

### Evaporation of water droplets from nanoporous microcantilevers

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The evaporation dynamics of water micro droplets from the surfaces of nanoporous AAO microcantilevers were investigated. The surfaces of fabricated AAO cantilever were modified by UV irradiation or n-octyltrichlorosilane to be hydrophilic or hydrophobic, respectively. Variations of the resonance frequency and deflection were measured during water droplet evaporation. The water evaporation phenomena on hydrophobic AAO cantilever was similar to that on hydrophobic silicon cantilever. However, the evaporation dynamics on hydrophilic AAO cantilever was found to be significantly different from that on a hydrophobic AAO cantilever due to the permeation of water into the hydrophilic nanowells.