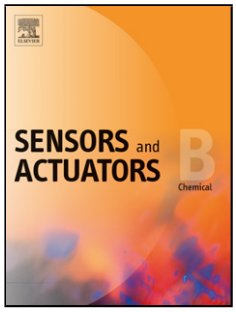

Title: Masking agent-controlled discriminative Hg^{2+} and Cu^{2+} sensing by quinonediimine dye formation of aniline-functionalized silica nanoparticles

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Masking agent-controlled discriminative Hg^{2+} and Cu^{2+} sensing by quinonediimine dye formation of aniline-functionalized silica nanoparticles

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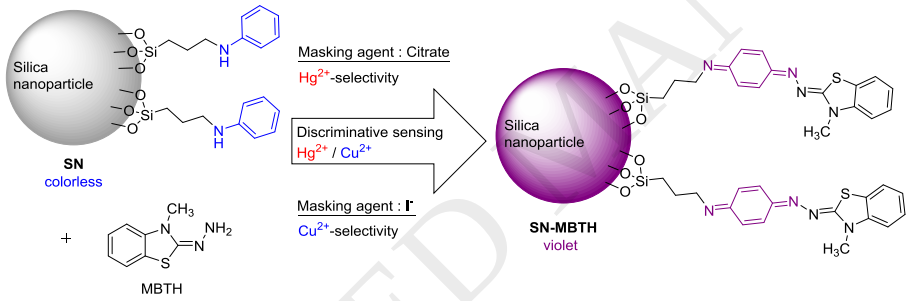
Graphical Abstract



Highlights:

- A discriminative Hg^{2+}- and Cu^{2+}-selective colorimetric sensing system was developed.
- The signaling was due to the metal-assisted oxidative coupling of aniline with MBTH.
- Immobilizing on silica nanoparticles enhanced user safety in handling toxic anilines.
- Detection of Hg^{2+} and Cu^{2+} in wastewater was possible using an office scanner.

Abstract:

A novel masking agent-controlled discriminative Hg^{2+}- and Cu^{2+}-selective reaction-based