

Multi-Resonant Detection System for Atomic Force Microscopy

Disclosure Number

201303019

Technology Summary

The present invention overcomes many of the limitations of AFM cantilevers by enabling amplification of the detection of forces at the tip over a very wide range of frequencies while at the same time reducing unwanted external effects on cantilever dynamics such as stray electric fields and liquid environments. This invention also enables one to cleanly drive mechanical tip oscillations without the use of a piezo actuator. Moreover, the invention offers alternative means to detect tip deflection other than optical beam deflection.

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