

Supporting Information

Nitrogen-doped Hollow Carbon Nanospheres as a Delivery Platform Enhance the Availability and Therapeutic Efficacy of Curcumin in Inflammatory Bone Defect Repair

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Table S1 Primer sequences for real-time qPCR analysis of the mRNA expression

Genes	Forward primer	Reverse primer
ALP	AACCTGACTGACCCTTCCCTCT	TCAATCCTGCCTCCTTCCACTA
Runx2	CGGGAACCAAGAAGGCACA	GCGGGACACCTACTCTCATACTG
OCN	GTGCAAAGCCCAGCGACTCT	GCTCCAAGTCCATTGTTGAGGTAG
OPG	TTGGCTGAGTGTTCTGGTGA	CTGGAAAGTTTGCTCTTGCGA
RANKL	TCGGGTTCCATAAAGTCAGTC	CAAATGTTGGCGTACAGGTAATAGA
β-actin	TGACGTTGACATCCGTAAAGACC	TGCTAGGAGCCAGGGCAGTAA

Table S2 Mean OD values, SD (standard deviation) values and RSD (relative standard deviation) values of the drug delivery system at different curcumin concentrations (n=9)

Curcumin	Dynamic Range					
Concentration (mg·ml ⁻¹)	0.1	0.2	0.4	0.6	0.8	1.0
Mean OD value	2.9128	2.9202	2.9344	2.9534	2.9658	2.9854
SD value	0.00156	0.00164	0.00188	0.00159	0.0013	0.00174
RSD value (%)	0.0536	0.0562	0.0641	0.0538	0.0438	0.0583

