

## **Spatially Resolved IR Microspectroscopy of Single Cells and Tissues**

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Characterisation of biomedical samples, specifically of eucaryotic cells and tissue sections by spatially resolved Fourier Transform Infrared (FT-IR) microspectrometry is an emerging new technology. This technique provides spectral information with unique biomarker profiles with minimal sample preparation. Due to its rapidity and high analytical and diagnostic sensitivity this method shows in combination with digital imaging techniques a great promise for in-vivo and ex-vivo medical diagnosis.

In the presentation we will discuss strategies of FT-IR microspectroscopy on the basis of experimental data obtained on individual cells, colorectal adenocarcinoma sections, and an USAF resolution target. Based on spectral data acquired by the use of IR imaging systems employing either conventional (thermal) or synchrotron light sources, we will emphasize technical aspects of data acquisition. Particularly we will focus on the importance of spatial resolution for biomedical applications of infrared microspectrometry.