

Supplementary Information

Hexagonal boron nitride nanoplates as emerging biological nanovectors and their potential applications in biomedicine

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BSA release assay.

Typically, 10 mg of BSA@BN powder was dissolved in 1 ml of phosphate buffer solutions (PBS) at pH 5.4, 7.4, and 8.4. The solutions were incubated at 37 °C. At fixed time intervals (1, 2, 4, 6, 24 and 48 h), they were centrifuged at 16200 g min⁻¹ for 10 min. The supernatants were analyzed at 280 nm using a UV-Vis spectrophotometer to determine the concentration of the released BSA.

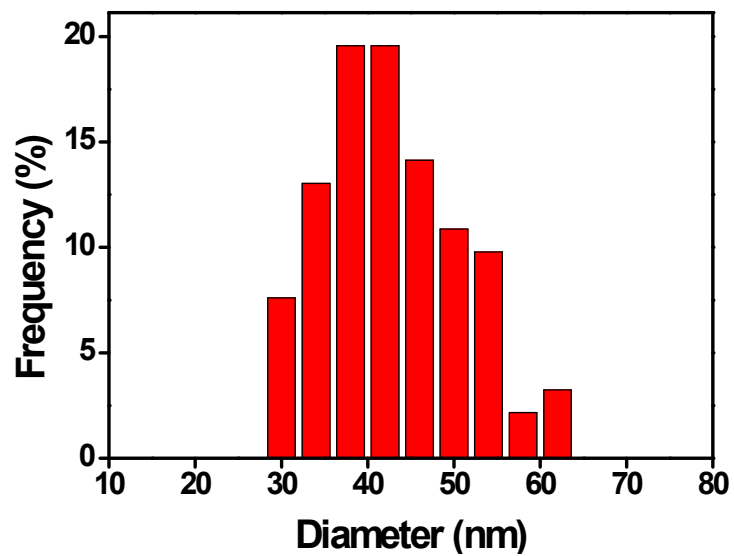


Figure S1 Statistical diameter histogram obtained from TEM data by measuring 100 nanoplates. The histogram shows that the nanoplate diameters are dispersed from 30 to 60 nm with a broad peak at 40 nm.

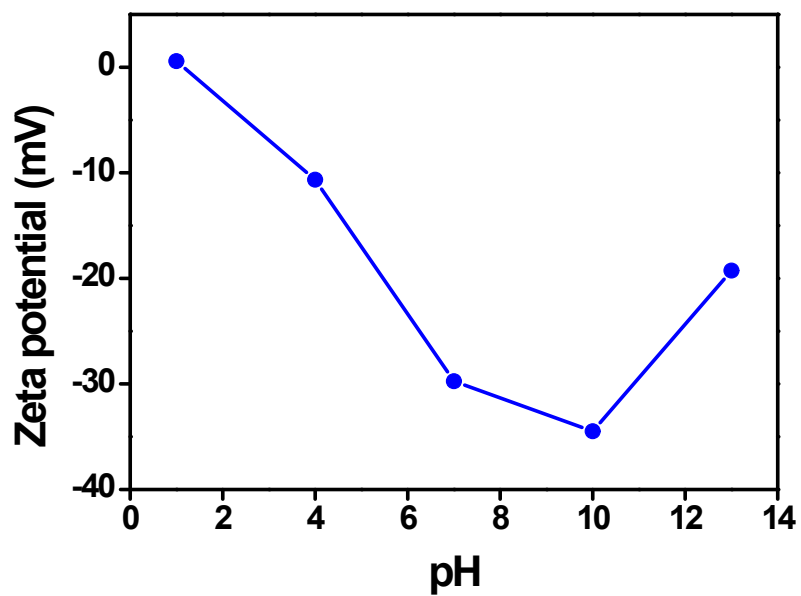


Figure S2 Zeta potential of *h*-BN nanoplate colloid (0.02 mg ml^{-1}).

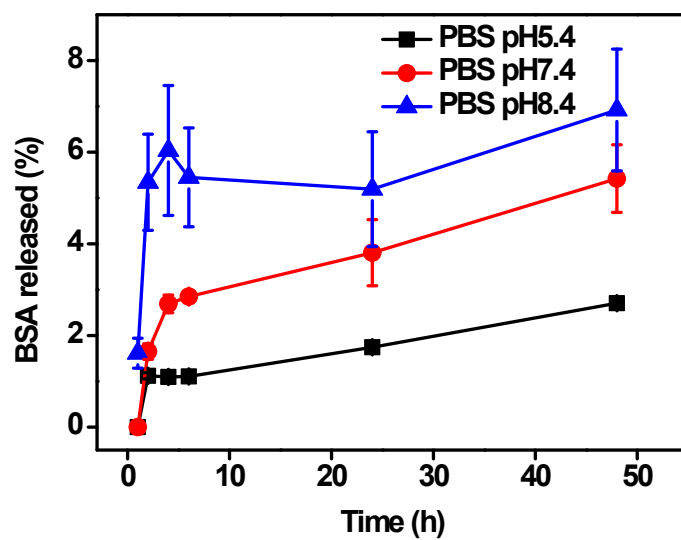


Figure S3 Cumulative percent *in vitro* release of BSA from *h*-BN nanoparticles at 37 °C in PBS solutions at different pH levels.