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A novel ratiometric fluorescent probe for the detection of uric acid in human blood based on H₂O₂-mediated fluorescence quenching of gold/silver nanoclusters

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ABSTRACT

In this work, a ratiometric fluorescent probe (RF-probe) for highly sensitive and selective detection of uric acid was reported for the first time toward H₂O₂ based on inner filter effect (IFE) between bimetallic gold/silver nanoclusters (Au/Ag NCs) and 2,3-diaminophenazine (DAP). For this RF-probe, uric acid was degraded to allantoin and H₂O₂. Upon the addition of HRP, o-phenylenediamine (OPD) could be catalytically oxidized to DAP in the presence of H₂O₂, then the fluorescence intensity

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