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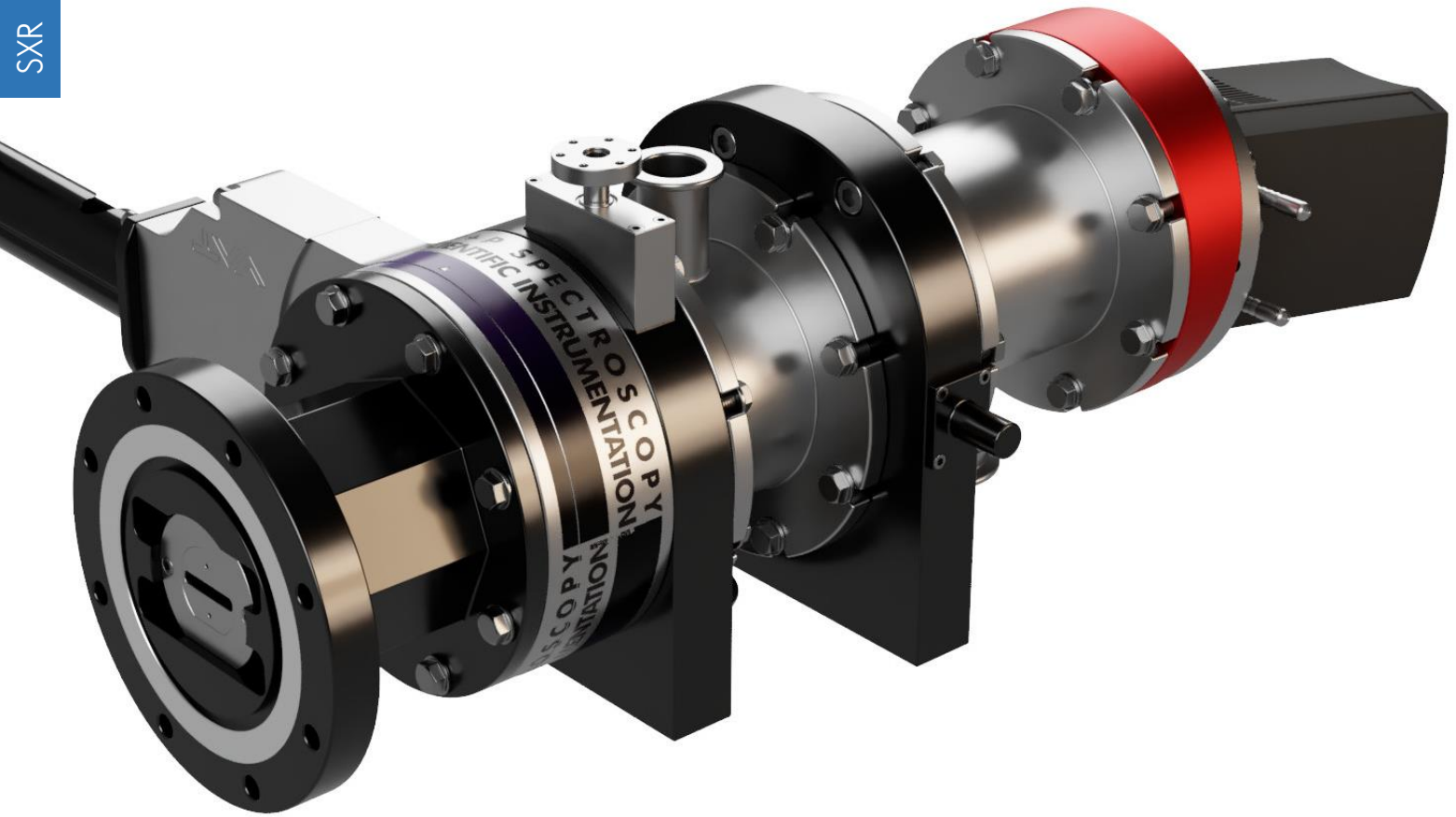
NO-SLIT FLAT-FIELD XUV SPECTROMETER AND BEAM PROFILER

VUV
XUV
SXR



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Features

Direct imaging of the source

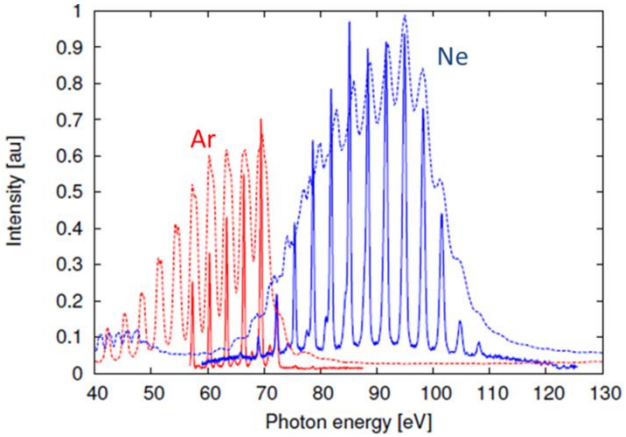
- flat-field spectrometer for the 1 to 200nm spectral range
- best-in-class efficiency through no-slit design: no need for an alignment-sensitive narrow entrance slit
- ~20x more light collection than standard spectrometers, resulting in a proportional improvement of the signal-to-noise

Accuracy and efficiency

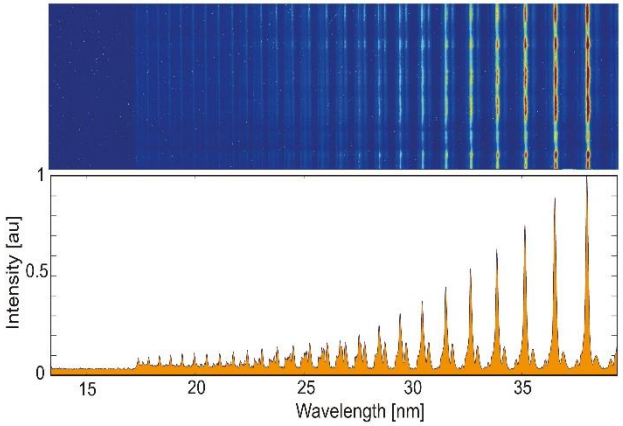
- absolute grating position monitoring for maintaining grating alignment
- highly efficient aberration-corrected flat-field grating
- integrated beamprofiler
- double stray-light filter
- convenient control by software

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	$<10^{-6}$mbar (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

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