**Supplementary material 1** Powder X-ray diffraction (XRD) patterns of O#SQDs produced after thermal annealing. Those marked with “ ” can be indexed to hexagonal wurtzite ZnO (JCPDS file no.36-1451), while the others marked with “●” can be indexed to hexagonal wurtzite-8H ZnS (JCPDS Card No. 39-1363).
**Supplementary material 2** The TEM pictures of O#SQDs synthesized at 200 °C for 18 h The black circle QDs is the ZnS/ZnO which is amplified.
Supplementary material 3 The quenching ratio ($F/F_0$) of BSA fluorescence with addition of O#SQDs.
**Supplementary material 4** The Stern-Volmer plots for BSA fluorescence quenching by O#SQDs.
Supplementary material 5 The fluorescence quenching of BSA by flavonoid glycosides in combination of quantitative O#SQDs (15.00×10⁻⁶ mol/L). BSA, 1.00×10⁻⁵ mol/L, λex = 280 nm, T = 300 K.