/	40	30	20	10
/	50	20	20	10
/	70	10	10	10

Table S2. LCST of SCKP composed of DSDA, DMA, DEGDA and PEGDA575 at different feed ratios

DSDA (mol)	DMA (mol)	DEGDA (mol)	PEGDA575 (mol)	LCST (°C)
20	10	30	40	< 23
20	10	20	50	< 23

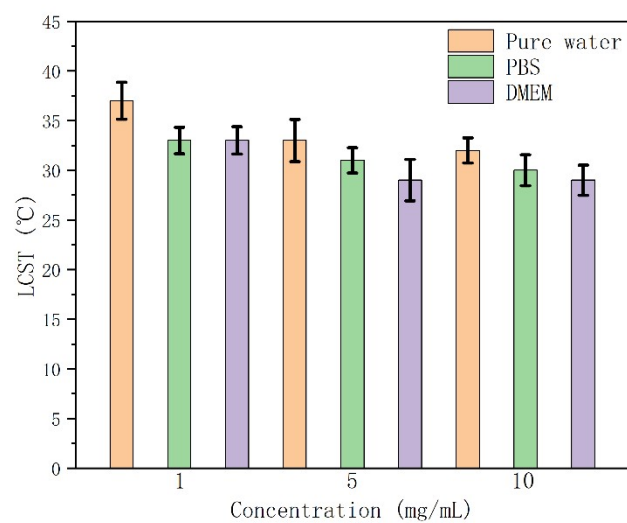


Figure S5. LCST of SCKP composed of DSDA, DEGDA and PEGDA575 at a feed ratio of 20:20:50 in pure water, PBS and DMEM at the concentration of 1 mg/mL, 5 mg/mL and 10 mg/mL.

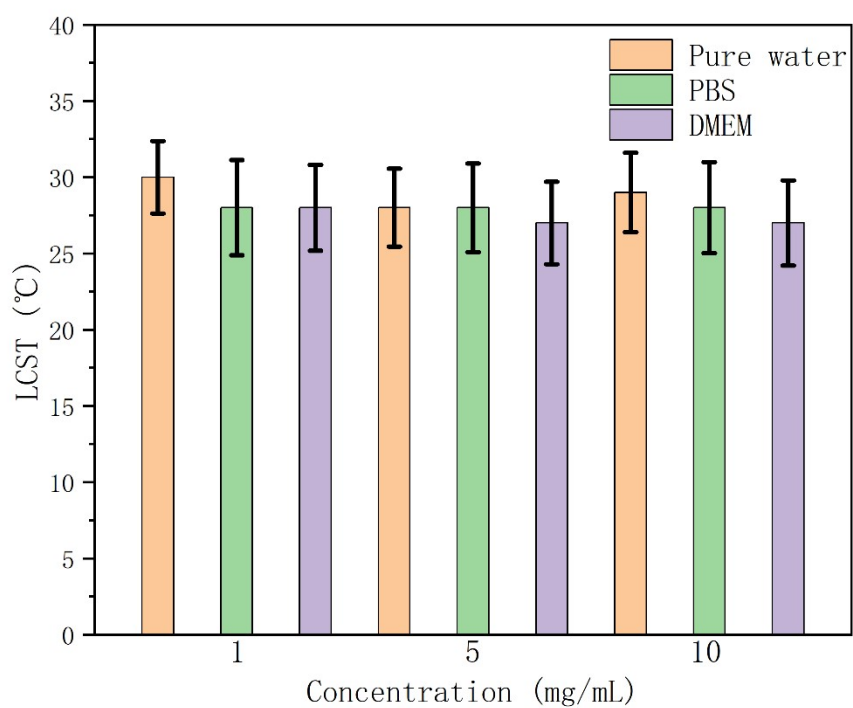


Figure S6. LCST of SCKP composed of DEGDA and PEGDA575 at a feed ratio of 50:50 in pure water, PBS and DMEM at the concentration of 1 mg/mL, 5 mg/mL and 10 mg/mL.

Table S3. LCST of SCKP composed of DSDA, DEGDA and PEGDA575 at a feed ratio of 20:30:50 in pure water, PBS and DMEM at the concentration of 1 mg/mL, 5 mg/mL and 10 mg/mL

Concentration (mg/mL)	Solvent		
	Pure water (°C)	PBS (°C)	DMEM (°C)
1	30	28	28
5	28	28	27
10	29	27	29

Table S4. LCST of SCKP composed of DEGDA and PEGDA575 at a feed ratio of 50:50 in pure water, PBS and DMEM at the concentration of 1 mg/mL, 5 mg/mL and 10 mg/mL

Concentration (mg/mL)	Solvent		
	Pure water (°C)	PBS (°C)	DMEM (°C)
1	37	33	33
5	33	31	29
10	32	30	29