Example: Spatial map of different vibrational modes of a single-walled carbon nanotube (SWNT). The resolution in each image is 15nm. The localization of the IFM mode is indicative for a defect in the tube structure.

RBM (259 cm$^{-1}$)

G (1594 cm$^{-1}$)

IFM (835 cm$^{-1}$)

(n,m) = (8,5) : $d_t \sim 0.9$nm

Image size: 1.0 um x 1.0 um