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# Separation of gold nanowires and nanoparticles through a facile process of centrifugation

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## **Abstract**

We demonstrate a facile process of centrifugation for the successful separation of Au nanowires (NWs) and nanoparticles (NPs). The products before/after separation were characterized by transmission electron microscopy (TEM, high-resolution TEM, bright and conical dark field TEM) and UV-vis absorption spectroscopy. In addition, Au NWs exhibit stronger surface-enhanced Raman scattering ability relative to that of Au NPs. The current process could be used for separation and purification of other metal nanomaterials with different shapes. The further assembling ultrathin Au NWs and monodispersed Au NPs have great potential applications including sensors and electronic devices.

*Keywords:* Segregation; centrifugation; nanowires; nanoparticles; SERS.

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