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TITLE: Probing Individual Atoms in Liquids

ABSTRACT:

The development of an ultra high-resolution Atomic Force Microscope for imaging biological samples in physiological solutions is described. This unique set up uses Frequency Modulation-Atomic Force Microscopy (FM AFM) combined with a highly sensitive Interferometric deflection detector to achieve high resolution imaging. The surface of mica has been imaged to yield true atomic resolution in a buffer solution. A detailed description of experimental set ups, tests characterising a unique Fast Frequency Detector and the resulting true atomic resolution images are presented.