

Materials List for:

Colloidal Synthesis of Nanopatch Antennas for Applications in Plasmonics and Nanophotonics

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Materials

Name	Company	Catalog Number	Comments
Reagents			
Ethylene glycol	J.T. Baker	9300	Must be anhydrous
Sodium hydrosulfide hydrate	Sigma Aldrich	161527	
Poly vinylpyrrolidone	Sigma Aldrich	856568	
Hydrochloric acid BDH ARISTAR PLUS	VWR International	7647-01-0	
Silver trifluoroacetate	Sigma Aldrich	482307	Store in dark place
Acetone	Sigma Aldrich	48358	
Nitric acid	Sigma Aldrich	7697-37-2	concentrated (70%), for cleaning
Poly(allylamine) hydrochloride (PAH)	Sigma-Aldrich	283215	
Polystyrene sulfonate (PSS)	Sigma-Aldrich	561223	
Sodium Chloride	Macron Inc.	7647	
Sulfo-Cyanine5 carboxylic acid (Cy5)	Lumiprobe	13390	Fluorescent dye (molecular weight: 664.76 g/mol)
Equipments			
Stirring hotplate with temperature control	VWR International	89000-338	
Vortex mixers	VWR International	10153-834	
Microcentrifuge	Thermoscientific	Model 59A	
Silicone fluid	Sigma-Aldrich	63148-62-9	
Micro-scale	Mettler Toledo	Model ML 104/03	
Electron-beam metal evaporator	CHA Industries	E-beam evaporator	Located inside a clean room
Pre-cleaned glass slides	Schott North America, Inc.	Nexterion Glass B	Clean room pre-cleaned
25-ml 24/40 round-bottom flask	VWR International	60002-290	
Magnetic stirring bar	VWR International	58948-116	
Micropipettes (1–10 ml, 10–100 ml and 100–1,000 ml)	VWR International		
Ultrasonic cleaning bath	Branson Ultrasonic	Model 1510R-DTH	
Stopwatch	VWR International		
Eppendorf centrifugation tubes (1.5 ml)	VWR International	22364111	
Poly(propylene) coning tubes (50 ml)	VWR International		

Home built bright/darkfield microscope			75 W Xenon white light source, Nikon BF/DF 50X ELWD 0.55 NA, 8.2 mm WD objective, Nikon D90 digital camera, Acton 2300i spectrometer, Photometrics CoolSnap HQ charge coupled device (CCD) camera
He Ne laser (633 nm), 5 mW	Newport Corp.	R-30990	
Reflectance standard	Lab Sphere	Model SRS-99-010	
Laser long pass filter 633 nm	Semrock	LP02-633RU-25	