

## Synthesis of Nanomedicine Hydrogel Microcapsules through Droplet Microfluidics and their pH- and Temperature-Dependent Release

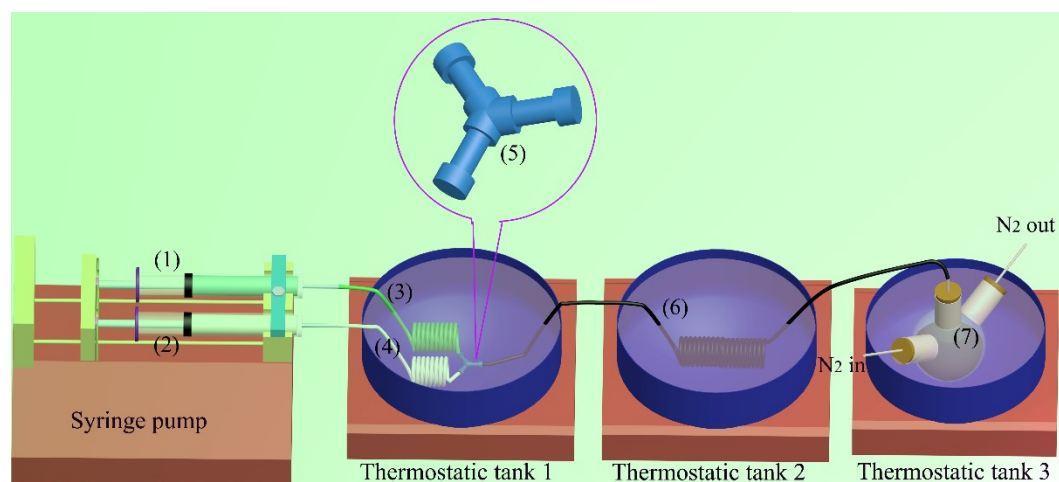
### Kinetics

Ran Liu<sup>1,2,‡</sup>, Qiong Wu<sup>1,2,‡</sup>, Xing Huang<sup>3</sup>, Xiaoxiong Zhao<sup>1,2</sup>, Xinhua Chen<sup>2</sup>,  
Yonggang Chen<sup>2</sup>, David A. Weitz<sup>3</sup>, Yujun Song<sup>1,2,3\*</sup>

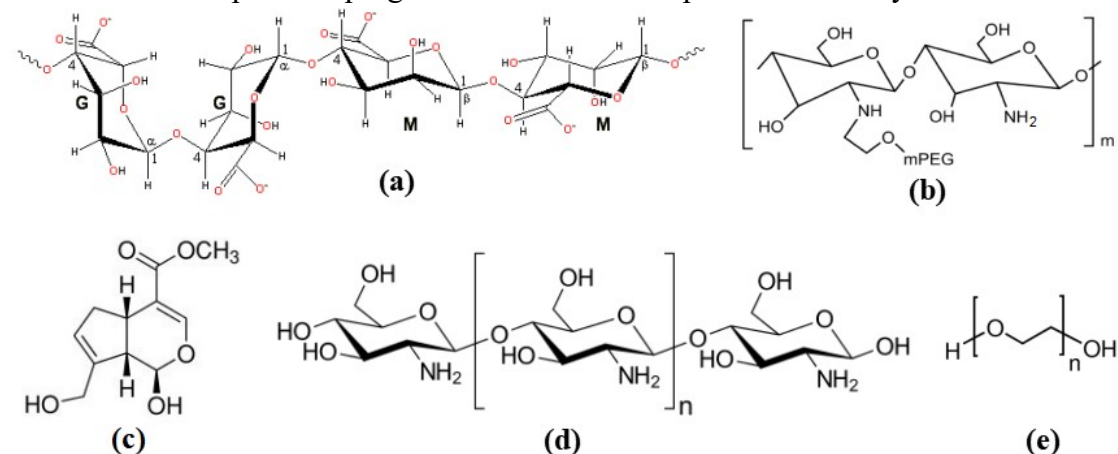
<sup>1</sup> Center for Modern Physics Technology, School of Mathematics and Physics, University of Science and Technology Beijing, Beijing 100083, China; <sup>2</sup> Zhejiang Key Laboratory for Pulsed Power Translational Medicine, Hangzhou, 310000, China; <sup>3</sup> Physics Department, School of Engineering and Applied Science, Harvard University, Cambridge, MA 02138, USA

‡ Contributed to this article equally.

\* Corresponding Author: [songyj@ustb.edu.cn](mailto:songyj@ustb.edu.cn)



**Scheme S1.** Temperature programmed microfluidic process for the synthesis of NPs.



**Scheme S2** Molecular structure of (a) alginate, (b) PEG-g-chitosan, (c) genipin, (d) chitosan, (e) polyethylene glycol (PEG), which have strong interactions with polymers rich in hydroxyl groups and/or amine or carboxyl groups.