

Molecular Detections *via* Interfacial Self-Assembly of Hollow Gold Nanoparticle

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Plasmonic assembly made of individual hollow gold nanoparticles have attracted significant interest in optical detections owing to their large surface area and many plasmonic hot spots. So far, the application of the hollow plasmonic assembly is limited to the detection of molecules in either gaseous or organic phases. Here, we propose an interfacial self-assembly of hollow gold nanoparticles to detect molecules in an aqueous phase. As-made hollow gold nanoparticles and their interfacial assembly are characterized by UV-vis spectrophotometer, TEM, and SEM, respectively. In addition, surface-enhanced Raman spectroscopy is carried out to sensitively detect molecules in an aqueous solution.