

Supporting Information

Graphene Oxide Based Fluorescent Sensor for Surfactants

Govindaraj Usha,^a Ramesh Prakash,^a Karuppasamy Karpagalakshmi,^a Sundaram Ramalakshmi,^a
Lakshminarayanan Piramuthu,^a Cheng Yang^b and Narayanan Selvapalam^{a*}

^aCenter for Supramolecular Chemistry and Department of Chemistry, International Research Center, Kalasalingam Academy of Research and Education (Kalasalingam University), Krishnankoil, 626126 Tamil Nadu State, India. and ^bKey Laboratory of Green Chemistry & Technology of Ministry of Education, College of Chemistry, State Key Laboratory of Biotherapy, and Healthy Food Evaluation Research Center, Sichuan University, Chengdu 610064, China

Email:n.selvapalam@klu.ac.in

Limit of Detection for CTAP

$$\text{LOD} = (3 \times 1002.631 / 54788) \times 10^{-6} \text{M} = 0.0549 \times 10^{-6} \text{M} = \mathbf{0.549 \times 10^{-7} \text{M}}$$

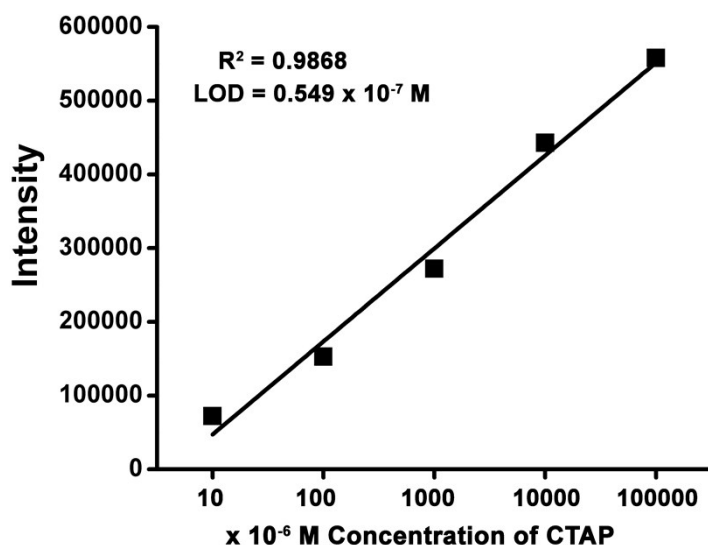


Figure S1: Linear plot of fluorescence intensity of CTAP at different concentration from 10^{-1} to 10^{-5} M

Limit of Detection for SDS

$$\text{LOD} = (3 \times 1002.631 / 97995) \times 10^{-6} \text{M} = 0.03069 \times 10^{-6} \text{M} = \mathbf{0.306 \times 10^{-7} \text{M}}$$

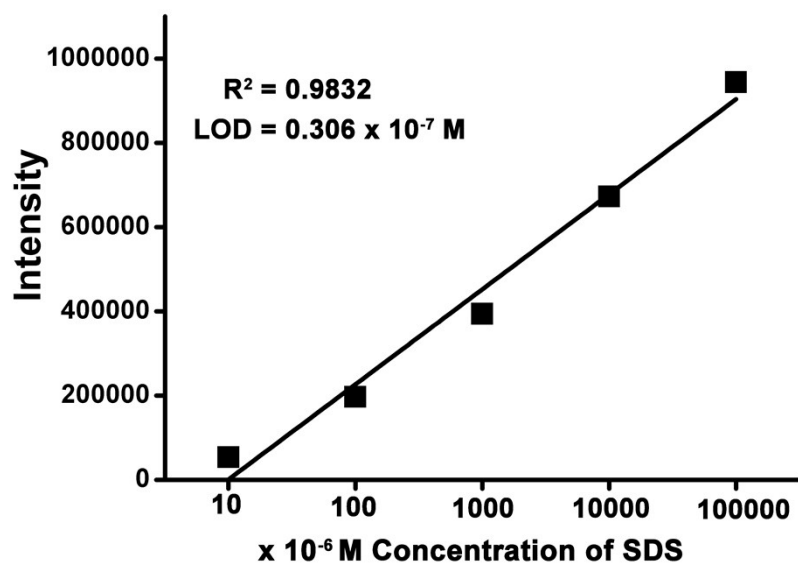


Figure S2: Linear plot of fluorescence intensity of SDS at different concentration from 10^{-1} to 10^{-5}M .

