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A traffic light-type sensitive visual detection of mercury by golden nanoclusters mixed with fluorescein

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Abstract

A novel colorimetric sensor based on red-emitting bovine serum albumin-golden nanoclusters (BSA-AuNCs) and green-colored fluorescein that exhibited traffic light-type color change was developed for ratiometric and visual detection of mercury (Hg). In the presence of Hg²⁺, the red fluorescence from BSA-AuNCs was quenched while the green fluorescein was inert thus as a reference. And it presented traffic light-type (red, yellow and green) color in the low, middle and high

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