Materials List for:

Ultrafast Time-resolved Near-IR Stimulated Raman Measurements of Functional π-conjugate Systems

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Materials

Name	Company	Catalog Number	Comments
1-Axis Translational Stage	OptSigma	TSD-401S	Products equivalent to this are used as well; for M22, L9, and CM in Figure 1A
20-cm Optical Delay Line	OptSigma	SGSP26-200	ODL1 in Figure 1A
3-Axis Translational Stage	OptSigma	TSD-405SL	For L8 in Figure 1A
3-Axis Translational Stage	Suruga Seiki	B72-40C	For FC in Figure 1A
5-cm Optical Delay Line	PMT	HRS-0050	ODL2 in Figure 1A
Al Concave Mirror	Thorlabs	CM254-050-G01	Focal length: 50 mm; CM in Figure 1A
Base Plate	Suruga Seiki	A21-6	Products equivalent to this are used as well; for M1-M32, BS1-BS3, L1-L10, I1-I17, P1-P2, HWP1-3, F1-F3, VND1-VND2, OC, BPF, HS, BBO, SP, CM, and FC in Figure 1A
BBO Crystal	EKSMA Optics	-	Type 1, θ = 23.2 deg; BBO in Figure 1A
BK7 Plano-Concave Lens	OptSigma	SLB-25.4-50NIR2	Focal length: 50 mm; IR anti-reflection coating; L6 in Figure 1A
BK7 Plano-Convex Lens	OptSigma	SLB-25.4-150PIR2	Focal length: 150 mm; IR anti-reflection coating; L2, L3, L5 in Figure 1A
BK7 Plano-Convex Lens	OptSigma	SLB-25.4-100PIR2	Focal length: 100 mm; IR anti-reflection coating; L4 in Figure 1A
BK7 Plano-Convex Lens	OptSigma	SLB-25.4-200PIR2	Focal length: 200 mm; IR anti-reflection coating; L7 in Figure 1A
Broadband Dielectric Mirror	OptSigma	TFMS-25.4C05-2/7	M22-M25, M28, M29 in Figure 1A
Broadband Dielectric Mirror	Precision Photonics (Advanced Thin Films)	-	M26, M27, M30-M32 in Figure 1A
Broadband Half-Wave Plate	CryLight	-	HWP3 in Figure 1A
Color Glass Filter	HOYA	IR85	F1 in Figure 1A
Color Glass Filter	HOYA	RM100	F2 in Figure 1A
Color Glass Filter	Schott	BG39	F3 in Figure 1A
Computer	Dell	Vostro 200 Mini Tower	OS: Windows XP
Cyclohexane	Kanto Kagaku	07547-1B	HPLC grade
Data Analysis Software	Wavemetrics	Igor Pro 8	
Dielectric Beamsplitter	LAYERTEC	-	Reflection : Transmission = 2 : 1; BS1 in Figure 1A

