Electronic Supplementary Material (ESI) for Analytical Methods.
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Supplementary material

A simple paper-based approach for arsenic determination in water using hydride generation coupled with mercaptosuccinic-acid capped CdTe quantum dots

Oraphan Thepmanee,[a] Kanlaya Prapainop,[b,c] Obnithi Noppha,[c] Nuanlaor Rattanawimanwong,[a] Weena Siangproh,[a] Orawon Chailapakul,[d] Kriangsak Songsrirote*[a]

[a] Department of Chemistry, Faculty of Science, Srinakharinwirot University, Sukhumvit 23, Wattana, Bangkok 10110, Thailand

[b] Department of Biochemistry, Faculty of Science, Mahidol University, Rama VI Road, Ratchathewi, Bangkok 10400, Thailand

[c] School of Materials Science and Innovation, Faculty of Science, Mahidol University, Rama VI Road, Ratchathewi, Bangkok 10400, Thailand

[d] Electrochemistry and Optical Spectroscopy Research Unit, Department of Chemistry, Faculty of Science, Chulalongkorn University, 254 Phayathai Road, Pathumwan, Bangkok 10330, Thailand

*Corresponding authors: Kriangsak Songsrirote. Tel: +66(0)98-2690388 Fax: +66(0)22-600128. E-mail: kriangsaks@g.swu.ac.th

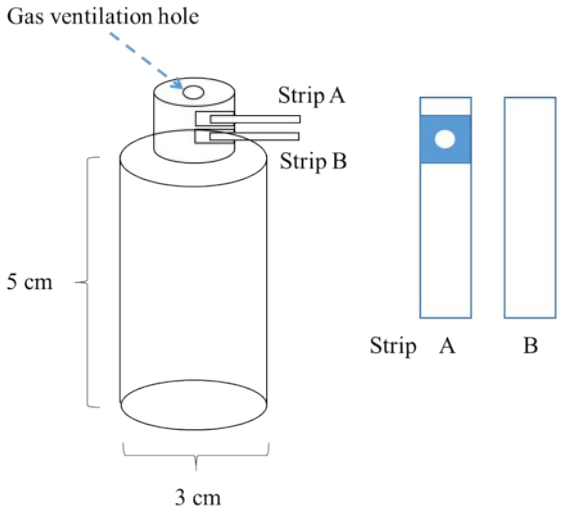

Figure S1. Reaction bottle and paper strips for arsenic determination.

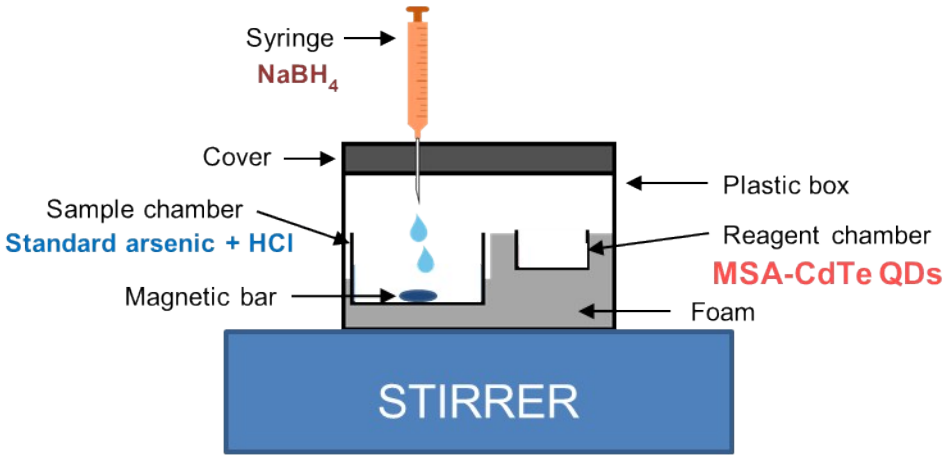

Figure S2. Diagram of gas diffusion system for arsine gas generation and diffusion to react with MSA-CdTe QDs.

