

Title (en)

MULTIMODE SCANNING PROBE MICROSCOPE, PROBE-ENHANCED RAMAN MICROSCOPE AND METHOD OF REGULATION OF THE DISTANCE BETWEEN THE PROBE AND THE SAMPLE

Title (de)

MULTIMODALES RASTERSONDENMIKROSKOP, SONDENVERSTÄRKTES RAMANMIKROSKOP UND VERFAHREN ZUR REGELUNG DES ABSTANDS ZWISCHEN DER SONDE UND DER PROBE

Title (fr)

MICROSCOPE À SONDE LOCALE MULTIMODE, MICROSCOPE RAMAN EXALTÉ PAR POINTE ET PROCÉDÉ DE RÉGULATION DE LA DISTANCE ENTRE LA SONDE LOCALE ET L'ÉCHANTILLON

Publication

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Application

**EP 14703140 A 20140113**

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Abstract (en)

[origin: WO2014114860A1] The present invention relates to a microscope having a multimode local probe comprising: a resonator (1); a first electrode (9) and a second electrode (8); an excitation source suitable for generating mechanical resonance in the resonator; a metal tip (4) attached to the resonator; means allowing relative movement between the local probe and a sample, which can move the end of the tip so that it is at a distance Z between 0 and 100 nm from the sample; and means for detecting at least one electrical signal representing shear forces on the terminals of said electrodes (8, 9). According to the invention, said metal tip (4) is electrically connected to said second output electrode (9), and the microscopy apparatus comprises means for amplifying and filtering the signals relative to the shear forces and to the tunneling current in a single electronic circuit; and means for controlling the distance Z between the end of the tip and the surface of the sample.

IPC 8 full level

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CPC (source: EP US)

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Citation (search report)

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