

Supporting Information

Design of Hydrogel–Microgel Composites with Tailored Small Molecule Release Profiles

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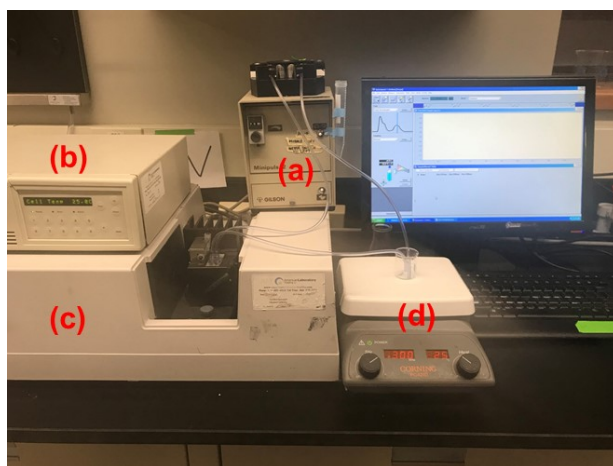


Fig. S1. Photograph of the instrumental setup used for the CV release experiments. (a) Peristaltic pump, (b) Temperature controller, (c) UV-Vis spectrometer, and (d) Heating/stirring plate.

Table S1. List of the Mole Ratios, Monomer Compositions, and Selected Solvents for Different HMC Materials

HMC Samples	NIPAm	BIS	BVB	AMPS	OMA	HEAm	Solvent	Microgels
HMC-5-BIS (HMC (CV))	95%	5%	-	-	-	-	DI water	CV-loaded
HMC-10-BIS	90%	10%	-	-	-	-	DI water	CV-loaded
HMC-15-BIS	85%	15%	-	-	-	-	DI water	CV-loaded
HMC-1-AMPS	94%	5%	-	1%	-	-	DI water	CV-loaded
HMC-2-AMPS	93%	5%	-	2%	-	-	DI water	CV-loaded
HMC-1-BVB	94%	5%	1%	-	-	-	DI water	CV-loaded
HMC-2-BVB	93%	5%	2%	-	-	-	DI water	CV-loaded
HMC-5-BISa	95%	5%	-	-	-	-	Ethanol : Water 7:3 (v/v)	Pure
HMC-5-OMA	90%	5%	-	-	5%	-	Ethanol : Water = 7:3 (v/v)	Pure
HMC-10-OMA	85%	5%	-	-	10%	-	Ethanol : Water = 7:3 (v/v)	Pure
HMC-5-HEAm	90%	5%	-	-	-	5%	Ethanol : Water = 7:3 (v/v)	Pure
HMC-10- HEAm	85%	5%	-	-	-	10%	Ethanol : Water = 7:3 (v/v)	Pure
HMC (AY)	95%	5%	-	-	-	-	DI water	AY-loaded
HMC (RhB)	95%	5%	-	-	-	-	DI water	RhB- loaded
HMC (CV, AY)	95%	5%	-	-	-	-	DI water	CV-loaded and AY- loaded
HMC (CV, RhB)	95%	5%	-	-	-	-	DI water	CV-loaded and RhB- loaded

