maxLIGHT pro

NO-SLIT FLAT-FIELD XUV SPECTROMETER AND BEAM PROFILER



hpspectroscopy

maxLIGHT pro

Features

Direct imaging of the source

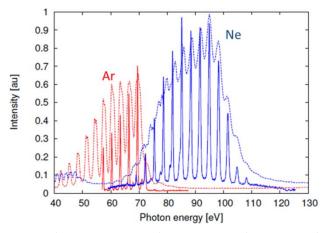
- flat-field spectrometer for the 1 to 200nm spectral range
- best-in-class efficiency through no-slit design: no need for an alignment-sensitive narrow entrance slit
- ~20x more light collection than standard spectrometers, resulting in a proportional improvement of the signal-tonoise

Accuracy and efficiency

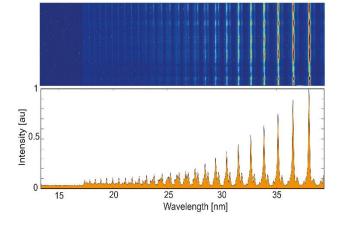
- absolute grating position monitoring for maintaining grating alignment
- highly efficient aberrationcorrected flat-field grating
- integrated beamprofiler
- double stray-light filter
- convenient control by software

Customization

- every spectrometer is customized to exactly match the desired application, e.g.
- interfacing to experimental chambers
- specific device geometries
- user-defined filter mounts



Sample measurement demonstrating the improved signal strength. With the same signal strength, the resolution of maxLIGHT (solid lines) is significantly higher compared with a standard spectrometer (dotted lines). For equivalent resolution, standard technology would require a narrow slit setting and thus a significant degradation in signal strength. The proprietary no-slit technology delivers high resolution and signal strength at the same time. (data courtesy of Prof. C. Hauri, Paul Scherrer Inst.)



Sample measurement demonstrating the resolving power of maxLIGHT. The shown high harmonic spectrum is generated by the interaction of a single femtosecond laser pulse with a solid target and subsequent spectral filtering. The substructure inherent to the generation process is clearly resolved by the XUV spectrometer.

Plasma Phys. Control. Fusion 53 124021 (2011)

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Specifications

Topology	aberration-corrected flat-field spectrometer

and beam profiler

Wavelength range 1-200nm

Source distance flexible

Detector CCD or MCP/CMOS

Operating pressure <10-6mbar (UHV version available)

No-slit technology yes

Entrance slit optional

Grating positioning motorized closed-loop

Spectral filter insertion unit yes

Control interfaces USB or Ethernet

Software Windows UI and Labview/VB/C/C++ SDK

Customizable fully customizable

Options non-magnetic, rotated geometry, polarimetry, etc

	SXR	XUV	VUV
Wavelength range	1-20nm	5-80nm	40-200nm
Dispersion	0.2-0.4nm/mm	0.5-1.3nm/mm	0.9-1.6nm/mm
Resolution	<0.015nm at 10nm	<0.028nm at 40nm	<0.05nm at 120nm

Contact us

HP SPECTROSCOPY

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