

Synthesis and drug release profile of a dual-responsive poly(ethylene glycol) hydrogel nanocomposite

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Supplementary Information

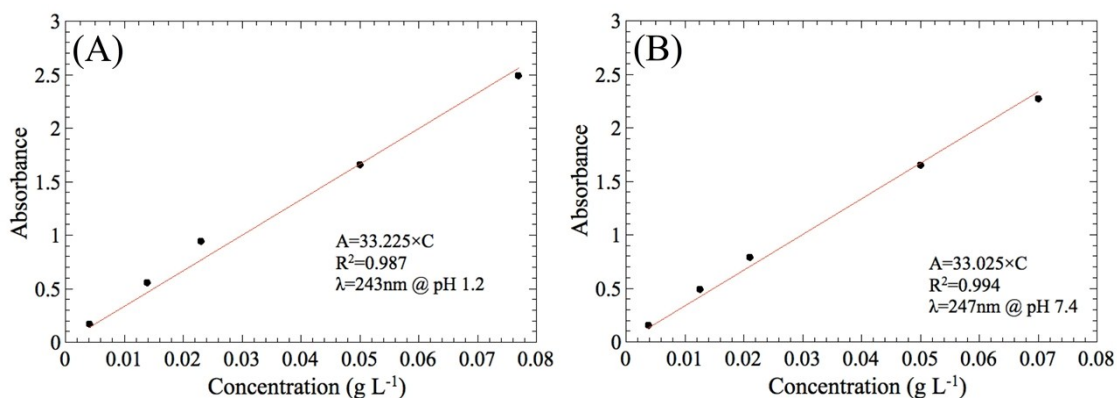


Figure S1. Calibration curve of prednisolone in different buffer solutions: (A) pH 1.2, and (B) pH 7.4.

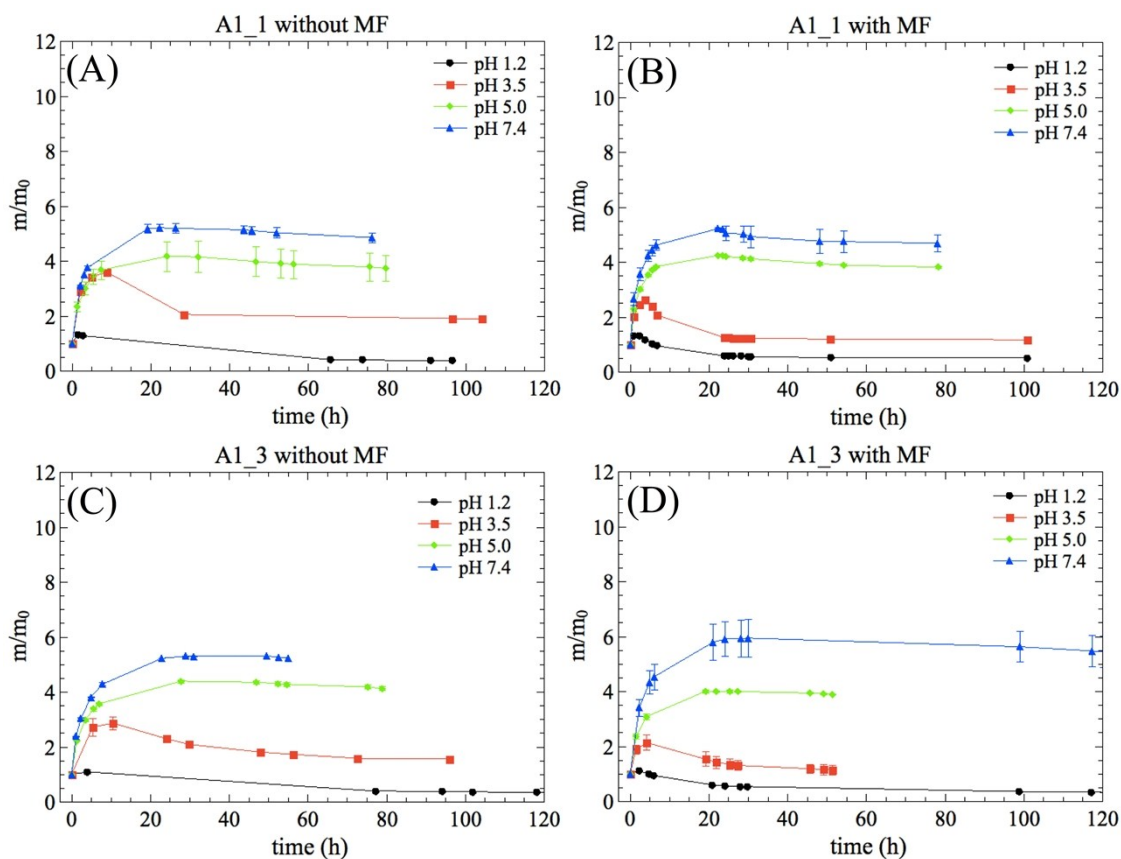


Figure S2. Time-dependent swelling curves at the indicated pH at temperature of 36.5°C: (A) A1_1 without MF, (B) A1_1 with MF, (C) A1_3 without MF, (D) A1_3 with MF. Note: Observe that the swelling behavior was not affected by the MF.

