

Detection of E.coli on gold nanoparticles fabricated on ITO substrate using SERS (Surface-Enhanced Raman Scattering)

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SERS (Surface-Enhanced Raman Scattering) was applied to detect E.coli immobilized on nanopatterned ITO (Indium Tin Oxide) substrate. Gold nanoparticles electrochemically deposited on ITO substrate were confirmed by SEM (Self Electron Microscopy). By SERS spectroscopy, the intensity was linear relationship with the concentration. Consequently, this system could be applied to the biochip. Acknowledgments: This research was supported by the Original Technology Research Program for Brain Science through the National Research Foundation of Korea(NRF) funded by the Ministry of Education, Science and Technology (2009-0093907), by the Ministry of Knowledge Economy(MKE) and Korea Institute for Advancement in Technology (KIAT) through the Workforce Development Program in Strategic Technology, and by National Nuclear R&D Program through the National Research Foundation of Korea(NRF) funded by the Ministry of Education, Science and Technology (No. 2010-0018194)