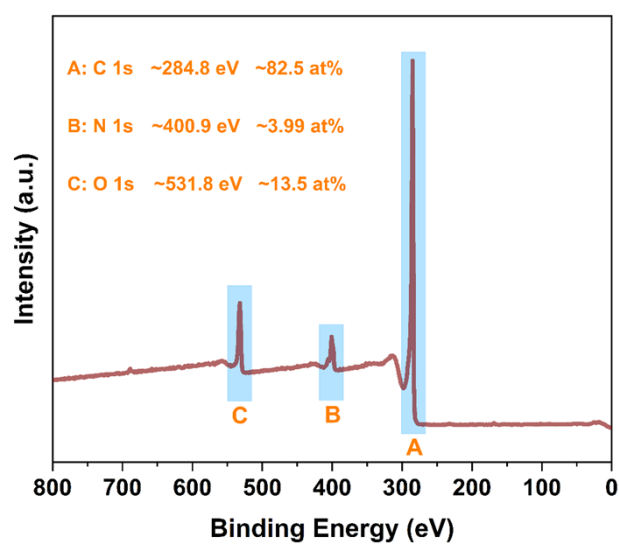


Fig. S1. The full XPS spectrum of N-HCSO

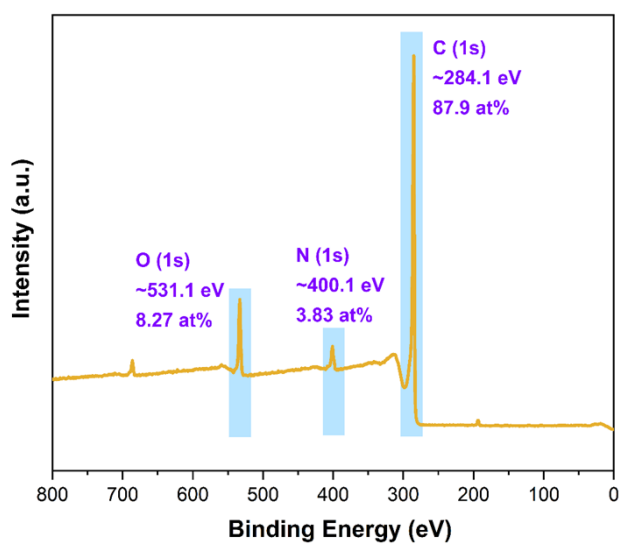


Fig. S2. The full XPS spectrum of N-HC

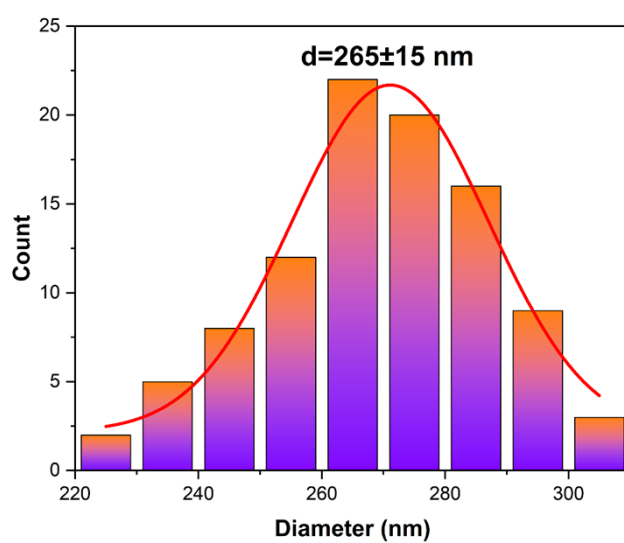


Fig. S3. Particle size distribution of SiO₂@PDA (n=100)

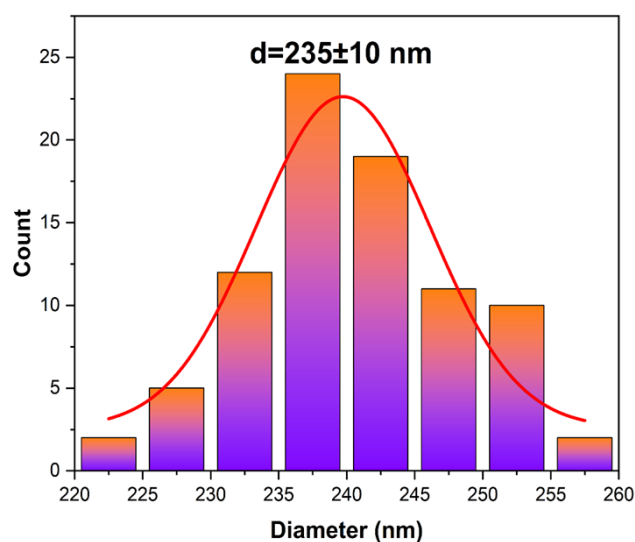


Fig. S4. Particle size distribution of N-HCSO (n=100)

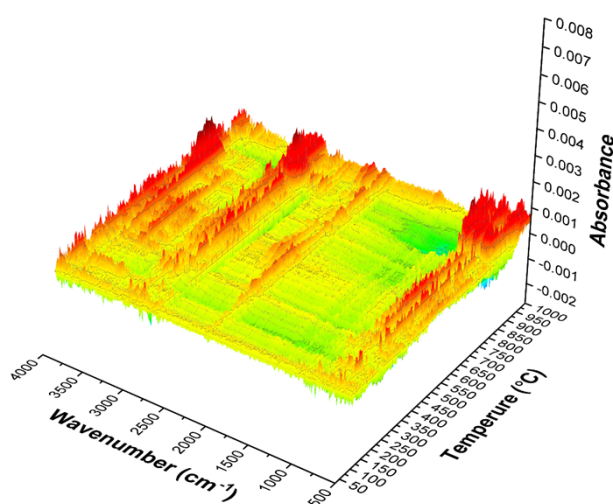


Fig. S5. TG-IR 3D image of SiO₂@PDA

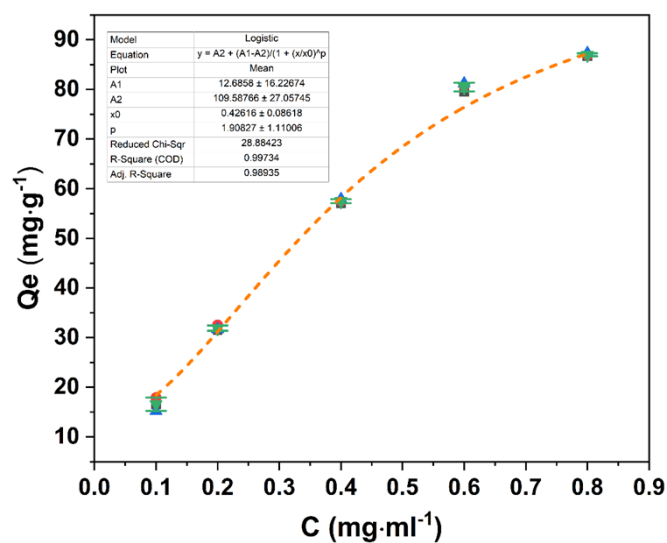


Fig. S6. Adsorption Isotherm of Curcumin on N-HCSO