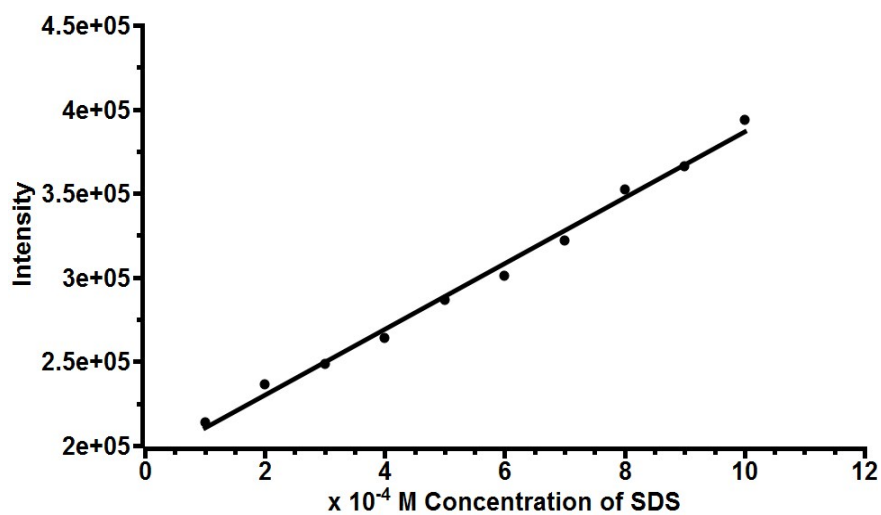


Figure S3. Calibration curve for SDS (10^{-3} to 10^{-4}M) using RBGO

Recycle potential of the sensor RBGO with SDS surfactant



Figure S4. Recycle potential of the sensor RBGO has been examined with 10^{-3} M concentration of SDS, which indicates that it last for less than two cycles.

Limit of Detection for TX100

$$\text{LOD} = (3 \times 1002.631 / 99659) \times 10^{-6} \text{M} = 0.03018 \times 10^{-6} \text{M} = \mathbf{0.301 \times 10^{-7} \text{M}}$$

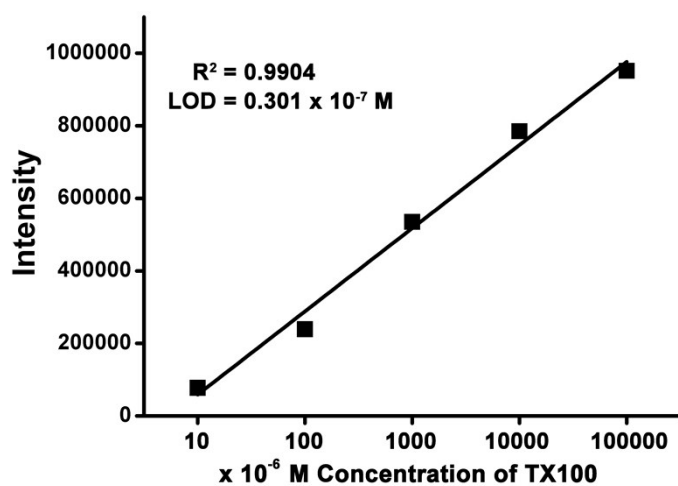


Figure S5: Linear plot of fluorescence intensity of TX100 at different concentration from 10^{-1} to 10^{-5} M.

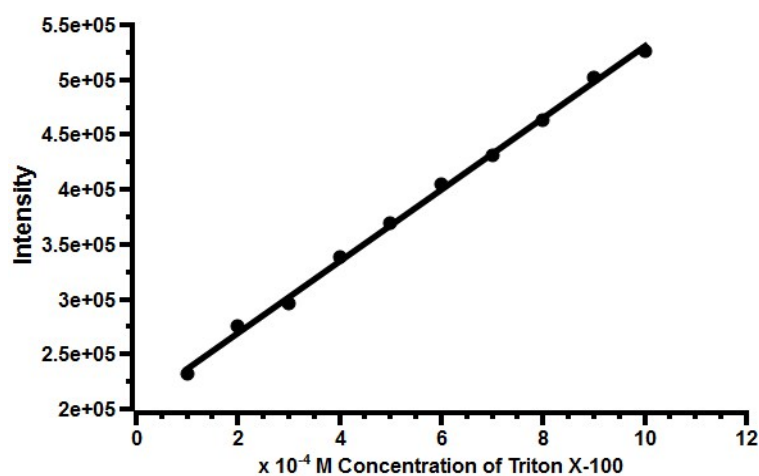


Figure. S6. Calibration curve for TX100 (10^{-3} to 10^{-4} M) using RBGO