Dielectric Beamsplitter	LAYERTEC	-	Reflection : Transmission = 1 : 1; BS2, BS3 in Figure 1A
Dielectric Mirror	Precision Photonics (Advanced Thin Films)	-	M1-M8 in Figure 1A
Digital Oscilloscope	Tektronix	TDS3054B	500 MHz, 5 GS/s
Elastomer Tube	-	-	Figure 1E
Femtosecond Ti:sapphire Oscillator	Coherent	Vitesse 800-2	Wavelength: 800 nm, pulse duration: 100 fs, average power: 280 mW, repetition rate: 80 MHz; included in Ti:S in Figure 1A
Femtosecond Ti:sapphire Regenerative Amplifier	Coherent	Legend-Elite-F-HE	Wavelength: 800 nm, pulse duration: 100 fs, pulse energy: 3.5 mJ, repetition rate: 1 kHz; included in Ti:S in Figure 1A
Film Polarizer	OptSigma	SPFN-30C-26	P1 in Figure 1A
Glan-Taylor Prism	OptSigma	GYPB-10-10SN-3/7	P2 in Figure 1A
Gold Mirror	OptSigma	TFG-25C05-10	M9-M21 in Figure 1A
Half-Wave Plate	OptSigma	WPQ-7800-2M	HWP1 in Figure 1A
Harmonic Separator	Coherent	TOPAS-C HRs 410-540 nm	HS in Figure 1A
InGaAs Array Detector	Horiba	Symphony-IGA-512X1-50-1700-1LS	512 ch, Liquid nitrogen cooled
InGaAs PIN Photodiode	Hamamatsu Photonics	G10899-01K	
IR Half-Wave Plate	OptiSource	-	HWP2 in Figure 1A
Iris	Suruga Seiki	F74-3N	Products equivalent to this are used as well; I1-I17 in Figure 1A
Lens Holder	OptSigma	LHF-25.4S	Products equivalent to this are used as well; for L1-L10 in Figure 1A
Magnetic Gear Pump	Micropump	184-415	
Mirror Mount	Siskiyou	IM100.C2M6R	Products equivalent to this are used as well; for M1-M32, BS1-BS3, BBO, CM in Figure 1A
near-IR phosphor card	Thorlabs	VRC2	
Nut	-	-	Figure 1E, M4; purchased from a DIY store
Optical Chopper	New Focus	3501	OC in Figure 1A
Optical Parametric Amplifier	Coherent	OPerA-F	OPA1 in Figure 1A
Optical Parametric Amplifier	Coherent	TOPAS-C	OPA2 in Figure 1A
Polarizer Holder	OptSigma	PH-30-ARS	Products equivalent to this are used as well; for P1-P2 and HWP1-3 In Figure 1A
Polyfluoroacetate Tube	-	-	Figure 1E
Post Holder	OptSigma	BRS-12-80	Products equivalent to this are used as well; for M1-M32, BS1-BS3, L1-L10, I1-I17, P1-P2, HWP1-3, F1-F3, VND1-VND2, OC, BPF, HS, BBO, SP, CM, and FC in Figure 1A
Quartz Flow Cell	Tosoh Quartz	T-70-UV-2	FC in Figure 1A
Quartz Plano-Concave Lens	OptSigma	SLSQ-25-50N	Focal length: 50 mm; L8 in Figure 1A
Quartz Plano-Convex Lens	OptSigma	SLSQ-25-100P	Focal length: 100 mm; L1, L9 in Figure 1A

Quartz Plano-Convex Lens	OptSigma	SLSQ-25-220P	Focal length: 220 mm; L10 in Figure 1A
Sapphire Plate	Pier Optics	-	3 mm thick; SP in Figure 1A
Si PIN Photodiode	Hamamatsu Photonics	S3883	
Single Spectrograph	Horiba Jobin Yvon	iHR320	Focal length: 32 cm
Stainless Steel Rod	Suruga Seiki	A41-100	Products equivalent to this are used as well; for M1-M32, BS1-BS3, L1-L10, I1-I17, P1-P2, HWP1-3, F1-F3, VND1-VND2, OC, BPF, HS, BBO, SP, CM, and FC in Figure 1A
Stainless Steel Rod	Newport	J-SP-2	Figure 1E
Toluene	Kanto Kagaku	40180-1B	HPLC grade
U-Shaped Steel Plate	-	-	Figure 1E; purchased from a DIY store
Variable Neutral Density Filter (with a holder)	OptSigma	NDHN-100	VND1 in Figure 1A
Variable Neutral Density Filter (with a holder)	OptSigma	NDHN-U100	VND2 in Figure 1A
Visual Programming Language	National Instruments	LabVIEW 2009	The control software in this study is programmed in LabVIEW 2009
Volume-Grating Bandpass Filter	OptiGrate	BPF-1190	BPF in Figure 1A
β-Carotene	Wako Pure Chemical Industries	035-05531	