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**Gold nanoparticles-based chemiluminescence resonance energy transfer for ultrasensitive detection of melamine**

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**ABSTRACT**

A turn-on chemiluminescence resonance energy transfer method was fabricated for the determination of melamine by using bis(2,4,6-trichlorophenyl)oxalate-hydrogen peroxide-fluorescein chemiluminescence reaction as a donor and dispersed gold nanoparticles as an acceptor. The chemiluminescence signal of bis(2,4,6-trichlorophenyl)oxalate-hydrogen peroxide-fluorescein reaction decreased significantly in the presence of dispersed gold nanoparticles because the absorption band of dispersed gold nanoparticles perfectly overlapped with the chemiluminescence spectrum. Melamine could induce the aggregation of gold nanoparticles, leading to a dramatic red-shift of the absorption band of dispersed gold nanoparticles. The absorption band of the aggregated gold nanoparticles doesn't overlap with the

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