

ARTICLE

ZIF-8 Integrated with Polydopamine Coating as A Novel Nano-platform for Skin-Specific Drug Delivery

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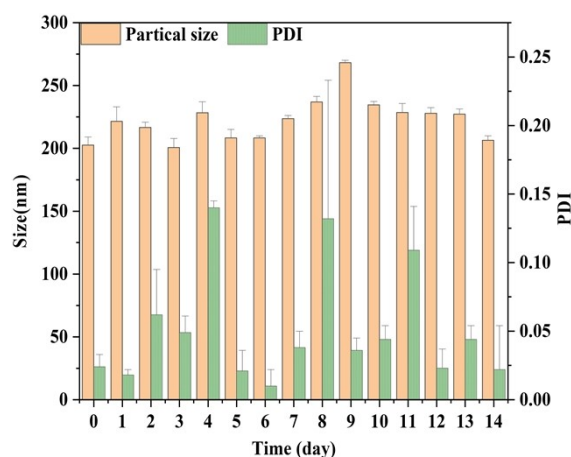


Fig. S1 *In vitro* stability studies of 5-FU@ZIF-8 in 14 days.

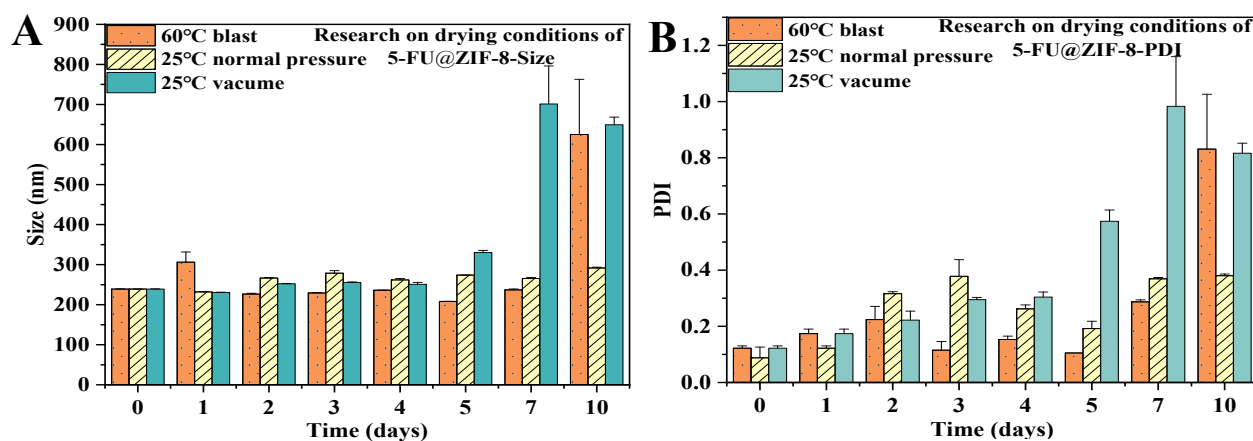


Fig. S2 Investigation of the drying conditions at 5-FU@ZIF-8. (A) Size. (B) PDI.

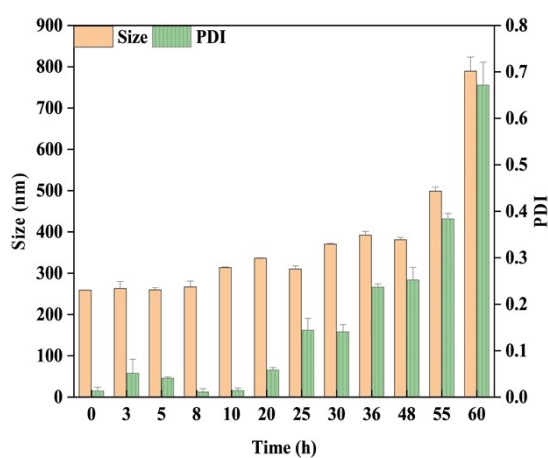


Fig. S3 *In vitro* stability studies of 5-FU@ZIF-8@PDA in 60 h.

