

Materials List for:

Measurement and Analysis of Atomic Hydrogen and Diatomic Molecular AIO, C₂, CN, and TiO Spectra Following Laser-induced Optical Breakdown

Christian G. Parigger¹, Alexander C. Woods¹, Michael J. Witte¹, Lauren D. Swafford¹, David M. Surmick¹

¹Department of Physics, University of Tennessee Space Institute

Correspondence to: Christian G. Parigger at cparigge@tennessee.edu

URL: <https://www.jove.com/video/51250>

DOI: [doi:10.3791/51250](https://doi.org/10.3791/51250)

Materials

Name	Company	Catalog Number	Comments
Custom Box	UTSI	None	Signal divider and conditioner. An oscilloscope can be used in place of this.
Four Channel Digital Delay/Pulse Generator	Stanford Research Systems, Inc.	Model DG535	Companies: Tequipment, diyAudio
Four Channel Color Digital Phosphor Oscilloscope	Tektronix	TDS 3054	500 MHz - 5 GS/sec, Companies: Amazon, Tektronix, Fluke, Agilent Technologies, Pico Technology
Wavetek FG3C Function Generator	Wavetek	FG3C	Companies: Tequipment, Stanford Research Systems, BK Precision
Nd:YAG Laser	Quanta-Ray	DCR-2A(10) PS	Laser radiation, Class IV. Companies: Lambda Photometrics, Continuum, Ellipse, Newport
Si Biased Detector	Thorlabs	DET10A/M	200-1,100 nm, with ND10A reflective filter. Companies: Canberra, Edmund Optics
Nd:YAG Laser Line Mirror, 1,064 nm	Thorlabs	NB1-K13	Companies: Edmund Optics, Newport
1 in Fused Silica Bi-Convex Lens, uncoated	Newport	SBX031	Companies: Edmund Optics, Thorlabs
2 in Fused Silica Plano-Convex lens, uncoated	Newport	SPX049	Convex lens, f/4. Companies: Edmund Optics, Thorlabs
Spectrograph	Instruments S.A. division Jobin-Yvon	HR 640	Companies: Andor, Newport, Horiba
Manual and electronic controller for Spectrograph	Instruments S.A. division Jobin-Yvon	Model 980028	Manual and electronic controller for Spectrograph
Mega 4000	Mega	Model 129709	Computer interface for Spectrograph
Gateway 2000 Crystal Scan 1024 monitor	Gateway	PMV14AC	Monitor for computer interface
20 MHz Oscilloscope	BK Precision	Model 2125	Companies: Amazon, Tektronix, Fluke, Agilent Technologies, Pico Technology
6040 Universal Pulse Generator	Berkeley Nucleonics Corporation	Model 6040	Companies: Agilent Technologies, Tektronix, Quantum Composers
Separate component to 6040 Universal Pulse Generator	Berkeley Nucleonics Corporation	Model 202 H	Separate component to 6040 Universal Pulse Generator
ICCD Camera	EG&G Parc	Model 46113	Companies: Andor, Standford Computer Optics, LaVision, Hamamatsu
OMA III	EG&G Parc	Model 1460	Spectral data acquisition and analysis. Unit discontinued,

			replaced by software installed on computers.
--	--	--	--