

Supporting Information

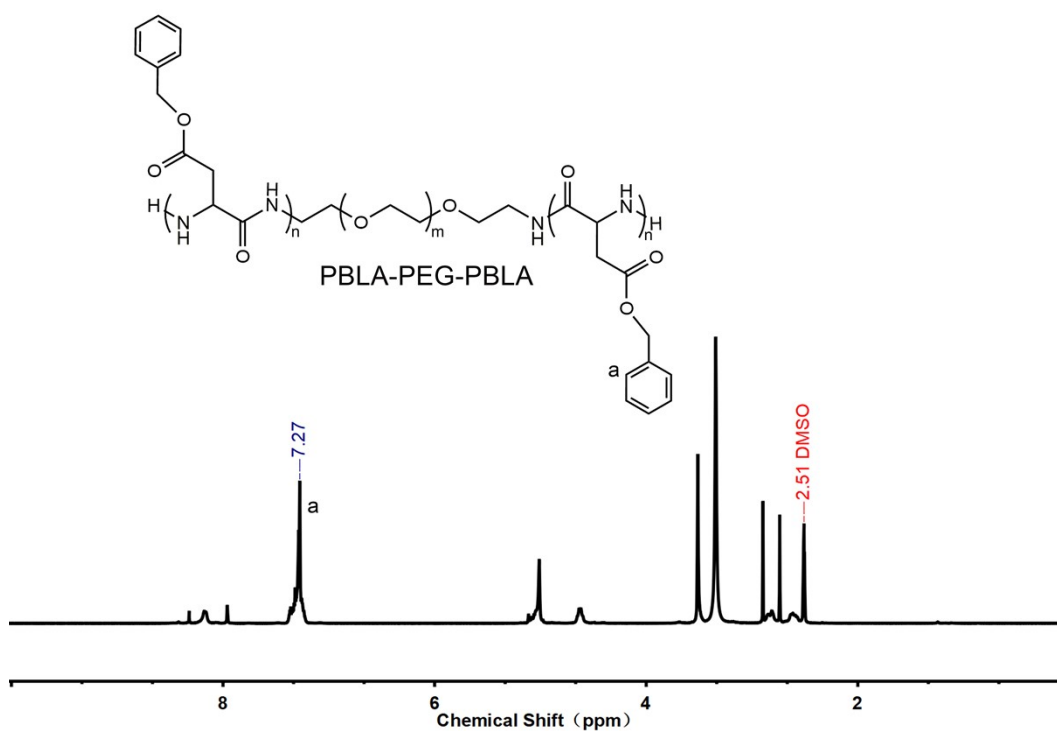
Dual Crosslinking Hydrogels with Tunable Injectability and Stability for Bone Repair

Wenlin Chu<sup>a</sup>, Xiang Ke<sup>a</sup>, Zhiyun Dong<sup>a</sup>, Jing Xie<sup>a</sup>, Jun Luo<sup>\*a</sup> and Jianshu Li<sup>\*a, b, c</sup>

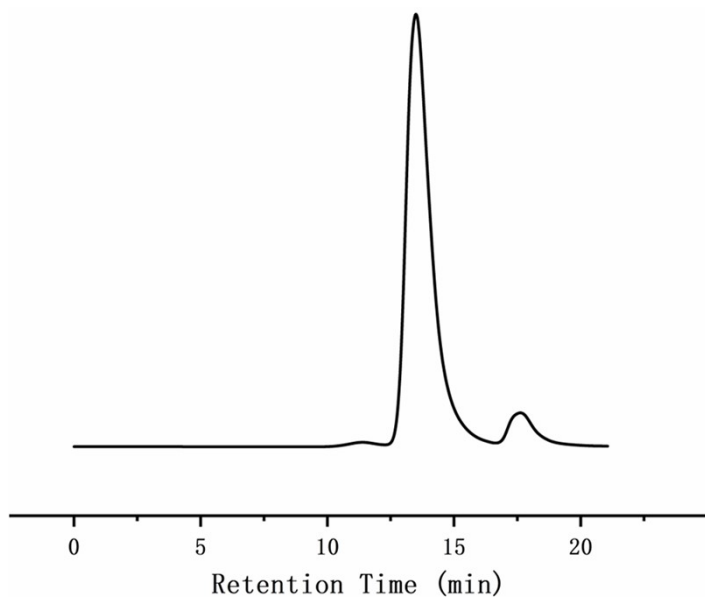
<sup>a</sup>. College of Polymer Science and Engineering, State Key Laboratory of Polymer Materials Engineering, Sichuan University, Chengdu 610065, China.