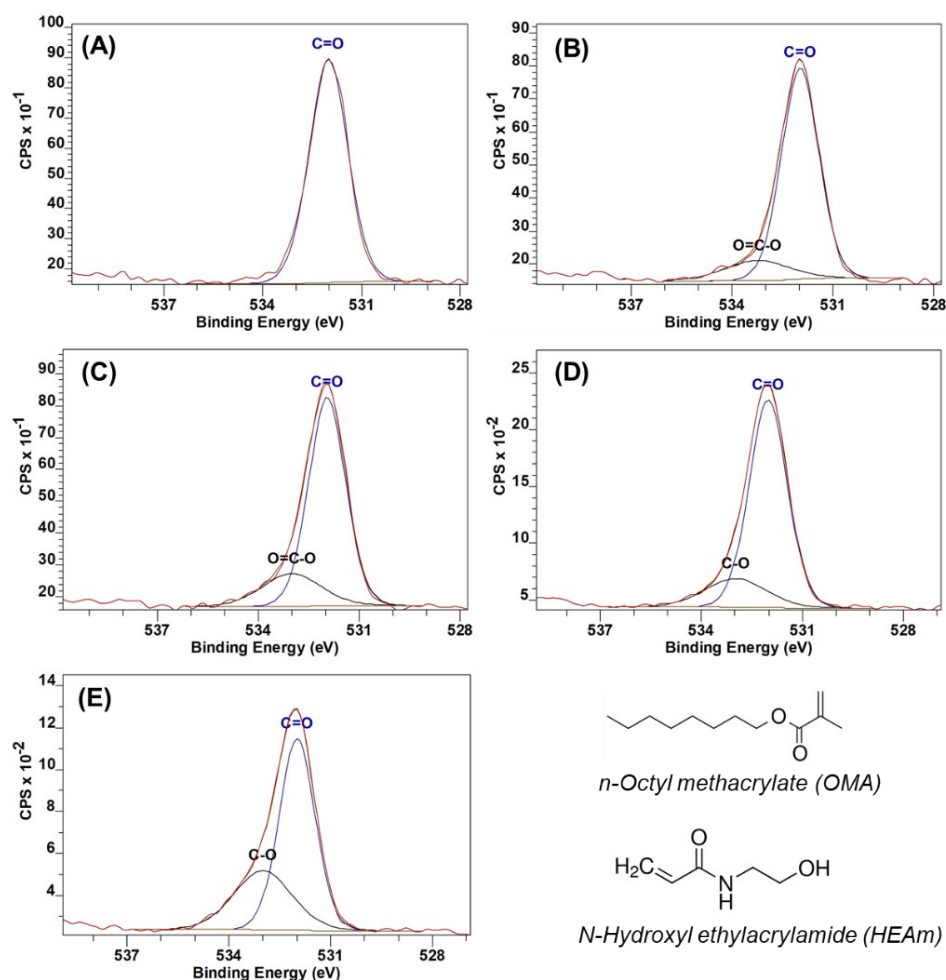


Fig. S2. O 1s high resolution XPS spectrum and fitting for (A) HMC-5-BISa, (B) HMC-5-OMA, (C) HMC-10-OMA, (D) HMC-5-HEAm, and (E) HMC-10-HEAm samples.

