

FTIR SPECTROMETERS UTILIZING MID-INFRARED QUANTUM CASCADE LASERS.

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A Fabry-Perot Quantum Cascade Laser source can be used in conjunction with a Fourier Transform Infrared Spectrometer to perform spectroscopic experiments that require orders of magnitude more photons than are emitted by a thermally radiant blackbody source. Three proof-of-concept experiments including laser transmission through liquids, transmission through gases over long distances, and reflection from powders and tablets demonstrated how the increased brightness of a Quantum Cascade Laser enables many important avenues in gas and condensed phase analysis.