

# CPC COOPERATIVE PATENT CLASSIFICATION

## G PHYSICS

(NOTES omitted)

### INSTRUMENTS

#### G01 MEASURING; TESTING

(NOTES omitted)

#### G01Q SCANNING-PROBE TECHNIQUES OR APPARATUS; APPLICATIONS OF SCANNING-PROBE TECHNIQUES, e.g. SCANNING PROBE MICROSCOPY [SPM]

##### NOTE

In this subclass, the first place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place.

<b>10/00</b>	<b>Scanning or positioning arrangements, i.e. arrangements for actively controlling the movement or position of the probe</b>	<b>60/00</b>	<b>Particular types of SPM [Scanning Probe Microscopy] or microscopes; Essential components thereof</b>
10/02	. Coarse scanning or positioning	60/02	. Multiple-type SPM, i.e. involving more than one SPM techniques
10/04	. Fine scanning or positioning	60/04	. . STM [Scanning Tunnelling Microscopy] combined with AFM [Atomic Force Microscopy]
10/045	. . {Self-actuating probes, i.e. wherein the actuating means for driving are part of the probe itself, e.g. piezoelectric means on a cantilever probe}	60/06	. . SNOM [Scanning Near-field Optical Microscopy] combined with AFM [Atomic Force Microscopy]
10/06	. . Circuits or algorithms therefor	60/08	. . MFM [Magnetic Force Microscopy] combined with AFM [Atomic Force Microscopy]
10/065	. . . {Feedback mechanisms, i.e. wherein the signal for driving the probe is modified by a signal coming from the probe itself}	60/10	. STM [Scanning Tunnelling Microscopy] or apparatus therefor, e.g. STM probes
<b>20/00</b>	<b>Monitoring the movement or position of the probe</b>	60/12	. . STS [Scanning Tunnelling Spectroscopy]
20/02	. by optical means	60/14	. . STP [Scanning Tunnelling Potentiometry]
20/04	. Self-detecting probes, i.e. wherein the probe itself generates a signal representative of its position, e.g. piezoelectric gauge	60/16	. . Probes, their manufacture, or their related instrumentation, e.g. holders
<b>30/00</b>	<b>Auxiliary means serving to assist or improve the scanning probe techniques or apparatus, e.g. display or data processing devices</b>	60/18	. SNOM [Scanning Near-Field Optical Microscopy] or apparatus therefor, e.g. SNOM probes
30/02	. Non-SPM analysing devices, e.g. SEM [Scanning Electron Microscope], spectrometer or optical microscope	60/20	. . Fluorescence
30/025	. . {Optical microscopes coupled with SPM}	60/22	. . Probes, their manufacture, or their related instrumentation, e.g. holders
30/04	. Display or data processing devices	60/24	. AFM [Atomic Force Microscopy] or apparatus therefor, e.g. AFM probes
30/06	. . for error compensation	60/26	. . Friction force microscopy
30/08	. Means for establishing or regulating a desired environmental condition within a sample chamber	60/28	. . Adhesion force microscopy
30/10	. . Thermal environment	60/30	. . Scanning potential microscopy
30/12	. . Fluid environment	60/32	. . AC mode
30/14	. . . Liquid environment	60/34	. . . Tapping mode
30/16	. . Vacuum environment	60/36	. . DC mode
30/18	. Means for protecting or isolating the interior of a sample chamber from external environmental conditions or influences, e.g. vibrations or electromagnetic fields	60/363	. . . {Contact-mode AFM}
30/20	. Sample handling devices or methods	60/366	. . . {Nanoindenters, i.e. wherein the indenting force is measured}
<b>40/00</b>	<b>Calibration, e.g. of probes</b>	60/38	. . Probes, their manufacture, or their related instrumentation, e.g. holders
40/02	. Calibration standards and methods of fabrication thereof	60/40	. . . Conductive probes
		60/42	. . . Functionalisation
		60/44	. SICM [Scanning Ion-Conductance Microscopy] or apparatus therefor, e.g. SICM probes
		60/46	. SCM [Scanning Capacitance Microscopy] or apparatus therefor, e.g. SCM probes
		60/48	. . Probes, their manufacture, or their related instrumentation, e.g. holders

## G01Q

- 60/50 . MFM [Magnetic Force Microscopy] or apparatus therefor, e.g. MFM probes
- 60/52 . . Resonance
- 60/54 . . Probes, their manufacture, or their related instrumentation, e.g. holders
- 60/56 . . . Probes with magnetic coating
- 60/58 . SThM [Scanning Thermal Microscopy] or apparatus therefor, e.g. SThM probes
- 60/60 . SECM [Scanning Electro-Chemical Microscopy] or apparatus therefor, e.g. SECM probes

### **70/00 General aspects of SPM probes, their manufacture or their related instrumentation, insofar as they are not specially adapted to a single SPM technique covered by group [G01Q 60/00](#)**

- 70/02 . Probe holders
- 70/04 . . with compensation for temperature or vibration induced errors
- 70/06 . Probe tip arrays
- 70/08 . Probe characteristics
- 70/10 . . Shape or taper
- 70/12 . . . Nanotube tips
- 70/14 . . Particular materials
- 70/16 . Probe manufacture
- 70/18 . . Functionalisation

### **80/00 Applications, other than SPM, of scanning-probe techniques (manufacture or treatment of nanostructures [B82B 3/00](#); recording or reproducing information using near-field interaction [G11B 9/12](#), [G11B 11/24](#), [G11B 13/08](#))**

### **90/00 Scanning-probe techniques or apparatus not otherwise provided for**