<sup>b</sup>. State Key Laboratory of Oral Diseases, West China Hospital of Stomatology, Sichuan University, Chengdu, 610041, China.

<sup>c</sup>. Med-X Center for Materials, Sichuan University, Chengdu, 610041, China.

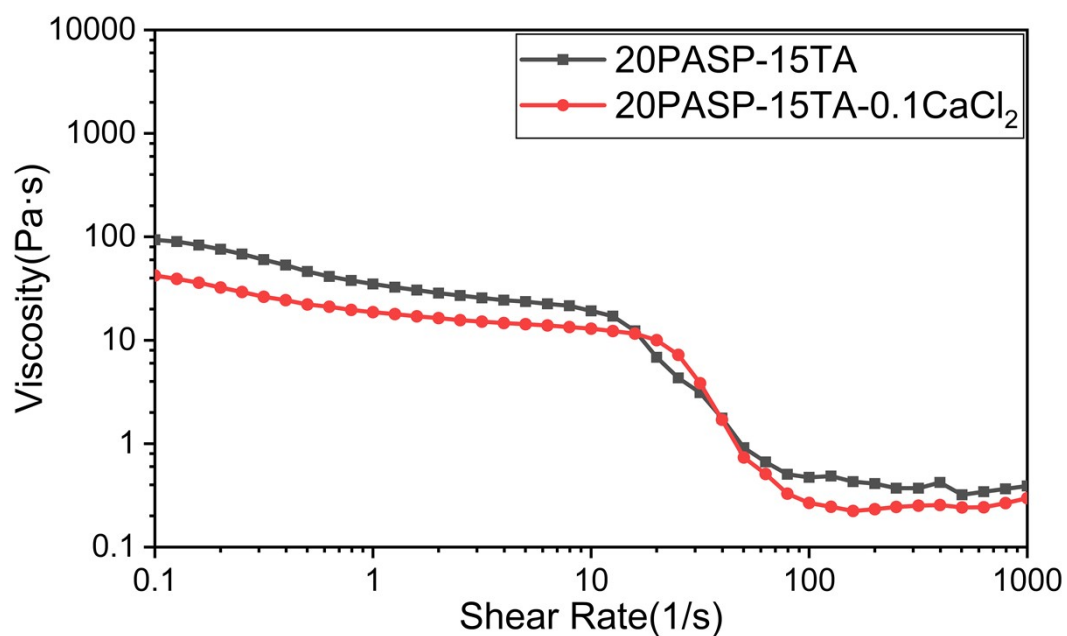


**Fig. S1** <sup>1</sup>H NMR spectra of PBLA-PEG-PBLA in DMSO-d<sub>6</sub>.



$M_n$	$M_w$	Polydispersity Index
5832	10089	1.73

**Fig. S2** GPC trace of PAsp-PEG-PAsp ( $M_n=5832$ , PDI: 1.73).



**Fig. S3** Viscosity measuring of the 20 wt% PTA hydrogels with and without immersing in the 0.1M  $\text{CaCl}_2$  solution.

**Table S1** The Results of ICP-OES measuring the mass fraction of Ca<sup>2+</sup> in hydrogels.

Sample	Quality (mg)	Volume (mL)	Coefficient of dilution	Instrument reading (mg/L)	Mass fraction	Mean mass fraction
1	32.6	10	50	0.8041	1.2333%	1.4252%
2	25.9	10	50	0.7873	1.5199%	
3	29.1	10	50	0.8860	1.5223%	

Introduction: The final content of Ca elements, mass fraction= Instrument reading\* Coefficient of dilution\* Volume/ Quality.