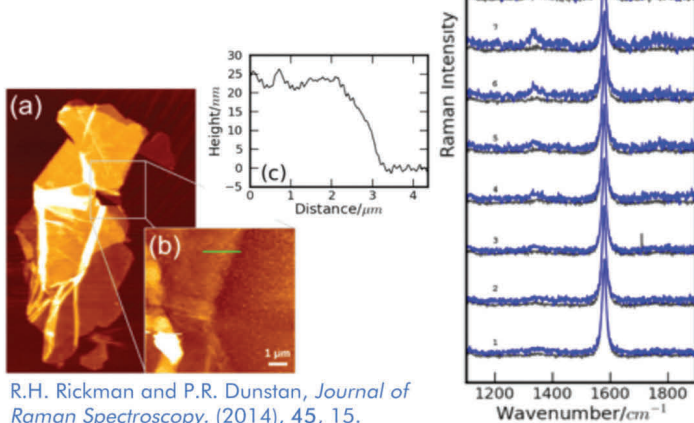


## CASE STUDY

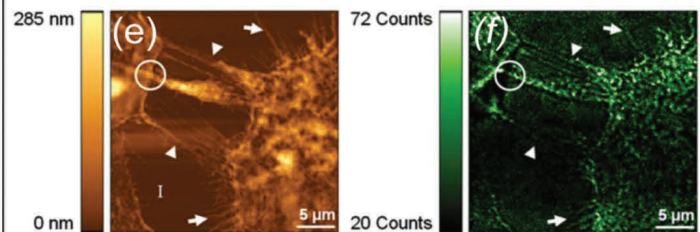
Analysis of a surface structural map with a correlated chemical map showing the distribution of chemicals within the sample. This is a powerful output which is useful in determining aspects of quality control in a product's contamination issues, toxicology related phenomena, crystal structure (including stress investigation) and defect analysis.

- Analysis of crystal structure, such as silicon (stress mapping)
- Phase separation in hard matter – surface chemical mapping of components
- Sub-micron structured materials – such as optical components
- Nanostructure carbon: carbon nanotube analysis and graphene.
- Simultaneous topographic and fluorescence mapped matter (e.g. chromosomes and cells). 'Beating the diffraction limit' imaging.

Imaging defects in graphite and graphene flakes. Panels show the relationship between topography (a), (b) and (c) and Raman spectral features (d)



Topographic (e) and fluorescence (f) SNOM acquisitions of two PNT2 cells initiating contact. The cells were fluorescently labelled to reveal the location of E-cadherin. Arrows indicate filopodia across the intercellular region whilst arrowheads indicate those filopodia establishing contact.



## APPLICATIONS

- Pharmaceuticals
- Cellular Imaging
- Graphene and diamond
- Liquid/Analyte composition analysis
- Semiconductor analysis
- Nanoparticle characterisation