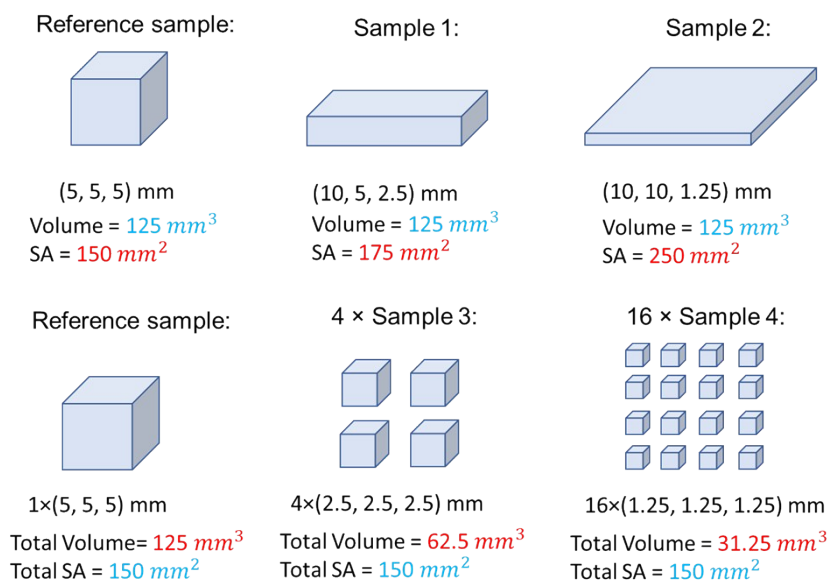


Fig. S3. Illustration showing the HMC-5-BIS samples with different dimensions

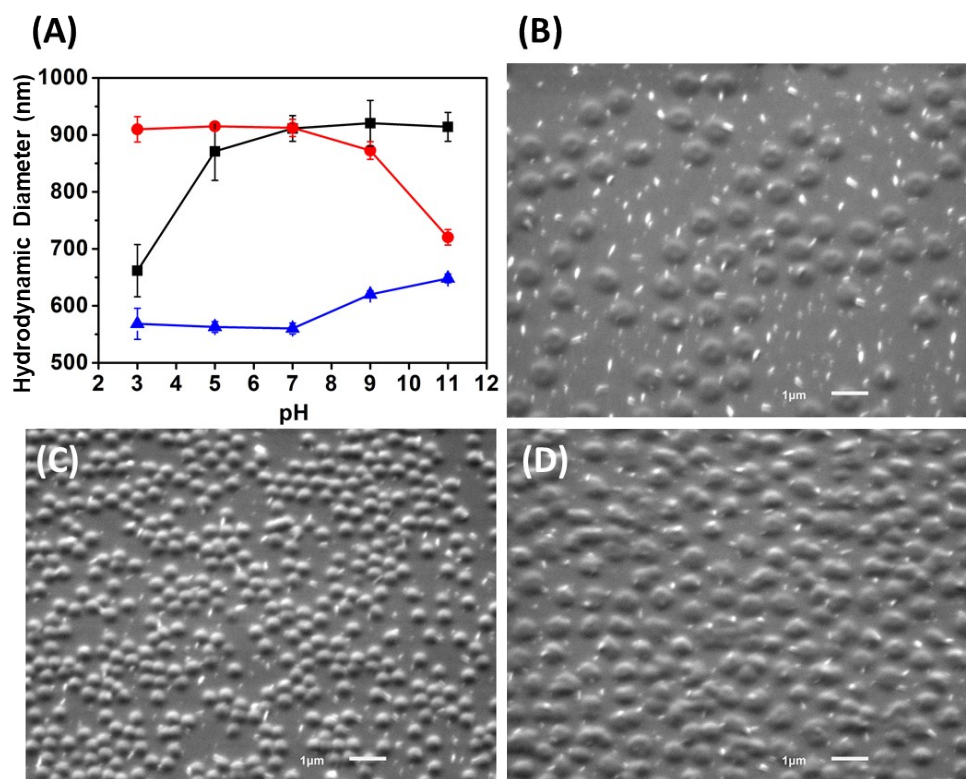


Fig. S4. (A) Hydrodynamic diameter of microgels at the different pH, (■) pNIPAm-*co*-AAc microgel, (●) pNIPAm-*co*-APMAH microgel, (▲) pNIPAm-*co*-APBA microgel. Error bars represent the standard deviations of three measurements. (B), (C) and (D) are the SEM images of pNIPAm-*co*-AAc, pNIPAm-*co*-APBA, and pNIPAm-*co*-APMAH microgels, respectively (scale bar = 1 μm).

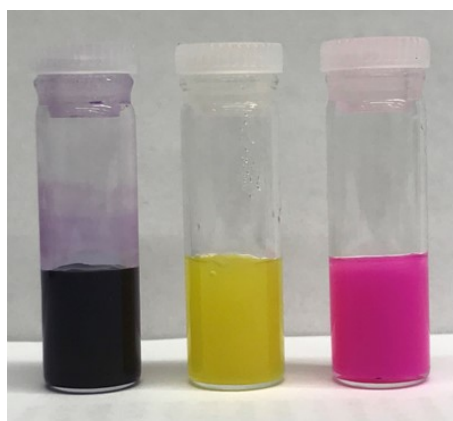


Fig. S5. Photographs of the three different model drug-loaded HMC materials. Left: HMC (CV), middle: HMC (AY), and right: HMC (RhB).

