

Electronic Information

Sensitive chemiluminescence determination method for 2,4,6-trinitrotoluene based on catalytic activity of amine-capped gold nanoparticles

Javad Hassanzadeh,^a Alireza Khataee,^{a,b,*} Nafiseh Bagheri,^c Roya Lotfi^a

^a Research Laboratory of Advanced Water and Wastewater Treatment Processes, Department of Applied Chemistry, Faculty of Chemistry, University of Tabriz, 51666-16471 Tabriz, Iran

^b Department of Materials Science and Nanotechnology, Near East University, 99138 Nicosia, North Cyprus, Mersin 10, Turkey

^c Department of Chemistry, Faculty of Science, Azarbaijan Shahid Madani University, Tabriz, Iran

* Corresponding author:

E-mail: a_khataee@tabrizu.ac.ir

Tel.: +98 41 33393165; Fax: +98 41 33340191

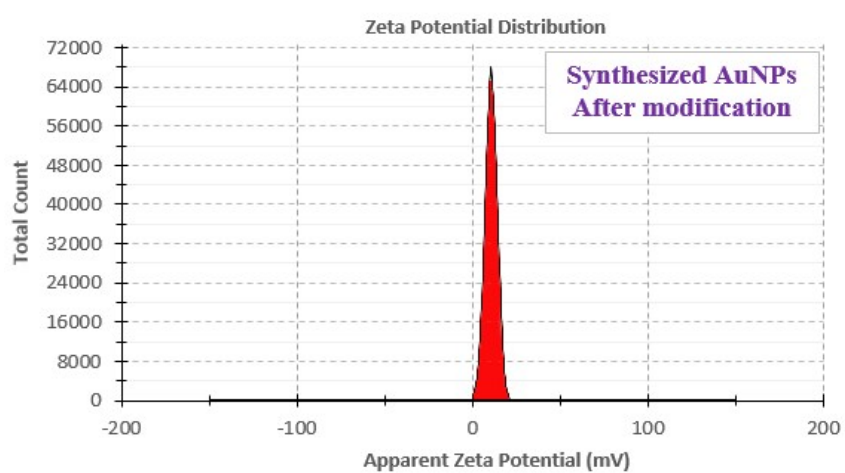
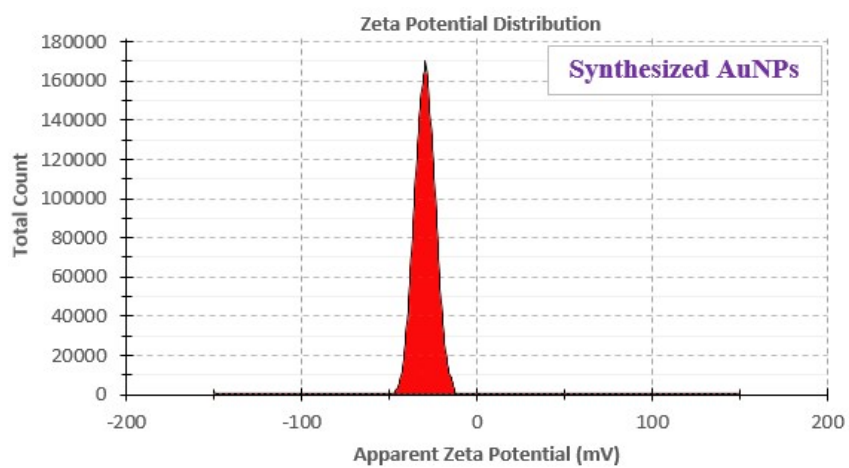


Figure S1. Zeta potential distribution for AuNPs before and after their modification with 1,2-ethylenediamine.

