Supporting Information

Synthesis and characterization of a novel hydrogel:Salecan/Polyacrylamide semi-IPN hydrogel with a desirable pore structure

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Fig. S1 Photographs of SP3 hydrogel formed at –20 ºC during the compression test.

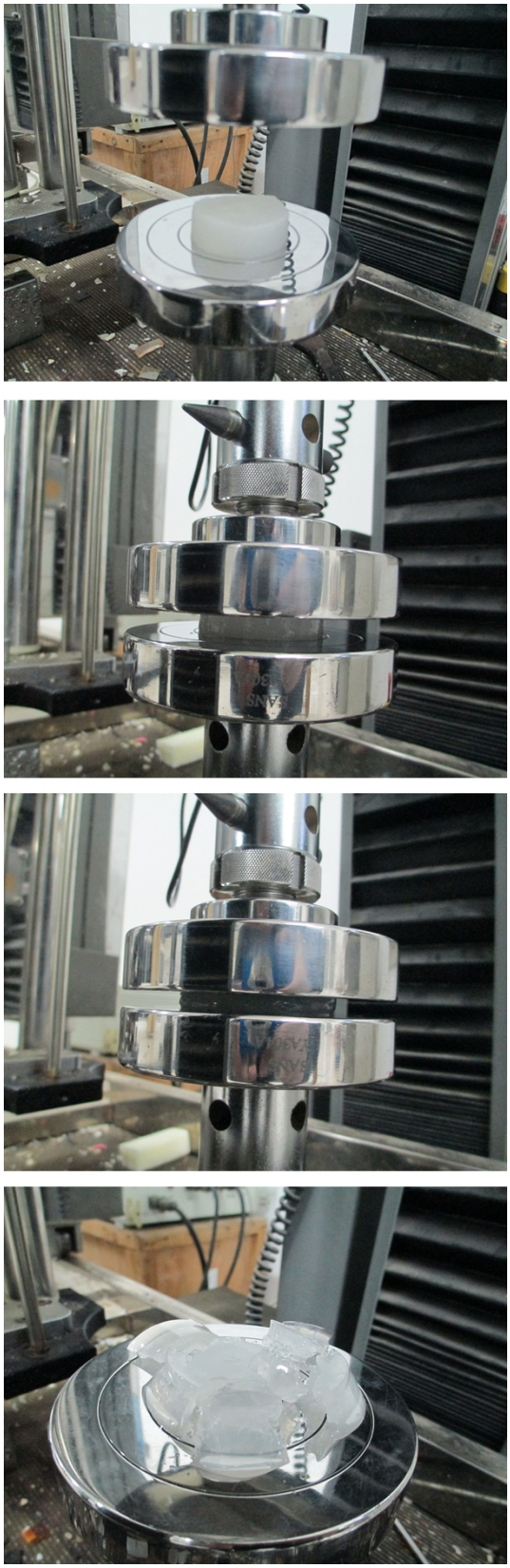

Fig. S2 Photographs of SP3 hydrogel formed at 30 ºC during the compression test.

MTT assay

The MTT assay is based on the reduction of yellow tetrazolium salt to purple formazan crystals by dehydeogenase enzymes secreted from the mitochondria of metabolically active cells. The amount of formazan produced is proportional to the number of viable cells present.

The medium in each well was replaced by 100 μL MTT solution. After 4h of incubation at 37 ºC the solution was removed, 150 μL of DMSO were added to dissolve the formazan crystals. After 10 min of rotary agitation, the absorbance was read at 540 nm. Experiments were done in triplicate. MTT cell proliferation and cytotoxicity detection kit was obtained from Nanjing KeyGen Biotech Co.,LTD, China.

Table S1 The content of Salecan in washing medium.

Hydrogels	T_{prep} = +30 ºC	T_{prep} = +4 ºC	T_{prep} = -20 ºC
	The content of Salecan in washing medium (mg/mL)	The content of Salecan in washing medium (mg/mL)	The content of Salecan in washing medium (mg/mL)
SP1	0.068	0.076	0.064
SP2	0.067	0.071	0.019
SP3	0.042	0.026	0.020

Table S2 Parameters n and k of Equation (4) for Salecan/PAAm semi-IPNs and individual PAAm prepared at +30 ºC, +4 ºC.

Hydrogels	T_{prep} = +30 ºC		T_{prep} = +4 ºC	
	n	k(s^{-1})	n	k(s^{-1})
SP1	0.607 ± 0.064	0.002 ± 0.001	0.461 ± 0.068	0.010 ± 0.004
SP2	0.418 ± 0.017	0.022 ± 0.017	0.377 ± 0.036	0.029 ± 0.006
SP3	0.328 ± 0.070	0.035 ± 0.025	0.304 ± 0.042	0.041 ± 0.016
PAAm	0.218 ± 0.039	0.084 ± 0.026	0.193 ± 0.041	0.093 ± 0.049

The exact compositions of the buffer solution:

buffer solution of pH 4 was prepared by mixing 130 mL of 1M acetic acid solution and 62.5 mL of 0.5M sodium acetate solution to make volume 250 mL with deionized water, ionic strength (*I*) was 0.125M; buffer solution of pH 7 was prepared by dissolving 0.86g potassium phosphate (KH_2PO_4) and 0.12g sodium hydroxide in 200 mL of deionized water, 4.6mL of 0.1M sodium hydroxide solution was subsequently added using a transferpette (Gilson, France). Then the obtained solution was transferred quantitatively into 250 mL volumetric flask and deionized water was added to the mark, *I* was about 0.053M; buffer solution of pH 10 was prepared by taking 125 mL of 0.05M borax (sodium tetraborate decahydrate, $Na_2B_4O_7 \cdot 10H_2O$) solution and 46.5 mL of 0.2M sodium hydroxide solution to make volume 250 mL with deionized water, *I* was about 0.09M. The pH values were determined with a pH meter (PHS-3C).