

Materials List for:

Combining Single-molecule Manipulation and Imaging for the Study of Protein-DNA Interactions

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Materials

Name	Company	Catalog Number	Comments
Elastomeric isolators	Newport	Newdamp	Choose the appropriate Newdamp elastomer depending on the microscope weight and resonance frequencies
Optical isolator	Optics for Research	IO-3-YAG-VHP	
Nd:YAG laser, 1,064 nm wavelength	Spectra-Physics	Millennia IR	
Acousto-optic deflectors (AODs)	A&A optoelectronic	DTS-XY 250	
Direct Digital Synthesizers	Analog Devices		
Quadrant detector photodiodes	OSI optoelectronics	SPOT-15-YAG	
DIO and FPGA board	National Instruments	NI-PCI-7830R	
Halogen lamp	Schott	KL 1500 LCD	
Condenser	Olympus	U-AAC 1.4NA Aplanat Apchromat	
Objective	Nikon	CFI Plan Apochromat 60x 1.2NA water immersion	
532 nm laser	Coherent	Sapphire	
CCD 200X and 2000X	Hamamatsu	XC-ST70 CE	
Electron-multiplied CCD	Hamamatsu	C9100-13	
Piezo stage with nm-accuracy	Physik Instrumente	P-527.2CL	
Emission Filter	Chroma Technologies	600/100m	
Silica beads (1.54 μm)	Bangs Laboratories	SS04N/5303	
Albumin from bovine serum (BSA)	Sigma Aldrich	B4287	
Pentyl acetate	Sigma Aldrich	46022	Flammable liquid and vapor (No 1272/2008)
Nitrocellulose	Sigma Aldrich	N8267-5EA	Flammable solid (No 1272/2008)
Heat block	MPM Instruments Srl	M502-HBD	with 2 removable blocks; preheated at 120 °C
NanoPort assemblies	Upchurch Scientific Inc.	N-333	
Polyetheretherketone tubing	Upchurch Scientific Inc.	1535	
Home-made metallic holder for the assembly of the flow-chamber pressure reservoir made of Plexiglass			

Luer lock-tip syringes 2.5 ml	Terumo	SS 02LZ1	
Shut-off valves	Upchurch Scientific, Inc.	P-732	
Flangeless fittings	Upchurch Scientific, Inc.	LT-111	
Fluorinated ethylene propylene tubing	Upchurch Scientific, Inc.	1549	
Two computer-controlled solenoid valves	Clippard, Cincinnati, USA	ET-2-H-M5	
Pressure transducer	Druck LTD	PTX 1400	
biotin-14-dCTP	Life Technologies	19518-018	
Terminal deoxynucleotidyl Transferase (TdT)	Thermoscientific	EP0161	
ATTO532 maleimide	Sigma Aldrich	68499	
<i>N,N</i> -dimethylformamide (DMF)	Sigma Aldrich	227056	Combustible Liquid, Harmful by skin absorption. Irritant, Teratogen. H226; H303; H312; H316; H319; H331; H360; P201; P261; P280; P305; P351; P338; P311
Tris-(2-carboxyethyl)phosphine hydrochloride (TCEP)	Sigma Aldrich	C4706	
L-Glutathione reduced (GSH)	Sigma Aldrich	G4251	Acute toxicity, Oral (Category 5), H303
Amicon Ultra-15, PLQK Ultracel-PL Membrane, 10 kDa cutoff spin concentrators	Merck Millipore	UFC901024	
Streptavidin-coated polystyrene beads 1.87 μ m	Spherotech, Inc.	SVP-15-5	