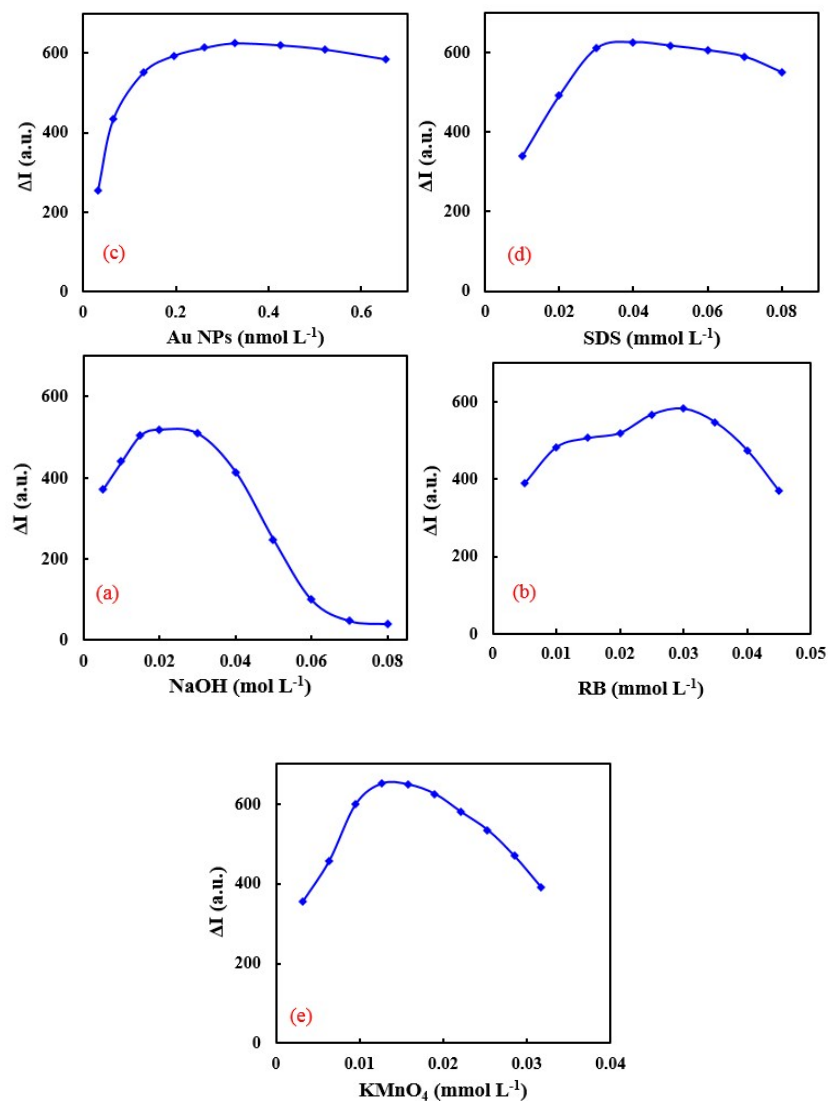


Figure S2. Effect of (a) concentration of NaOH (0.02 mmol L⁻¹ RB, 0.04 mmol L⁻¹ SDS, 0.019 mmol L⁻¹ KMnO₄ and 400 μ L AuNPs); (b) concentration of RB (0.04 mmol L⁻¹ SDS, 0.02 mmol L⁻¹ NaOH, 0.019 mmol L⁻¹ KMnO₄ and 400 μ L AuNPs); (c) amount of AuNPs (0.03 mmol L⁻¹ RB, 0.04 mmol L⁻¹ SDS, 0.02 mmol L⁻¹ NaOH and 0.019 mmol L⁻¹ KMnO₄); (d) concentration of SDS (0.03 mmol L⁻¹ RB, 0.02 mol L⁻¹ NaOH, 0.019 mmol L⁻¹ KMnO₄ and 1000 μ L AuNPs) and (e) concentration of KMnO₄ (0.03 mmol L⁻¹ RB, 0.04 mmol L⁻¹ SDS, 0.02 mmol L⁻¹ NaOH and 1000 μ L AuNPs) on the CL intensity.