

**CPC****COOPERATIVE PATENT CLASSIFICATION****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, classification is made in the first appropriate place.

**G01Q 10/00****Scanning or positioning arrangements, i.e. arrangements for actively controlling the movement or position of the probe**

## G01Q 10/02

- Coarse scanning or positioning

## G01Q 10/04

- Fine scanning or positioning

## G01Q 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}

## G01Q 10/06

- . Circuits or algorithms therefor

## G01Q 10/065

- . . {Feedback mechanisms, i.e. wherein the signal for driving the probe is modified by a signal coming from the probe itself}

**G01Q 20/00****Monitoring the movement or position of the probe**

## G01Q 20/02

- by optical means

## G01Q 20/04

- Self-detecting probes, i.e. wherein the probe itself generates a signal representative of its position, e.g. piezo-electric gauge

**G01Q 30/00****Auxiliary means serving to assist or improve the scanning probe techniques or apparatus, e.g. display or data processing devices**

## G01Q 30/02

- Non-SPM analysing devices, e.g. SEM [Scanning Electron Microscope], spectrometer or optical microscope

## G01Q 30/025

- . {Optical microscopes coupled with SPM}

## G01Q 30/04

- Display or data processing devices

## G01Q 30/06

- . for error compensation

## G01Q 30/08

- Means for establishing or regulating a desired environmental condition within a sample chamber

## G01Q 30/10

- . Thermal environment

## G01Q 30/12

- . Fluid environment

## G01Q 30/14

- . . Liquid environment

## G01Q 30/16

- . Vacuum environment

## G01Q 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

## G01Q 30/20

- Sample handling device or method

**G01Q 40/00****Calibration, e.g. of probes**

## G01Q 40/02

- Calibration standards and methods of fabrication thereof

<b>G01Q 60/00</b>	<b>Particular type of SPM [Scanning Probe Microscopy] or microscopes; Essential components thereof</b>
G01Q 60/02	<ul style="list-style-type: none"> <li>Multiple-type SPM, i.e. involving more than one SPM technique</li> </ul>
G01Q 60/04	<ul style="list-style-type: none"> <li>STM [Scanning Tunnelling Microscopy] combined with AFM [Atomic Force Microscopy]</li> </ul>
G01Q 60/06	<ul style="list-style-type: none"> <li>SNOM [Scanning Near-field Optical Microscopy] combined with AFM [Atomic Force Microscopy]</li> </ul>
G01Q 60/08	<ul style="list-style-type: none"> <li>MFM [Magnetic Force Microscopy] combined with AFM [Atomic Force Microscopy]</li> </ul>
G01Q 60/10	<ul style="list-style-type: none"> <li>STM [Scanning Tunnelling Microscopy] or apparatus therefor, e.g. STM probes</li> </ul>
G01Q 60/12	<ul style="list-style-type: none"> <li>STS [Scanning Tunnelling Spectroscopy]</li> </ul>
G01Q 60/14	<ul style="list-style-type: none"> <li>STP [Scanning Tunnelling Potentiometry]</li> </ul>
G01Q 60/16	<ul style="list-style-type: none"> <li>Probes, their manufacture, or their related instrumentation, e.g. holders</li> </ul>
G01Q 60/18	<ul style="list-style-type: none"> <li>SNOM [Scanning Near-Field Optical Microscopy] or apparatus therefor, e.g. SNOM probes</li> </ul>
G01Q 60/20	<ul style="list-style-type: none"> <li>Fluorescence</li> </ul>
G01Q 60/22	<ul style="list-style-type: none"> <li>Probes, their manufacture, or their related instrumentation, e.g. holders</li> </ul>
G01Q 60/24	<ul style="list-style-type: none"> <li>AFM [Atomic Force Microscopy] or apparatus therefor, e.g. AFM probes</li> </ul>
G01Q 60/26	<ul style="list-style-type: none"> <li>Friction force microscopy</li> </ul>
G01Q 60/28	<ul style="list-style-type: none"> <li>Adhesion force microscopy</li> </ul>
G01Q 60/30	<ul style="list-style-type: none"> <li>Scanning potential microscopy</li> </ul>
G01Q 60/32	<ul style="list-style-type: none"> <li>AC mode</li> </ul>
G01Q 60/34	<ul style="list-style-type: none"> <li>Tapping mode</li> </ul>
G01Q 60/36	<ul style="list-style-type: none"> <li>DC mode</li> </ul>
G01Q 60/363	<ul style="list-style-type: none"> <li>{Contact-mode AFM}</li> </ul>
G01Q 60/366	<ul style="list-style-type: none"> <li>{Nanoindenters, i.e. wherein the indenting force is measured}</li> </ul>
G01Q 60/38	<ul style="list-style-type: none"> <li>Probes, their manufacture, or their related instrumentation, e.g. holders</li> </ul>
G01Q 60/40	<ul style="list-style-type: none"> <li>Conductive probes</li> </ul>
G01Q 60/42	<ul style="list-style-type: none"> <li>Functionalization</li> </ul>
G01Q 60/44	<ul style="list-style-type: none"> <li>SICM [Scanning Ion-Conductance Microscopy] or apparatus therefor, e.g. SICM probes</li> </ul>
G01Q 60/46	<ul style="list-style-type: none"> <li>SCM [Scanning Capacitance Microscopy] or apparatus therefor, e.g. SCM probes</li> </ul>
G01Q 60/48	<ul style="list-style-type: none"> <li>Probes, their manufacture, or their related instrumentation, e.g. holders</li> </ul>
G01Q 60/50	<ul style="list-style-type: none"> <li>MFM [Magnetic Force Microscopy] or apparatus therefor, e.g. MFM probes</li> </ul>
G01Q 60/52	<ul style="list-style-type: none"> <li>Resonance</li> </ul>
G01Q 60/54	<ul style="list-style-type: none"> <li>Probes, their manufacture, or their related instrumentation, e.g. holders</li> </ul>
G01Q 60/56	<ul style="list-style-type: none"> <li>Probes with magnetic coating</li> </ul>
G01Q 60/58	<ul style="list-style-type: none"> <li>SThM [Scanning Thermal Microscopy] or apparatus therefor, e.g. SThM probes</li> </ul>
G01Q 60/60	<ul style="list-style-type: none"> <li>SECM [Scanning Electro-Chemical Microscopy] or apparatus therefor, e.g. SECM probes</li> </ul>