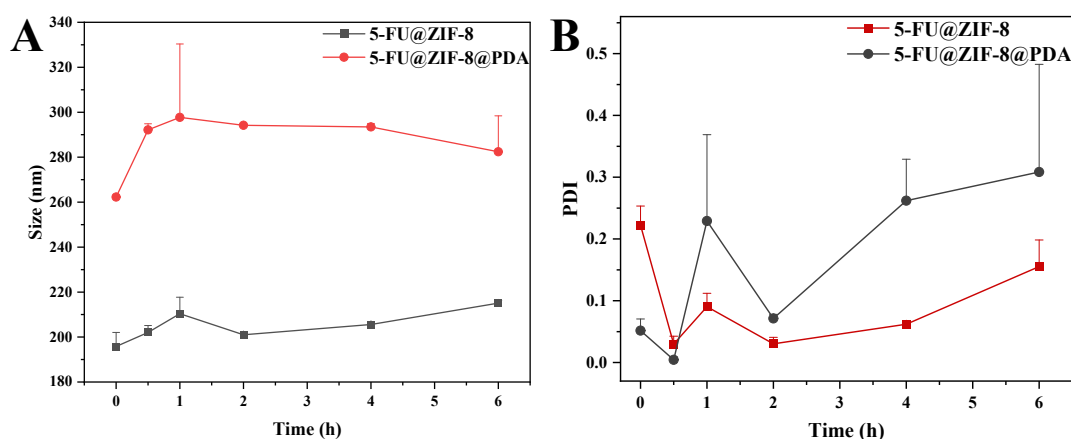


Fig. S4 *In vivo* stability studies of 5-FU@ZIF-8 and 5-FU@ZIF-8@PDA. (A) The size change of as-prepared nanoparticles during the skin penetration experiment for 6 h. (B) The PDI change of as-prepared nanoparticles during the skin penetration experiment for 6 h.

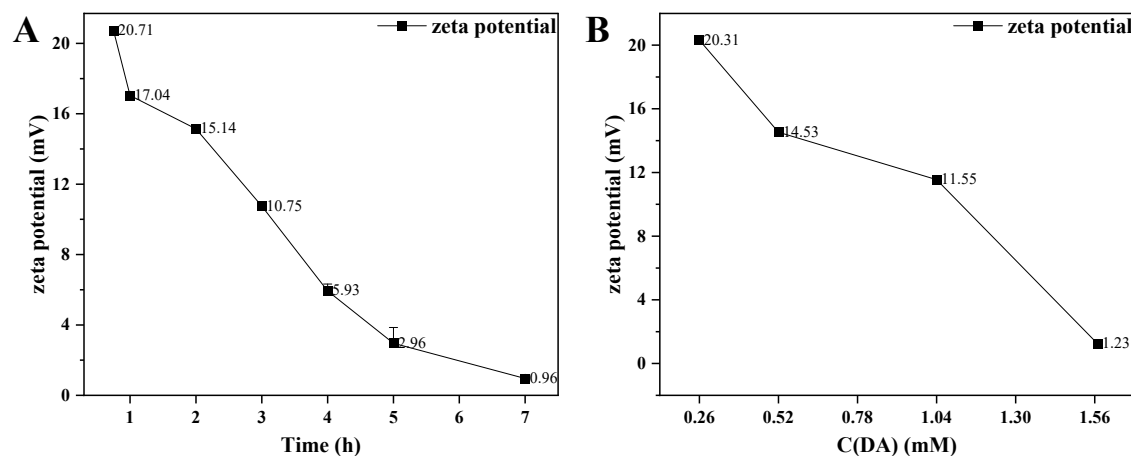


Fig. S5 Zeta potential of 5-FU@ZIF-8@PDA. (A) Zeta potential of 5-FU@ZIF-8@PDA at different time for stirring. (B) Zeta potential of 5-FU@ZIF-8@PDA at different DA concentrations.

