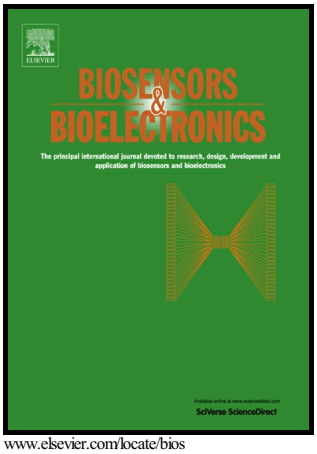

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Single-step detection of norovirus tuning localized surface plasmon resonance-induced optical signal between gold nanoparticles and quantum dots

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Abstract

A new method of label free sensing approach with superior selectivity and sensitivity towards virus detection is presented here, employing the localized surface plasmon resonance (LSPR) behavior of gold nanoparticles (AuNPs) and fluorescent CdSeTeS quantum dots (QDs). Inorganic quaternary alloyed CdSeTeS QDs were capped with $_{L}$-cysteine via a ligand exchange reaction. Alternatively, citrate stabilized AuNPs were functionalized with 11-