

## ***QCL-Based IR Microscopy: The Power of Real-Time Chemical Imaging***

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Quantum Cascade Lasers (QCLs) are poised to become an important next-generation illumination source for biomedical infrared microscopy. Their spectral brightness and broad tunability enables diffraction-limited imaging performance<sup>[1]</sup>, high-speed data collection<sup>[2][3][4]</sup>, and discrete frequency imaging modalities<sup>[5][6]</sup>. Spero™, from Daylight Solutions, is the world's first commercially available QCL-based infrared microscope. By combining the benefits of a tunable laser illumination source with an uncooled camera and benchtop form-factor, Spero will be critical in supporting the translation of infrared microspectroscopy techniques into clinical environments. This poster will review the latest developments with the Spero platform, including a new objective providing 12 micron spatial resolution over a 2 mm x 2 mm field-of-view with 4.25 micron pixels, real-time chemical imaging of microfluidic processes, and multiple biomedical application examples.

### References

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