

Materials List for:

Synthesis, Assembly, and Characterization of Monolayer Protected Gold Nanoparticle Films for Protein Monolayer Electrochemistry

Tran T. Doan¹, Michael H. Freeman², Adrienne R. Schmidt², Natalie D. T. Nguyen², Michael C. Leopold¹

¹Department of Chemistry, Gottwald Center for the Sciences, University of Richmond

²Department of Biochemistry and Molecular Biology, Gottwald Center for the Sciences, University of Richmond

URL: <https://www.jove.com/video/3441>

DOI: [doi:10.3791/3441](https://doi.org/10.3791/3441)

Materials

Name	Company	Catalog Number	Comments
Tetraoctylammonium bromide	Sigma-Aldrich	294136	
Sodium borohydride	Sigma-Aldrich	213462	
Hydrogen tetrachloroaurate	Sigma-Aldrich	254169-5G	
1-Hexanethiol	Sigma-Aldrich	234192	
Transmission Electron Microscope	JEOL	1010	
Nuclear Magnetic Resonance Spectrometer	Bruker Corporation	300 MHz	
Formvar/carbon support film on copper grid (400 mesh)	Electron Microscopy Sciences	FCF400-Cu	
Gold substrate	Evaporated Metal Films Corp.	Custom	
Ag/AgCl Reference electrode	Microelectrodes, Inc.	MI-401F	
Potentiostats	CH Instruments, Inc.	CHI650A, CHI610B	
1,9-Nonanedithiol	Sigma-Aldrich	N29805	
(3-mercaptopropyl)-trimethoxysilane	Sigma-Aldrich	175617	
Ultraviolet Visible Spectrophotometer	Agilent Technologies	8453	
Embed 812 epoxy resin	Electron Microscopy Sciences	14120	
"00" BEEM capsule	Electron Microscopy Sciences	70000-B	
Silicon flat mold	Electron Microscopy Sciences	70900	
Diamond knife	Diatome	21-ULE, S12801	