Abstract Submitted for the MAR08 Meeting of The American Physical Society

Fabrication of Plasmonic Optical Probe and Its Characterization¹ SEONG SOO CHOI, SunMoon University, D.W. KIM, VINAYAH JHA, O. SUWAL, SunMoon Univ, M.J. PARK, Korea Military Academy, RESEARCH CENTER FOR NANOSCIENCE, NATIONAL RESEARCH LAB TEAM — Recently, there have been tremendous interests about the nano-structured optical probe using surface plasmon polariton due to possible applications of the next generation local communication devices and nano-bio sensor technology. The nano-size metallic apertures such as metal-coated fiber probe and microfabricated pyramidal probe, have shortcomings of very low output intensities. With periodic groove or defects near the aperture on the microfabricated pyramidal probe, the huge output intensity enhancement has been reported [1]. In this talk, the fabrication with nano-flowers including metallic scattering centers around the nano-size aperture and its optical characterization of the pyramidal metallic probe will be presented. References: [1] The effect of groove shape on light transmission, S.S. Choi, etc, 3^{rd} International Conference on Surface Plasmon Photonics, June 17-22, Dijon, France.

¹This project is supported by National Research Lab Funding from Ministry of Korea Science and Technology

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Date submitted: 15 Oct 2007

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