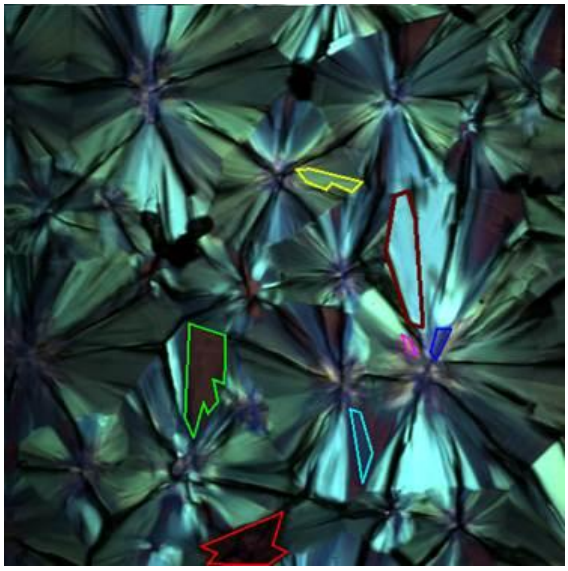
Hyperspectral Stimulated Raman microscopy on solid dosage forms, Herman Offerhaus, University of Twente

Abstract:
Stimulated Raman microscopy is a way to get relatively fast imaging with optical resolution. By scanning the operating wavelengths a hyperspectral image can be assembled. These contains sufficient information to distinguish different compounds and also distinguish between polymorphs of one. The hyperspectral images are collected in a few tens of seconds. Imaging at a single wavelength (in less than 1 second) allows for the imaging of physio-chemical changes on the surface upon dissolution or aging. By exploiting the phase of the coherent response we can enhance the sensitivity and selectivity.

Picture:



Hyperspectral image of quench-cooled Mannitol showing polymorphism and orientational spectral differences.