

Supporting Information

WS₂QDs based highly efficient non-enzymatic fluorescent biosensor for ofloxacin and ciprofloxacin monitoring in aquatic medium

Sunayana Bora,* and Chandan Upadhyay

Address: School of Materials Science and Technology, Indian Institute of Technology (Banaras Hindu University) Varanasi – 221005, Uttar Pradesh, India.

***Corresponding Author**

Sunayana Bora, Email: sunayanabora.rs.mst21@iitbhu.ac.in

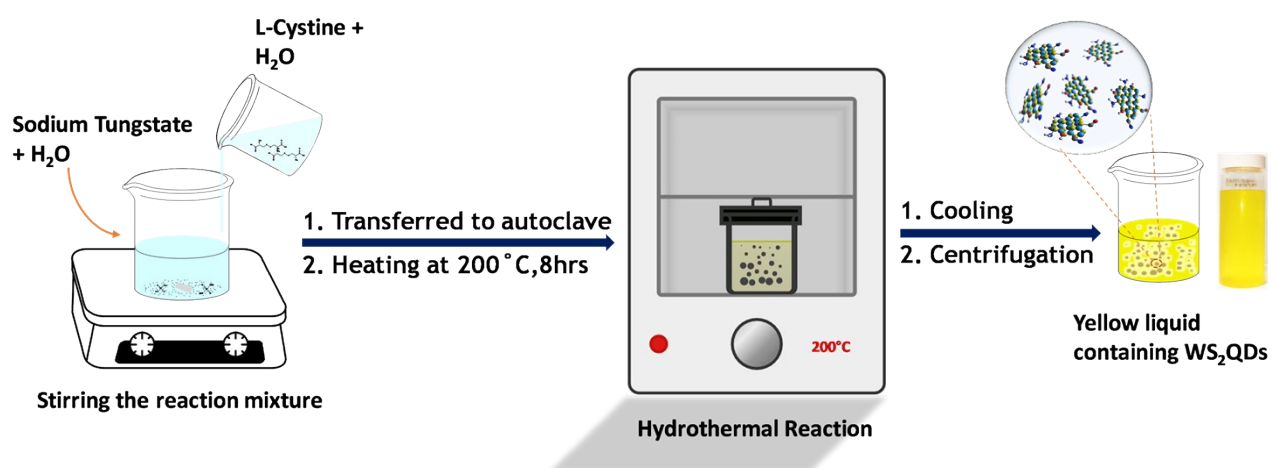


Figure S1. Schematic representation of hydrothermal synthesis of WS₂ QDs

WS₂ QDs were prepared under straightforward single-step hydrothermal conditions by modifying the reported method. Here we used a W to S molar ratio of 1:6. Sodium tungstate (Na₂WO₄·2H₂O) (0.45 g) was finely solubilized in 45 mL water to make a clear solution and L-Cys (0.65 g) was solubilized in 30 mL of water to prepare a separate solution. Subsequently, both of these solutions were properly intermixed and the resulting reaction solution was shifted into a 100 mL Teflon-lined stainless-steel autoclave as well as kept for heating at ~200°C for 8 hr using a hot air oven pursued by cooling the reaction mixture at ambient temperature. Subsequently, this cooled reaction mixture was centrifuged at 8000 rpm for about 20 minutes. The pale-yellow supernatant liquid was collected. Some part of this liquid was dialyzed to remove any kind of impurities and store it for future use. The other part of the product was dried at 60 °C and obtained pale-yellow powder of WS₂ QDs was collected and stored at 4 °C. A schematic representation of the synthesis method for WS₂ QDs is shown in Figure S1.