## Supplementary Information

## Multi-responsive, Injectable, and Self-Healing Hydrogel based on Benzoxaborole-Tannic Acid Complexation

Yi-Yang Peng<sup>a,Ω</sup>, Qiu Li Cheng<sup>b,Ω</sup>, Wenda Wang<sup>a</sup>, Meng Wu<sup>a</sup>, Diana Diaz-Dussan<sup>a</sup>, Piyush Kumar<sup>c</sup>, and Ravin Narain<sup>a,\*</sup>

<sup>a</sup>Department of Chemical and Material Engineering, University of Alberta, Edmonton, Alberta T6G 1H9, Canada

<sup>b</sup>State Key Laboratory of Supramolecular Structure and Materials, College of Chemistry, Jilin University, Changchun 130012, P. R. China

<sup>c</sup>Department of Oncology, University of Alberta, Cross Cancer Institute, Edmonton, T6G 1Z2, Alberta, Canada

\*Corresponding author, Email: narain@ualberta.ca

**Table S1.** Composition and molecular weight of PMM that determined by analyzing the <sup>1</sup>H NMR spectrum and GPC.

	Composition (mol%)		 Molecular Weight	
Polymer	MPC	MAABO	$M_n$ (kDa)	PDI $(M_w/M_n)$
PMM	95.9	4.1	63.8	4.685



**Fig. S1.** Cytotoxicity of various concentrations of poly(MPC-*st*-MAABO) with HeLa cells after 24 hours of incubation. MTT assay was used to determine cell viability.



Fig. S2. Strain sweep of hydrogel (MT3) at a constant frequency of 1Hz.



**Fig. S3**. Strain sweep (left) and subsequently conducted time sweep measurement (right) with strain at 1% with MT 4.5 (A), MT 3.75 (B), and MT 3.0 (C).