

Title (en)

APPARATUS FOR PARALLEL DETECTION OF THE BEHAVIOUR OF MECHANICAL MICRO-OSCILLATORS

Title (de)

VORRICHTUNG ZUR PARALLELEN DETEKTION DES VERHALTENS MECHANISCHER MIKROOSZILLATOREN

Title (fr)

APPAREIL DE DETECTION EN PARALLELE DU COMPORTEMENT DE MICROOSCILLATEURS MECANIKES

Publication

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Application

**EP 01992882 A 20011105**

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Abstract (en)

[origin: WO0237090A1] The invention concerns an apparatus for parallel detection of the behaviour of mechanical micro-oscillators interacting with the sample (21). The amplitude and the phase of resonance of micro-oscillators (12) are measured with optical means. The invention is characterised in that a source (1) is active during a fraction  $1/n$  of the period ( $n$  being an integer) and of variable phase  $p/n$  of the period ( $p$  being an integer). Interferences are produced between light beams generated by reflection of incident light beams (7) and (8) on the micro-oscillators (12). Periodically the micro-oscillators (12) are displaced by means. The value of the parameter  $p$  ( $p$  being an integer) is varied and  $N$  elementary measurements are integrated to obtain a measurement representing each of the values of  $p$ . The phase and amplitude of each micro-oscillator (12) are calculated on the basis of the representative data obtained for each value of  $p$  and this for a large number of accumulations. The invention is applicable in the field of nanotechnologies.

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Citation (search report)

See references of WO 0237090A1

Citation (examination)

- WO 0105701 A1 20010125 - JAPAN SCIENCE & TECH CORP [JP], et al
- WO 0181857 A2 20011101 - UNIV BRISTOL [GB], et al

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