31 March 2014

International Organization for Standardization
Organisation Internationale de Normalisation

TC 201 Surface Chemical Analysis
SC 1 Terminology

Vocabulary for Surface chemical analysis
ISO 18115:Part 2.

The attached figures may be found helpful for those defining and using the SPM terms.

- Fig 1 provides a family tree for SPM methods.
- Figs 2 and 3 illustrate complex probes.
- Fig 4 shows the probe assembly and chip carrier.

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Fig 1 - Family tree for the SPM Methods (yellow terms defined)

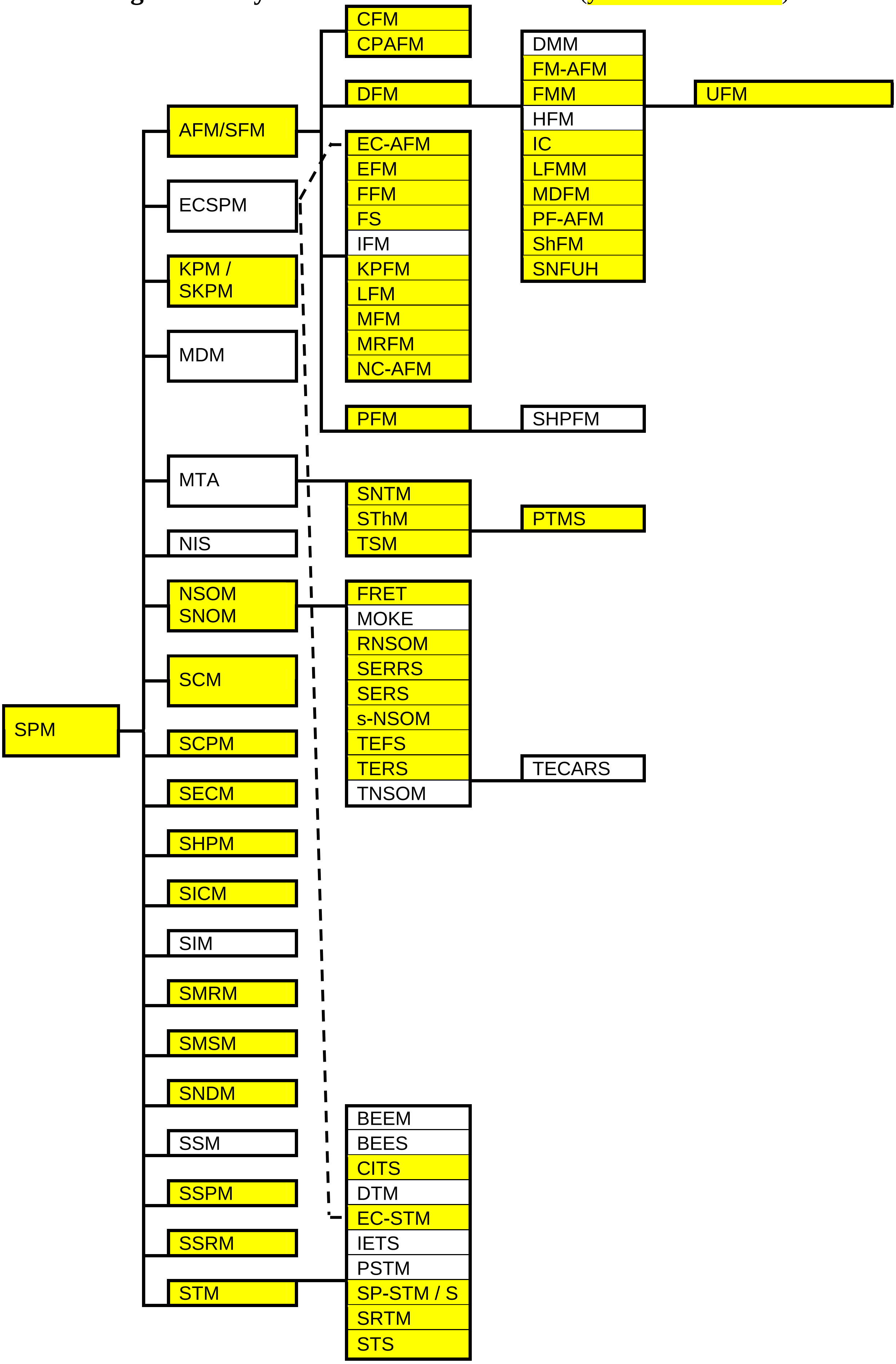

Fig 2 - Basic and more complex cantilevers, e.g. nanotube on standard mount – The "cantilever assembly"

