Electronic Supplementary Material (ESI) for Nanoscale.

Microbubbles in combination with focused ultrasound to deliver Quercetin-modified sulfur nanoparticles: through the blood brain barrier into the brain parenchyma and relieve endoplasmic reticulum stress to treat Alzheimer's disease

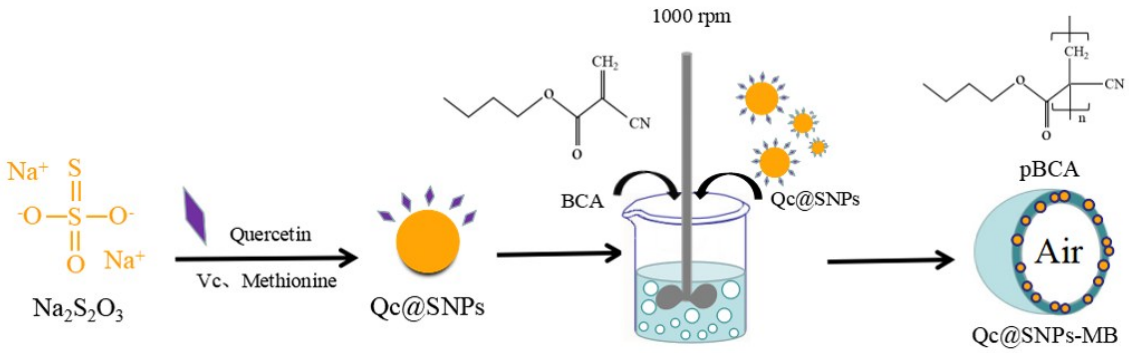

Figure. S1. Schematic diagram of Qc@SNPs-MB synthesis.

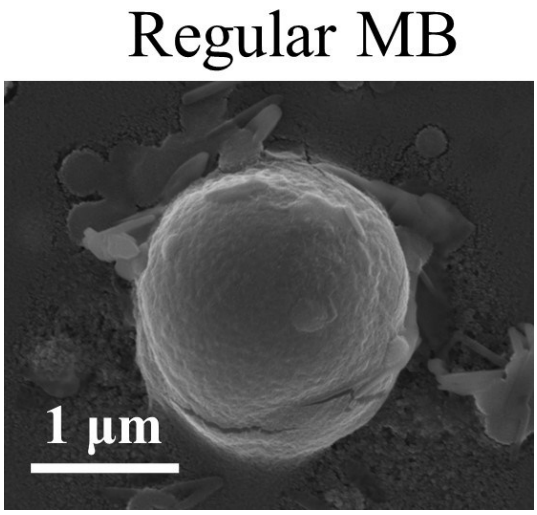

Figure. S2. SEM images of regular MB.

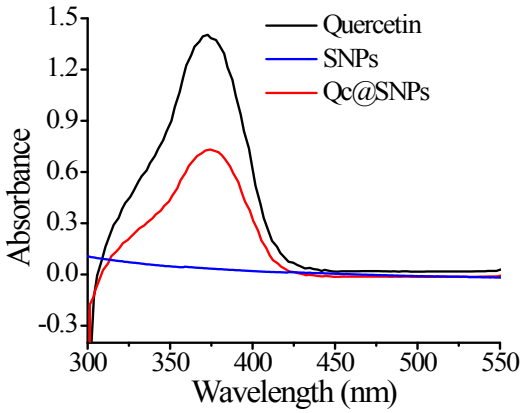

Figure. S3. UV-vis spectra of Quercetin, SNPs and Qc@SNPs.

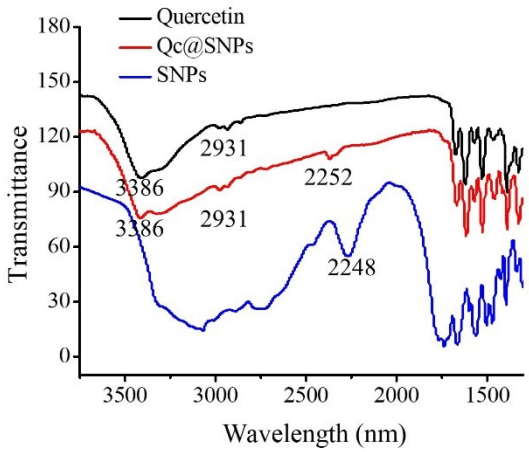

Figure. S4. FT-IR spectra of Quercetin, SNPs and Qc@SNPs.

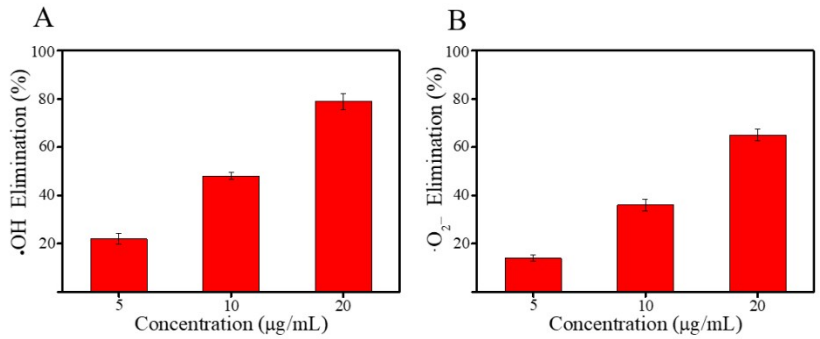

Figure. S5. Qc@SNPs scavenging efficiency for hydroxyl radicals and superoxide anions.

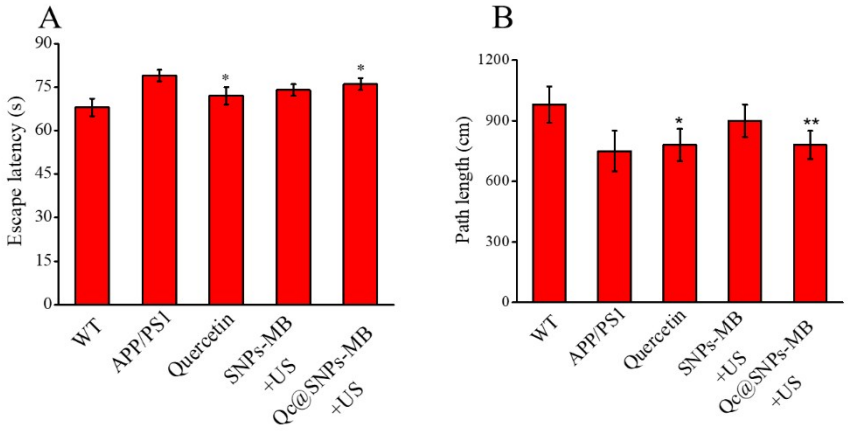

Figure. S6. The therapeutic effect of NPs in AD mice. (A-B) The learning ability and behavior of AD mice were evaluated by water maze test. The labels *, **, and *** indicate $p < 0.05$, $p < 0.01$, and $p < 0.001$, respectively, compared with the APP/PS1 group.