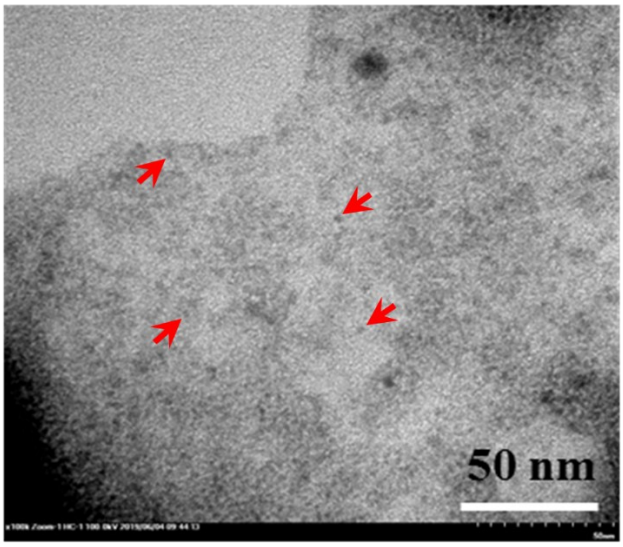

Figure S3. TEM image of MSA-CdTe QDs.

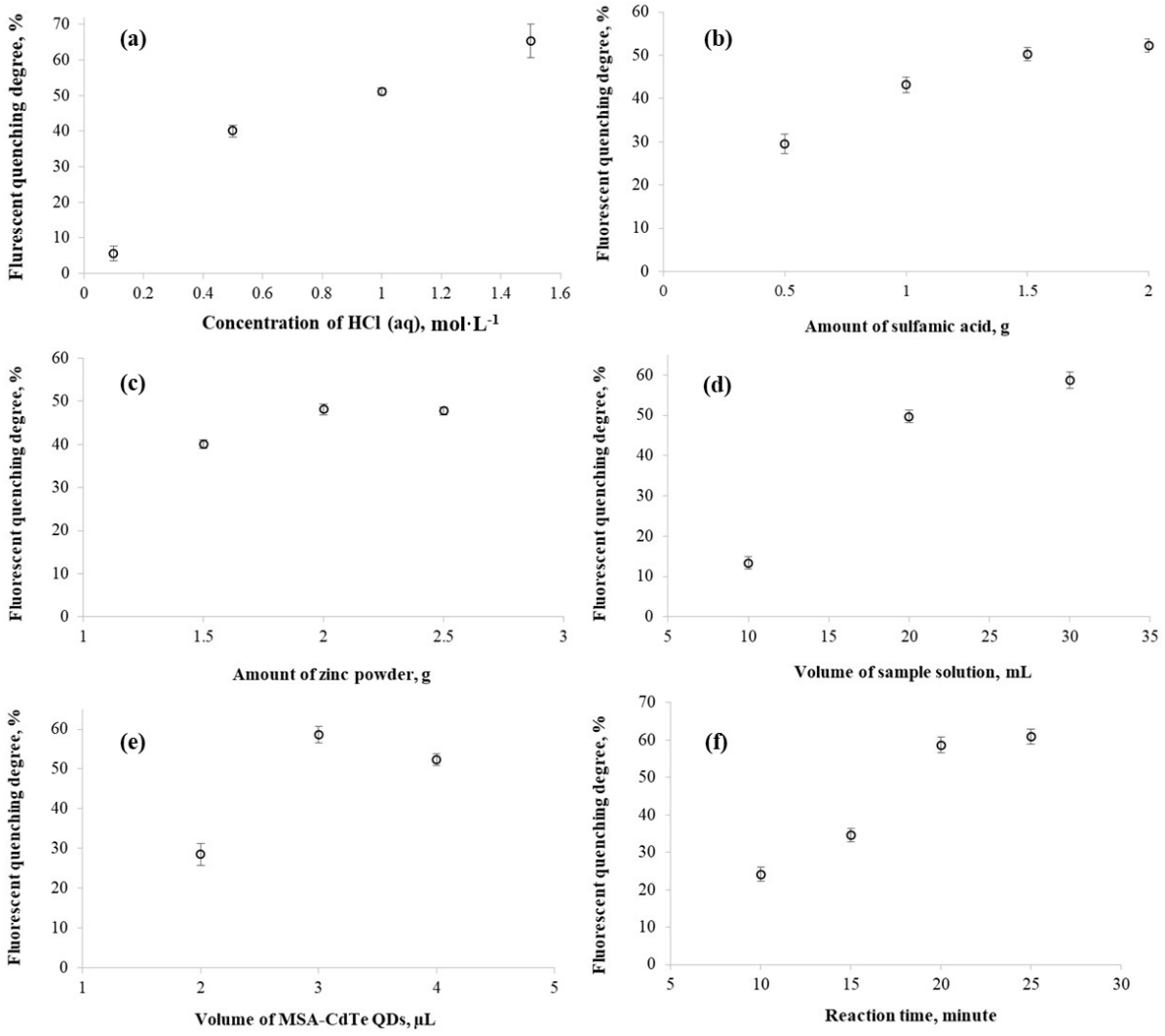

Figure S4. Fluorescent quenching degree of MSA-CdTe QDs with different (a) concentrations of HCl (aq), (b) amounts of sulfamic acid, (c) amounts of zinc powder, (d) volumes of sample solution, (e) volumes of MSA-CdTe QDs, and (f) reaction time for reaction of arsenic hydride generation.

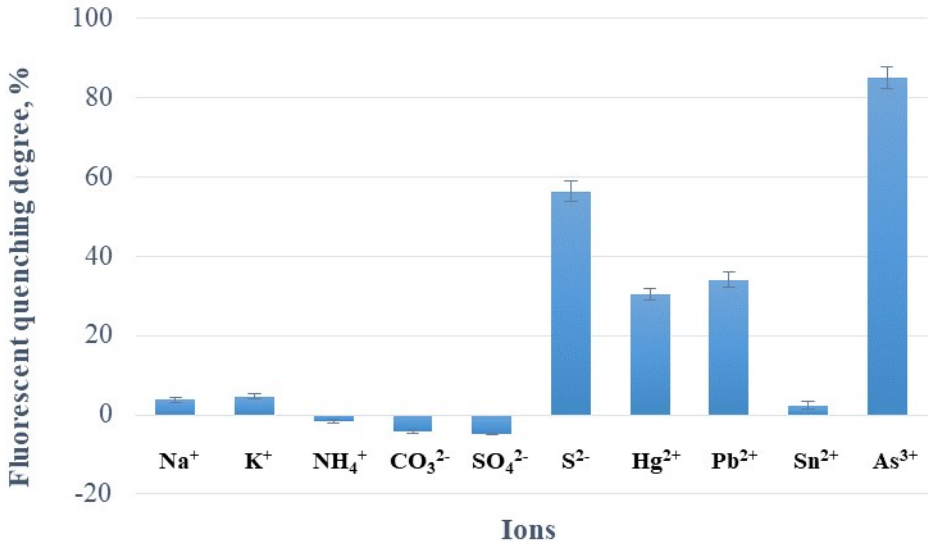

Figure S5. Effect of different ions in solution on fluorescent quenching of MSA-CdTe QDs.

Table S1. The studied parameters for arsenic detection based on the developed approach.

Parameters	**Conditions**
Type and amount of acid	1.0 mL of 0.5, 1.0, and 1.5 mol·L^{-1} HCl (*aq*) 0.5, 1.0, 1.5, and 2.0 g of sulfamic acid (*s*)
Amount of zinc powder	1.5, 2.0, 2.5 g
Volume of sample solution	10.0, 20.0, and 30.0 mL
Volume of MSA-CdTe CDs	2.0, 3.0, and 4.0 mL
Reaction time	10.0, 15.0, 20.0, and 25.0 min