

Materials List for:

A Method for Studying the Temperature Dependence of Dynamic Fracture and Fragmentation

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Materials

Name	Company	Catalog Number	Comments
1,550 nm CW Laser	NKT Photonics	Koheras Adjustik	x 2
1,550 nm Power Amplifier	NKT Photonics	Koheras Boostik HPA	
Delay Generators	Quantum Composers	9500+ Digital Delay Pulse Generator	8 output version
Stanford Research Systems	DG535 Digital Delay Generator		
16 Channel Digitiser	Agilent Technologies	U1056B Chassis + 4 X U1063A Digitiser	
High Bandwidth Oscilloscopes	Teledyne LeCroy	WaveMaster 816Zi-A	Expansion Velocity, Gen 3 PDV
Tektronix	DPO71604C	Projectile Velocity, Gen 1 PDV	
High Speed Imaging Systems	Vision Research	Phantom v16.10	
Invisible Vision	IVV UHSI-24		
Zeiss Optics	Planar T* 1,4/85	85 mm Prime Lens	
Nikon	AF-S Nikkor 70-200 mm f/2.8 ED VR II	70-200 mm Telephoto Lens	
Flash Lamp	Bowens	Gemini Pro 1500 W	x 2
PDV Probe	Laser 2000	LPF-04-1550-9/125-S-21.5-100-4.5AS-60-3A-3-3	x 4 (Custom order)
PDV System	Built in-house by the Institute of Shock Physics	Custom Build	3 rd Generation (Upshifted) 8 Channel Portable PDV System
Control Software	National Instruments	LabVIEW 2013	
Control Hardware for heating	National Instruments	NI-DAQ 6009 USB	
Heating Power Supply	BK Precision	BK1900	
Thermocouple Logger	Pico Technology	TC-08	
100 mm Single Stage Light Gas Gun	Physics Applications, Inc. (PAI)	Custom Build	Capable of at least 1,000 m/sec with ~2 kg projectile
Image analysis software	National Institutes of Health	ImageJ	Open source, free
Image analysis software	Mathworks	MATLAB r2014a	With image processing toolboxes
Material sectioning saw	Struers	Accutom-50	
Electron Microscope	Zeiss	Auriga	
Electron Backscatter Diffraction	Bruker	e-Flash 1000	
EBSD software	Bruker	eSprit	