

Materials List for:

# DNA Origami-Mediated Substrate Nanopatterning of Inorganic Structures for Sensing Applications

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## Materials

Name	Company	Catalog Number	Comments
Acetone	Honeywell	40289H	Semiconductor grade ULSI, ≥ 99.5 %
Agarose	Fisher Bioreagents	1036603	Low-EEO, multi-purpose and molecular biology grade
Ammonium hydroxide	Fisher Chemical	10652251	25 % ammonia solution, Certified AR for Analysis, d = 0.91
BRANSON 5510	Branson		Ultrasonic bath
Dimension Icon	Bruker		Atomic force microscope
Electron-beam evaporator IM-9912	Instrumentti Mattila		Evaporator for PVD
Ethidium bromide	Sigma Aldrich	E8751	Fluorescent dye for DNA staining
Eon Microplate spectrophotometer	BioTek		UV/Vis spectrophotometer used for DNA origami concentration measurements
Gel Doc XR+ Documentation System	BioRad		Gel imaging system
Gel Loading Dye, Blue (6×)	New England Biolabs	B7021S	Bromophenol blue-based loading dye for agarose gel electrophoresis
G-storm GS1 Thermal cycler	Gene Technologies		
HBR 4	IKA		Heating bath
Hydrofluoric acid	Honeywell	40213H	Semiconductor grade, 49.5-50.5 %
Isopropanol	Honeywell	40301H	Semiconductor grade VLSI, ≥ 99.8 %
Magnesium chloride	Sigma Aldrich	M8266	Anhydrous, ≥ 98 %
Mini-Sub Cell GT Horizontal Electrophoresis System	BioRad		
Plasmalab 80+ PECVD	Oxford Instruments		PECVD system
Plasmalab 80+ RIE	Oxford Instruments		RIE system
Poly(ethylene glycol)	Sigma Aldrich	89510	BioUltra, 8,000
PowerPac HC High-Current Power Supply	BioRad		
Sapphire substrate (Al <sub>2</sub> O <sub>3</sub> )	University Wafer		Thickness: 430 μm, Polish: DSP, Size: 50.8 mm
Sigma VP	Zeiss		Scanning electron microscope
Silica gel	Merck	1019691000	With indicator (orange gel), granulate ~1-3 mm

Single-stranded Scaffold DNA, type p7249	Tilibit Nanosystems		At 100 nM concentration
Sodium chloride	Sigma Aldrich	S9888	ACS reagent, ≥ 99.0 %
Staple strands (oligonucleotides)	Integrated DNA Technologies		Sequences can be ordered e.g. at 100 micromolar in Rnase-free water
TAE buffer (50×) pH 8.0	VWR Chemicals	444125D	Electran Electrophoresis grade
Take3 micro-volume plate	BioTek		Used for DNA origami concentration measurements
Tetraethyl orthosilicate	Sigma Aldrich	86578	≥ 99.0 % (GC)