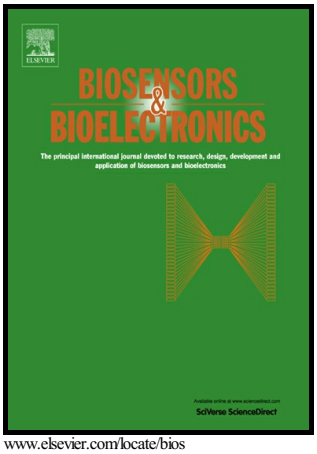

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A selective and sensitive optical sensor for dissolved ammonia detection via agglomeration of fluorescent Ag nanoclusters and temperature gradient headspace single drop microextraction

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Abstract

In this paper, a simple sensor platform is presented for highly selective and sensitive detection of dissolved ammonia in aqueous solutions without pretreatment based on temperature gradient headspace single drop microextraction (HS-SDME) technique, and fluorescence and UV-vis spectrophotometry are utilized with the Ag nanoclusters (Ag NCs) functioned by citrate and glutathione as the probe. The sensing mechanism is based on the volatility of ammonia gas and the active response of Ag