Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.

Supporting Information

Barnase encapsulation into submicron porous $CaCO_3$ particles – studies of loading and enzyme activity

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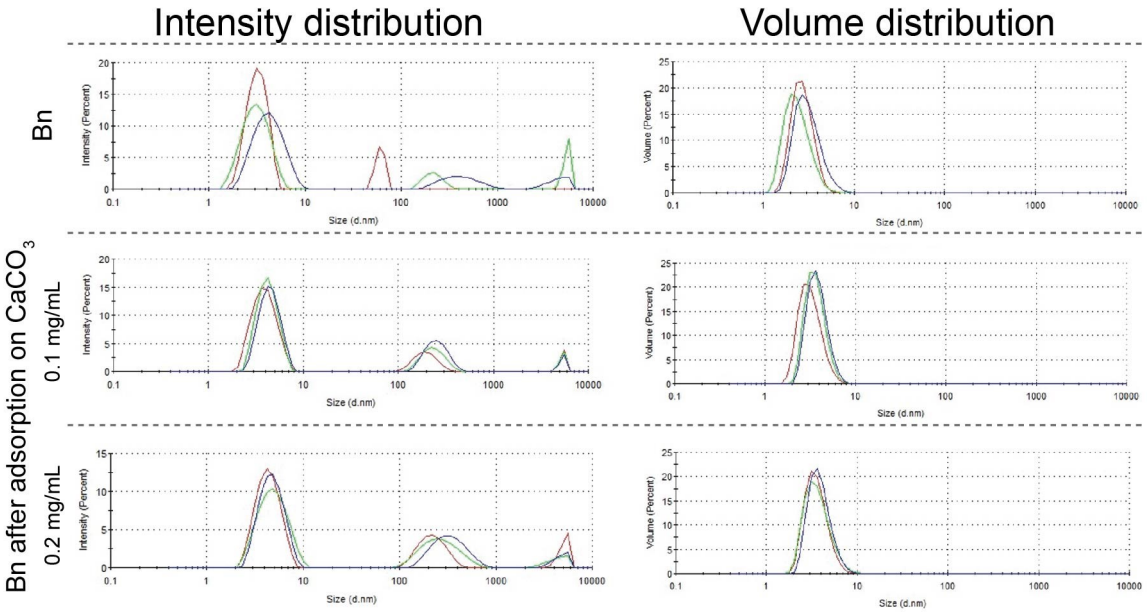


Figure S1. Size distribution by intensity (left) and by volume (rigth) of Bn in water solution with working pH 8 and after incubation with $CaCO_3$ for 1 h.

