Materials List for:

Functional Surface-immobilization of Genes Using Multistep Strand Displacement Lithography

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Materials

Name	Company	Catalog Number	Comments
Silicon wafer with 50 nm silicon dioxide (Bephore substrate)	Siegert Wafer		Thickness (µm): 525 ±25, Diameter (mm): 100
Silicon wafer (for PDMS master mold)	Siegert Wafer		Thickness (µm): 525 ±25, Diameter (mm): 76.2 (3”)
Glass slides no. 4	Menzel		22 mm x 50 mm
Glass slides no. 1.5	Assistent		24 mm x 24 mm
Biotin-PEG-Silane	Laysan Bio		MW 5,000
Anhydrous toluene	Sigma Aldrich (Merck)	244511	
Streptavidin	Thermo-Fisher Scientific	S888	
DNA	Integrated DNA Technologies (IDT)		
Phusion High-Fidelity PCR Master Mix with HF Buffer	New England Biolabs	M0531S	PCR kit
Wizard SV Gel and PCR Clean-Up System	Promega	A9281	Spin-column PCR clean-up kit
PURExpress	New England Biolabs	E6800S	Cell-free expression system
PDMS	Dow Corning	Slygard 184	
FluoSpheres	Thermo-Fisher Scientific	F8771	
PTFE tubing (ID: 0.8mm, OD: 1.6 mm)	Bola	S 1810-10	
EpoCore 20	micro resist technology GmbH		Photoresist
mr-Dev 600	micro resist technology GmbH		Photoresist developer
Ti-Prime	MicroChemicals		Adhesion promoter
Two-component silicon glue	Picodent	Twinsil	
UV-protection yellow foil	Lithoprotect (via MicroChemicals)	Y520E212	
Equipment			
Masks for photolithography	Zitzmann GmbH		64.000 dpi, 180x240 mm
Upright microscope	Olympus	BX51	Photolithography and fluorescence imaging
60x water immersion objective	Olympus	LumPlanFl	Used with Olympus BX51, NA 0.9
20x water immersion objective	Olympus	LumPlanFl	Used with Olympus BX51, NA 0.5
Camera	Photometrics	Coolsnap HQ	Used with Olympus BX51
Ligth source	EXFO	X-Cite 120Q	Used with Olympus BX51
Inverted microscope	Nikon	Ti2-E	Fluorescence imaging of gene expression
4x objective	Nikon	CFI P-Apo 4x Lambda	Used with Nikon Ti2-E

Camera	Andor	Neo5.5	Used with Nikon Ti2-E
Light source	Lumencor	SOLA SM II	Used with Nikon Ti2-E
Cage incubator	Okolab	bold line	Used with Nikon Ti2-E
Pressure Controller	Elveflow	OB1 MK3	
NanoPhotometer	Implen		DNA concentration measurement
Plasma cleaner	Diener	Femto	200 W, operated at 0.8 mbar with the sample in a Faraday cage