Nanoparticle-Based Anticounterfeiting

We have developed an anti-counterfeiting strategy based on the ionization of ligands from gold nanoparticles. In practice, the particles were inkjet printed onto surfaces, and the "mass barcodes" arising from different ligands was read off using laser desorption mass spectrometry (LDI-MS). This method provides rapid and efficient authentication of materials, with applications in pharmaceuticals, currency, and other areas where counterfeiting is common.



Professor Vincent Rotello and Richard Vachet University of Massachusetts





