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ULTRASONIC OSCILLATION DETECTING METHOD AND SAMPLE OBSERVING METHOD FOR INTERATOMIC FORCE MICROSCOPE

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Abstract of JP 6323843 (A)

PURPOSE:To provide ultrasonic oscillation detecting method and sample observing method for interatomic force microscope in which the viscoelastic properties and the like can be measured at a frequency higher than 1MHz by generating ultrasonic oscillation of 1MHz or above in a sample and detecting the ultrasonic oscillation using a common cantilever.

CONSTITUTION:A sample 8 is subjected to ultrasonic oscillation at a frequency sufficiently higher than the resonance frequency of a cantilever 11. Since the force functioning between a probe 4 and the sample 8 exhibits a nonlinear dependency on the distance, a displacement depending on the amplitude of oscillation is induced in the cantilever 11. Ultrasonic wave is detected by measuring the displacement.