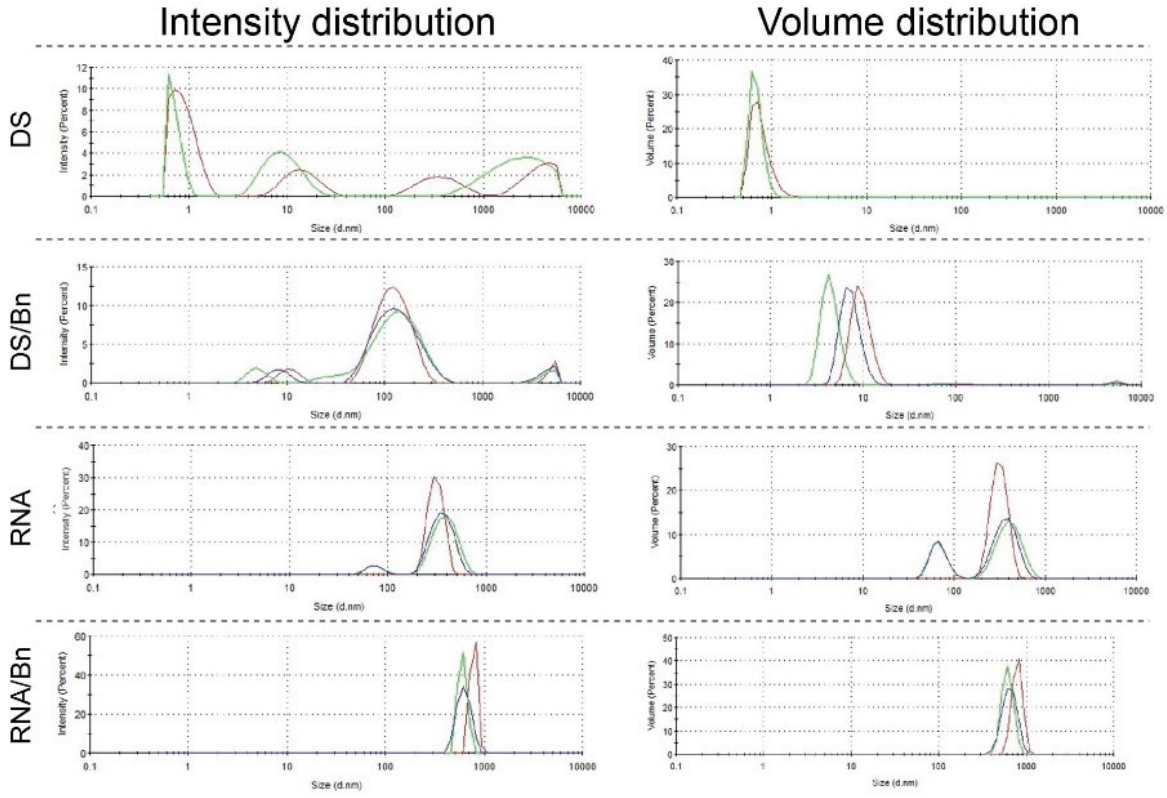


Figure S2. Size distribution by intensity (left) and by volume (rigth) of DS, RNA, DS/Bn and RNA/Bn in water solution with working pH 8.

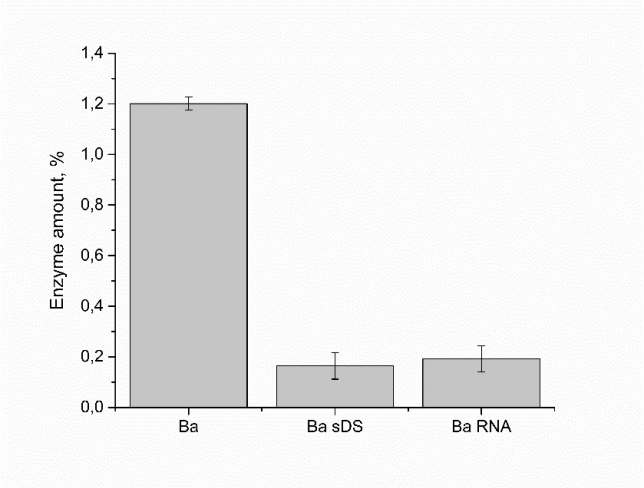


Figure S3. The amount of the enzyme in the supernatant after one washing step determined by Bredford method.

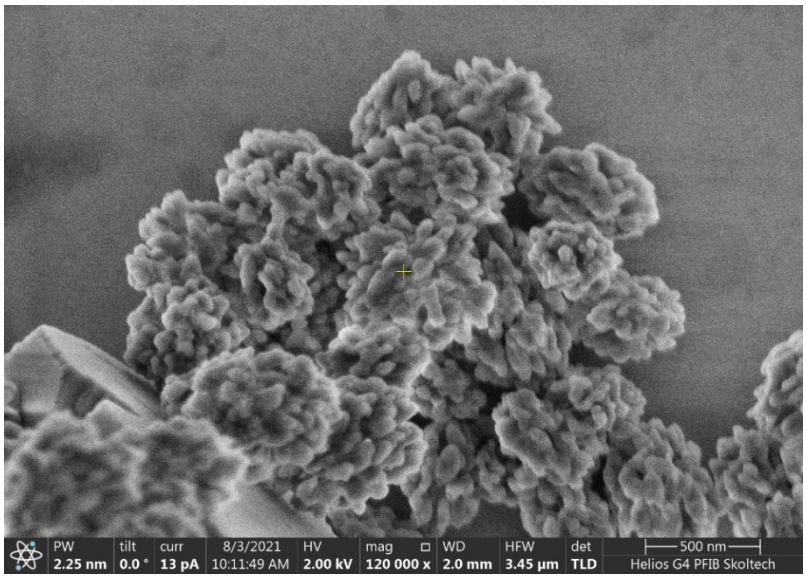


Figure S4. SEM image of pristine $CaCO_3$ particles.

