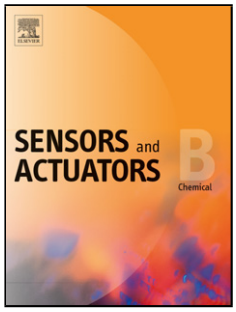

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Ultrasensitive colorimetric assay melamine based on in situ reduction to formation of CQDs-silver nanocomposite

Wei-Feng Wang [a], Yin Qiang [b], Xian-Hua Meng [a], Jun-Li Yang [a,*], Yan-Ping Shi [a]

[a] CAS Key Laboratory of Chemistry of Northwestern Plant Resources, Key Laboratory for Natural Medicine of Gansu Province, Lanzhou Institute of Chemical Physics, Chinese Academy of Sciences (CAS), Lanzhou 730000, P. R. China

[b] School of Pharmacy, Lanzhou University, Lanzhou 730000, P. R. China

Corresponding author:

[*]Tel/Fax: +86-931-4968385. E-mail: yangjl@licp.cas.cn (Jun-Li Yang)

Highlights

- In situ reduction Ag^+ to formation of CQDs-silver nanocomposite was exploited to develop colorimetric assay platform.
- Low at pM detection limit was obtained by the biosensing system.
- The detection sensitivity was full fill with the requirement of food resource melamine detection.
- The mild sensing condition made it could employ in on-site detection.

Abstract: In this work, the in situ reduction of Ag^+ by carbon quantum dots (CQDs) to the formation of CQDs-silver nanocomposite (CQDs-silver NPs) was exploited to develop a facile and ultrasensitive colorimetric sensor platform. Due to the high