

Materials List for:

Synthesis of Substrate-Bound Au Nanowires Via an Active Surface Growth Mechanism

Xinglong Wang^{*1}, Xuesong Wu^{*1}, Jiating He², Xiaolin Tao¹, Hongyan Li¹, Gui Zhao¹, Yawen Wang¹, Hongyu Chen^{1,2}

¹Institute of Advanced Synthesis, School of Chemistry and Molecular Engineering, Jiangsu National Synergetic Innovation Center for Advanced Materials, Nanjing Tech University

²Chemistry and Biological Chemistry, Nanyang Technological University

* These authors contributed equally

Correspondence to: Yawen Wang at ias_ywwang@njtech.edu.cn

URL: <https://www.jove.com/video/57808>

DOI: [doi:10.3791/57808](https://doi.org/10.3791/57808)

Materials

Name	Company	Catalog Number	Comments
Trisodium citrate dihydrate	Alfa Aesar	LoT: 5008F14U	
Sodium borohydride	Fluka	LoT: STBG0330V	NaBH ₄
Hydrogen tetrachloroaurate(III) trihydrate	Alfa Aesar	LoT: T19C006	HAuCl ₄
3-aminopropyltriethoxysilane	J&K Scientific	LoT: LT20Q102	APTES
L-ascorbic acid	Sigma-Aldrich	LoT: SLBL9227V	
4-mercaptobenzoic acid	Sigma-Aldrich	LoT: MKBV5048V	4-MBA
2-Naphthalenethiol	Sigma-Aldrich	LoT: BCBP4238V	2-NpSH
4-Mercaptophenylacetic acid	Alfa Aesar	LoT: 10199160	4-MPAA
3-mercaptobenzoic acid	Aladdin	LoT: G1213027	3-MBA
3-Mercaptopropionic acid	Aladdin	LoT: E1618095	3-MPA
absolute ethanol	Sinopharm chemical Reagent	20170802	
Silicon wafer	Zhe Jiang Iijing	P	Si
Scanning Electron Microscope	Quanta FEG 250		SEM
Centrifuge	Eppendorf	5424	
Ultrasonic cleaner	Kun Shan hechuang		
Ultra-pure water system	NanJing qianyan	UP6682-10-11	for deionized water
Plasma cleaner	Harrick Plasma	PDC-002	for oxygen plasma