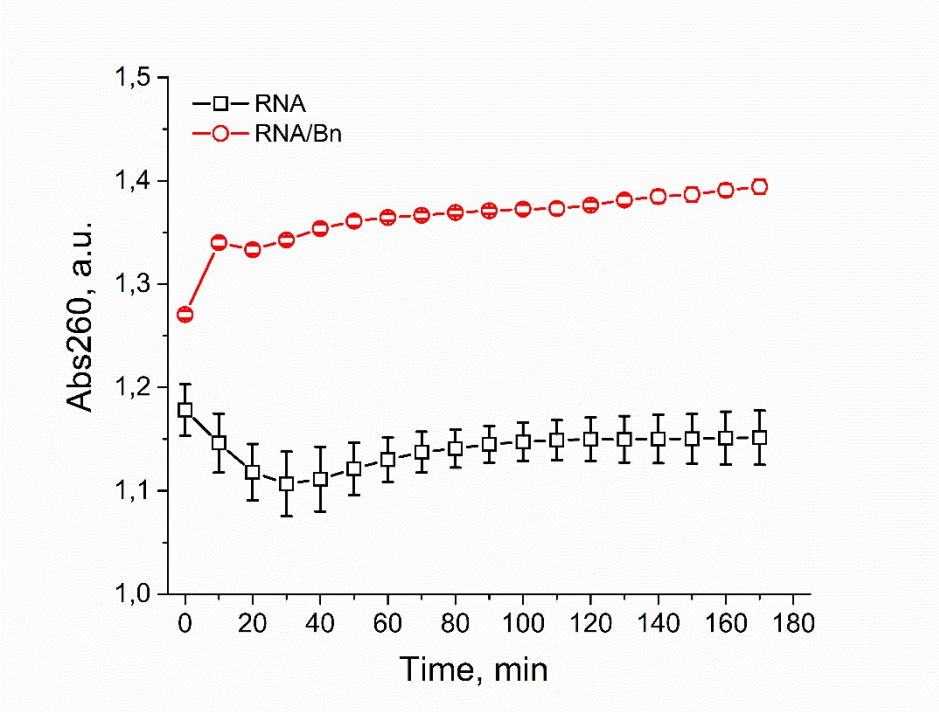


Figure S5. Absorbance at 260 nm of RNA and RNA incubated with Bn for 3 h at room temperature.

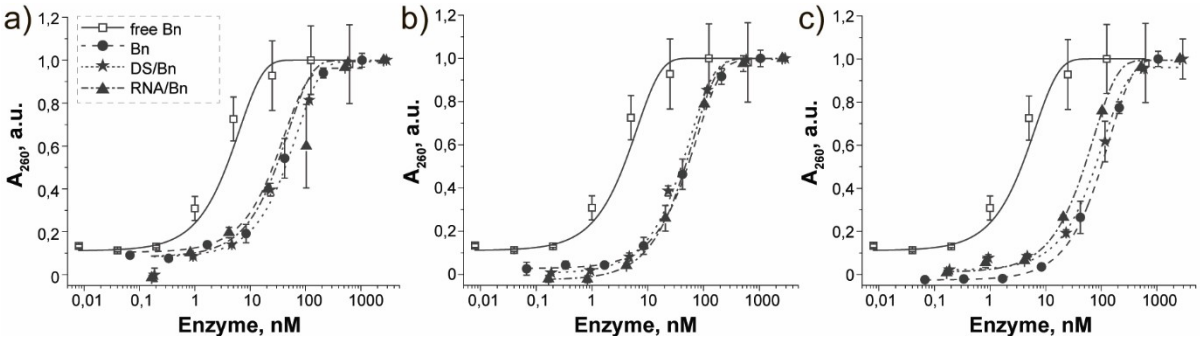
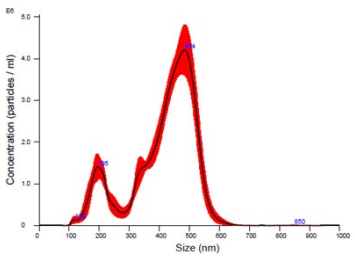
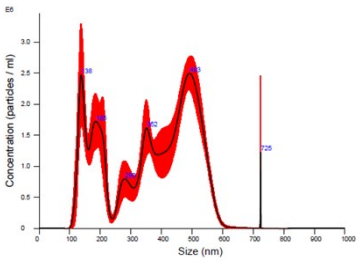


Figure S6. RNase activities of Bn in $CaCO_3$ particles encapsulated with and without DS or RNA by adsorption method determined at different time intervals, namely 24, 192, and 312 hours. The total enzyme concentration in $CaCO_3$ particles was determined based on the loading efficiency for each type of particles with respect to initial enzyme concentrations.

CaCO3-Bn



CaCO3-DS-Bn



CaCO3-RNA-Bn

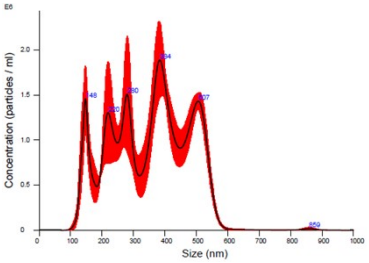


Figure S7. Averaged particle concentrations and size for different formulation of Bn.