If the probe designed to interrogate the surface is mounted on a regular tip, then the regular tip becomes the "**probe support**" and all terms that would normally be attributed to the regular tip are transferred to the new probe. The terms in bold italics are defined.

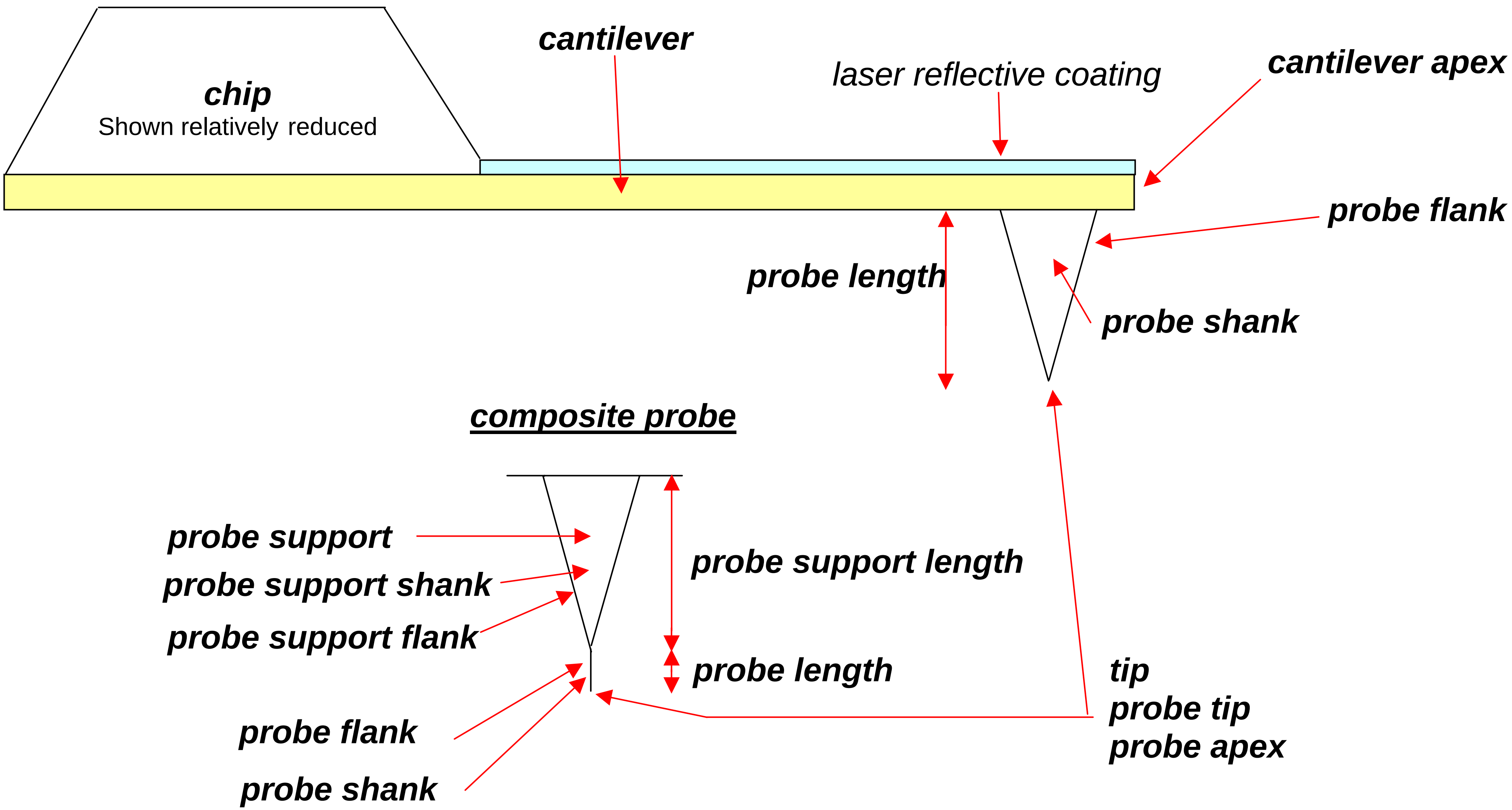

Fig 3 – A typical complex FIB machined cantilever.

