

Materials List for:

Assembly of Gold Nanorods into Chiral Plasmonic Metamolecules Using DNA Origami Templates

Yike Huang¹, Minh-Kha Nguyen^{1,2}, Anton Kuzyk¹

¹Department of Neuroscience and Biomedical Engineering, Aalto University School of Science

²Faculty of Chemical Engineering, Ho Chi Minh City (HCMC) University of Technology, Vietnam National University - Ho Chi Minh City (VNU-HCM)

Correspondence to: Yike Huang at yike.huang@aalto.fi, Anton Kuzyk at anton.kuzyk@aalto.fi

URL: <https://www.jove.com/video/59280>

DOI: [doi:10.3791/59280](https://doi.org/10.3791/59280)

Materials

Name	Company	Catalog Number	Comments
2,6-Dihydroxybenzoic acid	Sigma-Aldrich	D109606-25	98+%
AgNO ₃	Alfa Aesar	AA1141414	99.90%
Blue light transilluminator	Nippon Genetics	FG-06	FastGene LED Transilluminator
Bromophenol Blue	Acros Organics	403160050	For agarose gel loading buffer
Centrifugal filter units	Merck Millipore	42600	DNA extraction from agarose
Chirascan CD spectrometer	Applied Photophysics		
Cuvette	Hellma	105-202-85-40	Quartz SUPRASIL
DNA lobind tubes	Eppendorf	30108051	
Eppendorf Biospectrometer	Eppendorf	6135000904	
Eppendorf ThermoMixer C	Eppendorf	5382000015	
Ficoll 400	Thermo Fisher Scientific	BP525-10	Polysucrose 400 (For agarose gel loading buffer)
Gel electrophoresis sets	Thermo Fisher Scientific		
Gel imager	Bio-Rad		Gel Doc XR+ System
HAuCl ₄ •3H ₂ O	Alfa Aesar	AA3640006	99.99%
HCl	Scharlau	AC07441000	1M
Hexadecyltrimethylammonium bromide (CTAB)	Sigma-Aldrich	H9151-100	BioXtra, 98+%
L(+)-ascorbic acid	Acros Organics	401471000	99+%
M13p7560 scaffold strand	Tilbit nanosystems		
MgCl ₂ •6H ₂ O	Sigma-Aldrich	M2670-500	BioXtra, 99+%
NaBH ₄	Acros Organics	200050250	99%
NaCl	Sigma-Aldrich	S7653-500	BioXtra, 99.5+%
NaOH	Sigma-Aldrich	S8045-500	BioXtra, 98+%
Parafilm	Sigma-Aldrich	P7668-1EA	PARAFILM M
PBS buffer (10X)	Thermo Fisher Scientific	BP3991	Molecular Biology
ProFlex PCR System	Thermo Fisher Scientific	4484073	
Sodium dodecyl sulfate (SDS)	Sigma-Aldrich	74255-250	99+%
Staple strands	Thermo Fisher Scientific		
Sybr Safe	Invitrogen	S33102	For DNA stain
TBE buffer (10X)	Invitrogen	15581-044	Molecular Biology
TE buffer (10X)	Thermo Fisher Scientific	BP24771	Molecular Biology
TEM	FEI		FEI Tecnai F12

Thiol-functionalized ssDNA	Biomers.net		
Tris(2-carboxyethyl)phosphine hydrochloride (TCEP-HCl)	Thermo Fisher Scientific	PI20491	
UltraPure Agarose	Invitrogen	16500-100	
Ultrapure water (Type 1)			Milli-Q Direct 8 system
Uranyl Formate	Tebu-bio	24762-1	
White light transilluminator	UVP	TW-26	