Abstract Submitted
for the MAR09 Meeting of
The American Physical Society

***Nano-Prism* Probe for Nano-Optical Applications** TAEKYEONG KIM, BYUNG YANG LEE, SEUNGHUN HONG, Department of Physics and Astronomy, Seoul National University, DEOK-SOO KIM, ZEE HWAN KIM, Department of Chemistry, Korea University — Recently, a *nano-prism* structure has drawn attention as an optical nano-antenna due to its exotic optical properties, while it has been extremely difficult to prepare a probe terminated with a nano-prism for nano-optical applications. Herein, we report a method to mass-produce pristine nano-prism probes. Our fabrication process resulted in *nano-prism with sharp edge at the end of the probe,* which significantly enhanced the electric field around it and made nano-prism probes ideal for nano-optical applications. We performed the apertureless near-field scanning optical microscopy on gold nanoparticles using a nano-prism probe, revealing the field localization at the vertices of the nano-prism. We also demonstrated the fabrication of multiple nano-prism probes in a parallel fashion. This method could be a major breakthrough and provide tremendous flexibility for SPM optical applications such as nano-TERS (tip enhanced Raman scattering) or FRET (fluorescent resonance energy transfer) because it allows one to mass-produce nano-probes terminated virtually general nanostructures. (Advanced Materials, in press)

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Date submitted: 19 Nov 2008 Electronic form version 1.4