

Microcantilevered Structures - Applications Other Than Scanning Force Microscopy Deflection Sensors

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ABSTRACT

Over the past several years, our group has been involved with applying the instrumentation techniques developed for force microscopy to that of sensing various physical, chemical and biochemical species. This effort has involved utilizing the deflection stylus common to force microscopy. Instead of bringing the stylus into direct contact with a surface for imaging purposes, we have studied how this structure responds to alterations in the environment changing either the shape or its mechanical resonance when the cantilever is free from a surface (large distance removed). In this presentation, we will provide some recent results along this sensing direction for various chemical and physical species.