

**Bibliographic data: JP 6323843 (A)**

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

**Publication date:** 1994-11-25

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**Classification:** - **International:** G01B21/30; G01N29/00; G01N37/00; G01Q60/00; G01Q60/24; G01Q60/32; (IPC1-7): G01B21/30  
- **european:**

**Application number:** JP19930133878 19930512

**Priority number(s):** JP19930133878 19930512

**Also published as:** • JP 7092464 (B)

**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.

