

Subwavelength-resolution near-field Raman spectroscopy

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Abstract

The resolution capabilities of near-field Raman spectroscopy based on a giant enhancement of the electric field near a nanosized metal probe are studied. As a test sample, bundles of single-walled carbon nanotubes deposited on glass substrates are used. It is shown that this method ensures a subwavelength spatial resolution of about 50 nm and demonstrates a Raman scattering enhancement of the order of 10⁴. © 2007 Pleiades Publishing, Inc.

<http://dx.doi.org/10.1134/S1063776107110052>
