

The gateway to vacuum UV

High-energy radiation is interesting for various applications in optics and materials research. Thanks to synchrotron- or laser-based light sources that are available today, this field of physics is also gaining importance in medicine and biology.

Due to its ionizing properties, radiation from the spectral range below 200 nm is more difficult to detect than ultraviolet or visible light. Measurements require at least an oxygen-free atmosphere and, below 120 nm, a vacuum of typically 10^{-4} mbar.

Not only vacuum conditions are required for spectral characterization of light sources and processes, but also optimized gratings and detectors suitable for sometimes very long exposure times. So far, there have hardly been any system solutions for such investigations with VUV/EUV and XUV radiation.

Developing your own system can often take a lot of time, and errors in the design or choice of components will cost money and reduce efficiency. By purchasing a system solution, users can concentrate on their research as such.

From their own experience in the field of attosecond physics at the Max Planck Institute for Quantum Optics, the two founders of H+P Spectroscopy know quite well what scientists need. In the development of spectrographs, they draw on this experience. Custom-made products are the rule rather than the exception.

With H+P Spectroscopy's LIGHT series, there is a series of compact vacuum spectrographs that cover the most interesting parts of this spectrum. They are the basis for modified versions and adaptations to individual setups.

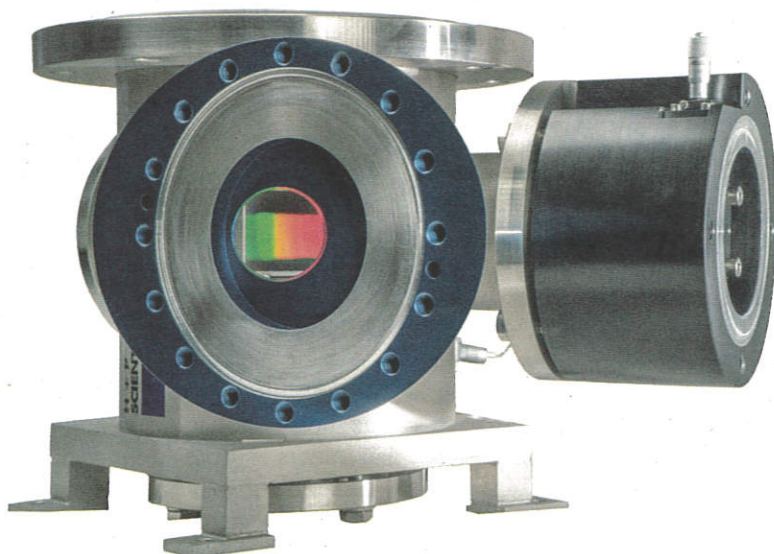


Fig. 1: easyLIGHT VUV vacuum spectrograph for 100 to 300 nm

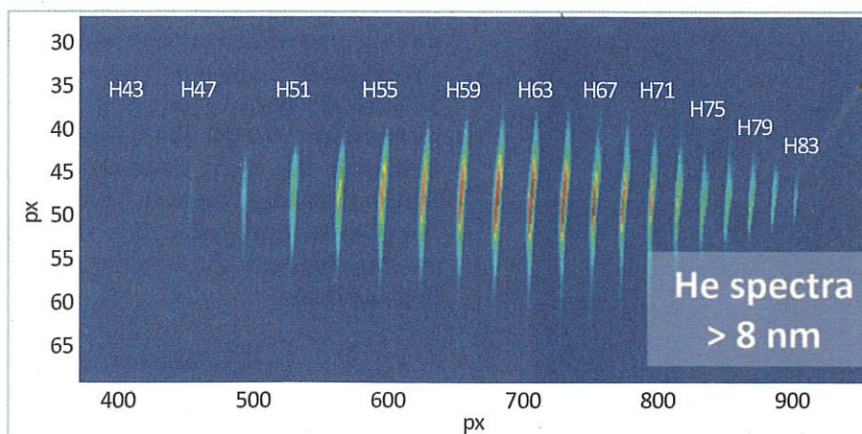


Fig. 2: Spectrum of higher harmonics of helium, measured with the maxLIGHT spectrograph and an Andor Newton DO920P-BEN CCD detector

- **maxLIGHT** — 1 to 200 nm: spectral resolution combined with maximum throughput, ideal for point light sources as for example in the generation of higher harmonics
- **highLIGHT** — 1 to 120 nm: highest spectral resolution with highest grating efficiency, no slits for maximum signal-to-noise ratio
- **easyLIGHT VUV** — 100 to 300 nm: spectrograph and monochromator in one, adjustable slit and precisely controlled grating with high reflectivity
- **easyLIGHT XUV** — 30 to 200 nm: spectrograph with direct source imaging and double stray light filter
- **nanoLIGHT** — 10 to 80 nm: Compact spectrometer with MCP detector and integrated beam profile analysis

For detailed information and H+P Spectroscopy product spec sheets, please go to:

<https://qd-europe.com/vakuum-uv/>

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