Fig 2 exampled a composite tip based on a **carbon nanotube probe** supported by a regular tip but a **composite probe** may also be FIB machined from a single material as shown schematically below left. There are also **tilt-compensated probes**, as shown right, where we define the **probe tilt angle**.

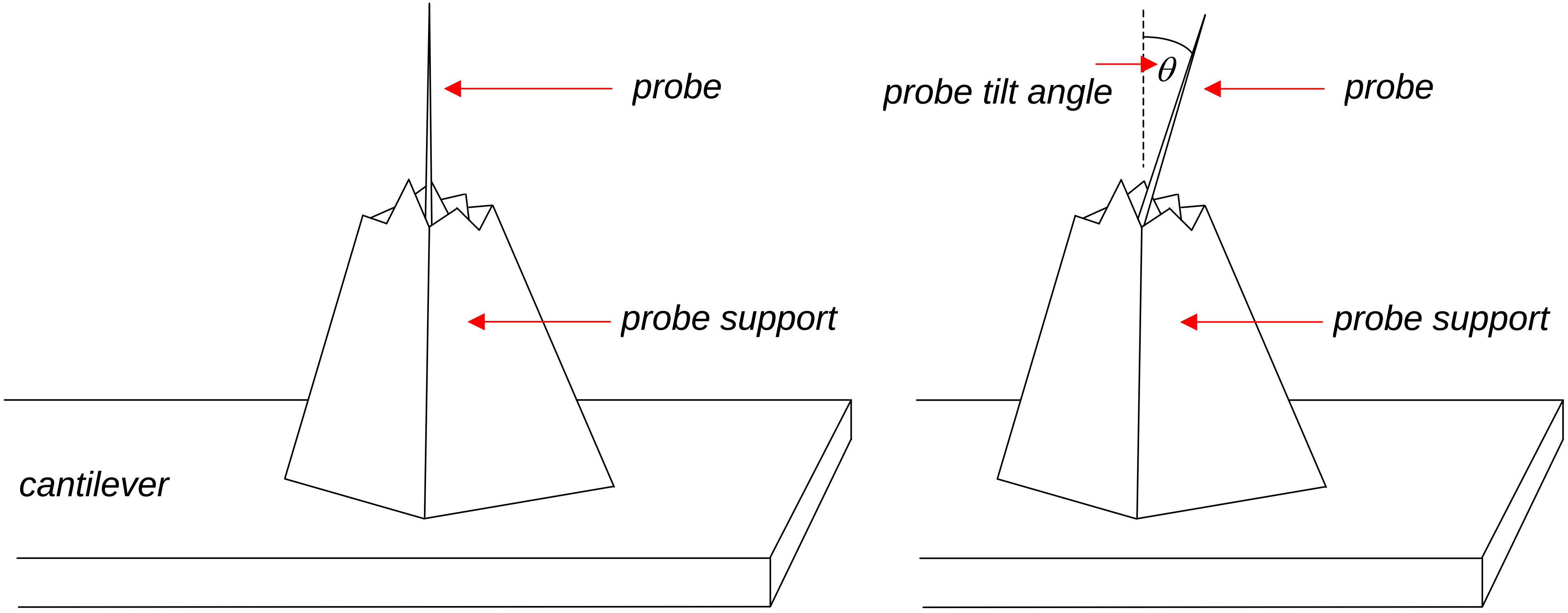

Fig 4 – The complete probe assembly

The **cantilever assembly** may be mounted on a **chip holder** to make up the complete probe assembly