In Situ Formation of Multiple Stimuli-Responsive Poly[(methyl vinyl ether)-*alt*-(maleic acid)]-based Supramolecular Hydrogels by Inclusion Complexation between Cyclodextrin and Azobenzene

Xiaoe Ma^{a,b}, Naizhen Zhou^{a,b}, Tianzhu Zhang *^{a,b}, Zhenchao Guo^{a,b}, Wanjun Hu^{a,b}, Changhao Zhu^{a,b}, Dandan Ma^{a,b} and Ning Gu^{a,b}

^a State Key Laboratory of Bioelectronics Jiangsu Key Laboratory for Biomaterials and Devices, School of Biological Science and Medical Engineering, Southeast University,

Sipailou 2, Nanjing 210096, China

^bResearch Institute of Southeast University in Suzhou, Ren Ai Road 150, Suzhou Industrial Park, Suzhou 215123, China

*Author to whom correspondence should be addressed; E-mail: zhangtianzhu@seu.edu.cn; Tel.: +86-(0)25-52171619; Fax: +86-(0)25-52171619.

The total grafting rate ($r_{CD\&Azo}$) of CD and Azo in supramolecular hydrogel Gel-1, Gel-2 and Gel-3:

$$r_{CD\&Azo} = \frac{r_{CD}n_{HP} + r_{Azo}n_{GP}}{n_{HP} + n_{GP}}$$

Where, r_{CD} is the CD grafting rate in host polymer (HP), r_{Azo} is the Azo grafting rate in gust polymer (GP); n_{HP} is the amount (mol) of repeating units in host polymer in supramolecular hydrogel, n_{GP} is the amount (mol) of repeating units in guest polymer in supramolecular hydrogel.

$$r_{CD} \cdot n_{HP} = r_{Azo} \cdot n_{GP}$$

Figure S1. IR spectra of P(MVE-*alt*-MA)-*g*- β -CD (A) and P(MVE-*alt*-MA)-*g*-Azo (B); ¹H NMR spectra of P(MVE-*alt*-MA)-*g*- β -CD (C) and P(MVE-*alt*-MA)-*g*-Azo (D).





Figure S2. Cytotoxicity of SKOV3 cultured in Gel-1, Gel-2, and Gel-3 for 48h.

