# RAPID MICROSCOPY MEASUREMENT OF VERY LARGE SPECTRAL IMAGES

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The spectral content of a sample provides important information that can be used for further analysis of the material content. Therefore, measuring the spectrum at each point of a sample is important for a large range of applications varying from art preservation through forensics to pathological analysis of a tissue section and aerial imaging. Spectral imaging is already in use for many applications, but measuring the spectral image of very large samples is a challenge that so far was not achieved. We present a novel method for scanning very large spectral images of microscopy samples. The system is based on capturing the information while the sample is continuously being scanned on the fly. The spectral separation is achieved through Fourier spectroscopy by using an interferometer mounted along the optical axis. High spectral resolution of ~5 nm at 500 nm is demonstrated with a diffraction-limited spatial resolution while the acquisition time is rather high.

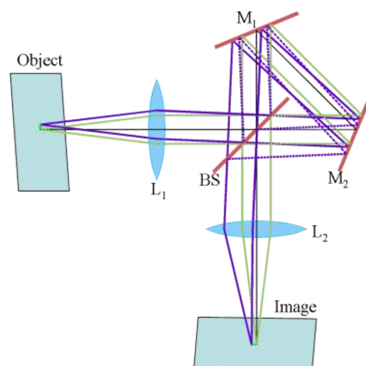


**Figure 1  Schematics of the optical system for very large spectral images**