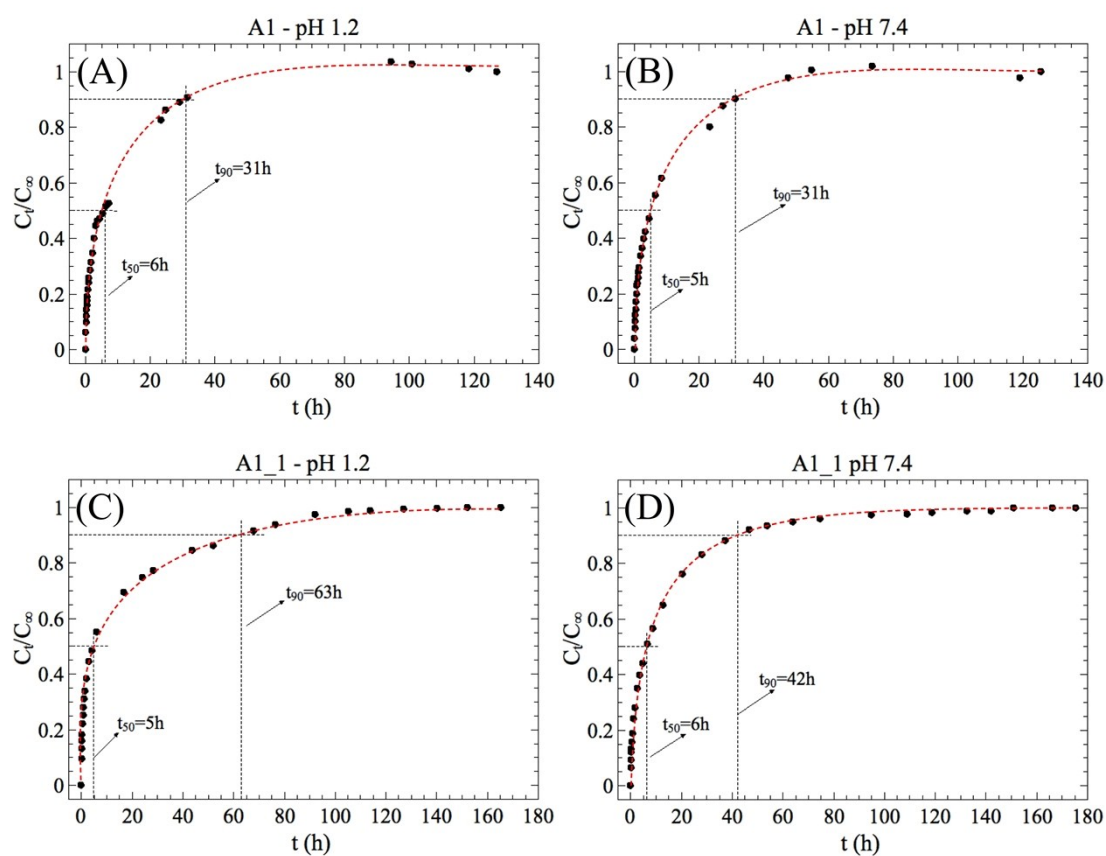


Figure S3. Time-dependent release curves of prednisolone from A1, and A1_1 hydrogels nanocomposites in different pH at a temperature of 37 °C. For sample A1_1, the experiments were carried out using an applied magnetic field of 48MGOe.

Table S1. Fitting parameters (n and k) of Eq. (1) to experimental release data of prednisolone from the hydrogels A1 and A1_1 at pH 1.2 and 7.4 with an applied magnetic field.

Sample name		n	k (h ^{-1/2})
A1	pH 1.2	0.52 ± 0.01	0.244 ± 0.002
	pH 7.4	0.58 ± 0.02	0.221 ± 0.004
A1_1	pH 1.2	0.42 ± 0.01	0.286 ± 0.003
	pH 7.4	0.46 ± 0.01	0.219 ± 0.002