

Materials List for:

Laser-heating and Radiance Spectrometry for the Study of Nuclear Materials in Conditions Simulating a Nuclear Power Plant Accident

Dario Manara¹, Luca Soldi^{1,2,4}, Sara Mastromarino^{1,3,5}, Kostantinos Boboridis¹, Davide Robba¹, Luka Vlahovic¹, Rudy Konings¹

¹European Commission, Joint Research Centre

²Energy Department, Politecnico di Milano

³Department of Chemical Physics, Sapienza - Università di Roma

⁴CEA Saclay

⁵TU Delft

Correspondence to: Dario Manara at Dario.MANARA@ec.europa.eu

URL: <https://www.jove.com/video/54807>

DOI: [doi:10.3791/54807](https://doi.org/10.3791/54807)

Materials

Name	Company	Catalog Number	Comments
Two-channel fast pyrometer	Assembled privately		Fast pyrometer. Photodiode detectors at 650 nm and 488 nm, assembled with focussing objective and fast logarithmic amplifier.
Laser TRUMPF HLD4506, TRUMPF,	TRUMPF Schramberg, Germany	HLD4506	Heating agent
CDI spectrometer	CDI	Optical Spectrograph card, 256 channels	Multi-wavelength spectro-pyrometer array
Ar+ laser	Ion Laser Technology	5500A-00	0.75 W RLS laser
Oscilloscope NICOLET	NICOLET, Madison, Wi, USA	Pro 44C Transient Digitizer	AD converter, data acquisition system
SETNAG Oxygen analyser	SETNAG, Marseille, France	JC24V-M	ZrO2 electrochemical cell for oxygen analysis in the autoclave
Blackbody source	POLYTECH CI Waldbronn, Germany	Customized	Black body source for spectro-pyrometer calibration
Standard calibration lamps	POLARON, Watford, UK	P.224c and P213c	Lamps for pyrometer and spectro-pyrometer calibration