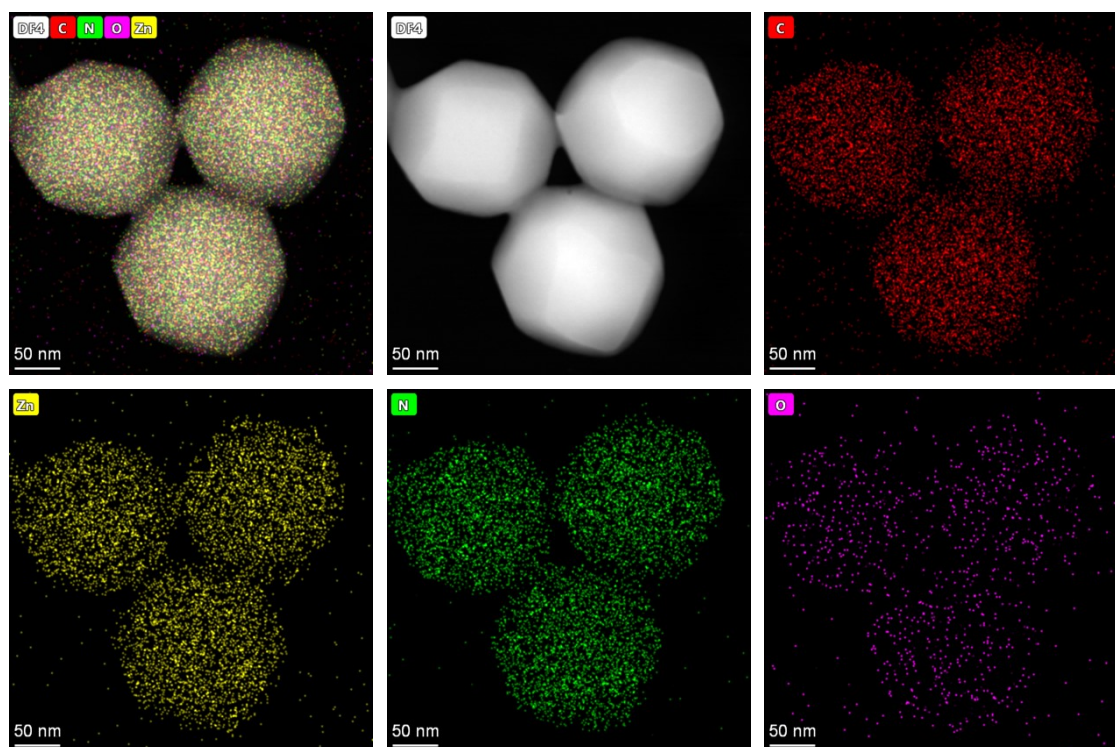


Fig. S6 EDS mapping of 5-FU@ZIF-8@PDA nanoparticles.

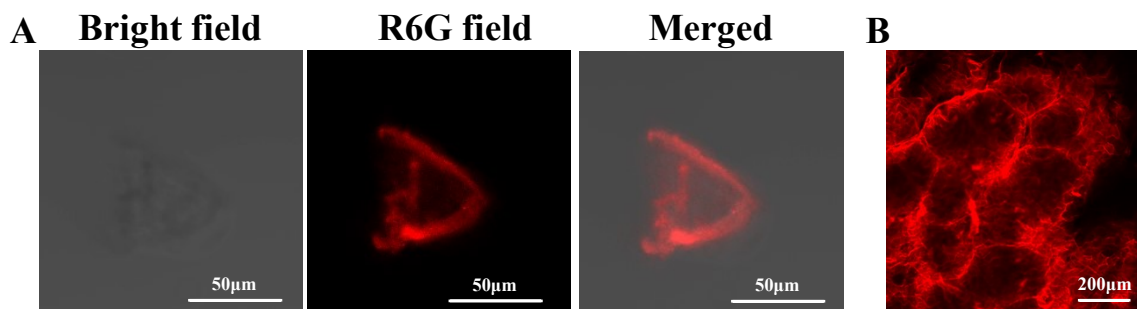


Fig. S7 CLSM image of R6G solution ($1 \mu\text{g}\cdot\text{ml}^{-1}$). (A) Effects of R6G skin penetration on hair follicle pathways. (Original magnification of A was 600 \times). (B) Intercellular pathway. (Original magnification of B was 200 \times).

Table S1 Investigation of the preparation process of 5-FU@ZIF-8@PDA (n = 3, Mean \pm SD).

Factor	Group	Increase value of size (nm)	PDI
C(DA) (mM)	0.26	69.0	0.111 \pm 0.043
	0.52	3858.0	0.279 \pm 0.134
	1.04	3918.0	0.129 \pm 0.054
	1.56	3360.0	0.283 \pm 0.050
Stirring time (min)	30	53.1	0.236 \pm 0.030
	45	69.0	0.299 \pm 0.032
	60	182.1	0.482 \pm 0.031
m(DA):m(MOF)	1:60	206.7	0.371 \pm 0.023
	1:80	69.0	0.037 \pm 0.034
	1:100	79.0	0.299 \pm 0.023