<b>G01Q 70/00</b>	<b>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 <a href="#">G01Q 60/00</a></b>
<a href="#">G01Q 70/02</a>	<ul style="list-style-type: none"><li>• Probe holders</li></ul>
<a href="#">G01Q 70/04</a>	<ul style="list-style-type: none"><li>• <ul style="list-style-type: none"><li>• with compensation for temperature or vibration induced errors</li></ul></li></ul>
<a href="#">G01Q 70/06</a>	<ul style="list-style-type: none"><li>• Probe tip arrays</li></ul>
<a href="#">G01Q 70/08</a>	<ul style="list-style-type: none"><li>• Probe characteristics</li></ul>
<a href="#">G01Q 70/10</a>	<ul style="list-style-type: none"><li>• <ul style="list-style-type: none"><li>• Shape or taper</li></ul></li></ul>
<a href="#">G01Q 70/12</a>	<ul style="list-style-type: none"><li>• <ul style="list-style-type: none"><li>• <ul style="list-style-type: none"><li>• Nano-tube tips</li></ul></li></ul></li></ul>
<a href="#">G01Q 70/14</a>	<ul style="list-style-type: none"><li>• <ul style="list-style-type: none"><li>• Particular materials</li></ul></li></ul>
<a href="#">G01Q 70/16</a>	<ul style="list-style-type: none"><li>• Probe manufacture</li></ul>
<a href="#">G01Q 70/18</a>	<ul style="list-style-type: none"><li>• <ul style="list-style-type: none"><li>• Functionalization</li></ul></li></ul>
<b>G01Q 80/00</b>	<b>Applications, other than SPM, of scanning-probe techniques (<a href="#">manufacture or treatment of nano-structures B82B 3/00</a>; recording or reproducing information using near-field interaction <a href="#">G11B 9/12</a>, <a href="#">G11B 11/24</a>, <a href="#">G11B 13/08</a>)</b>
<b>G01Q 90/00</b>	<b>Scanning-probe techniques or apparatus not otherwise provided for</b>