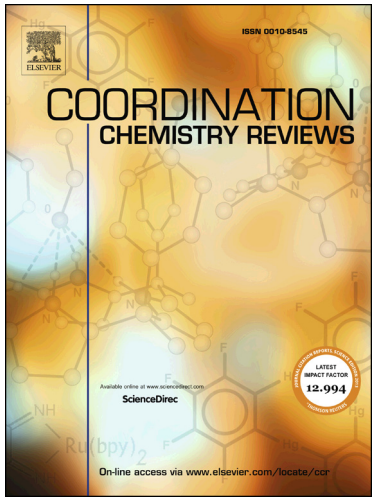


# Gold nanostructures with near-infrared plasmonic resonance: synthesis and surface functionalization

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# Gold nanostructures with near-infrared plasmonic resonance: synthesis and surface functionalization

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Abstract

A systematic and comprehensive survey on the preparation and functionalization approaches for a wide range of gold nanostructures that exhibit surface plasmon resonance (SPR) in the near-infrared (NIR) region is presented. This review is focused on the efficient synthetic strategies for precise production of gold nanostructures with NIR plasmonic resonance, and effects of size, shapes and composition on their optical absorption properties. Additionally, the surface functionalization of gold nanostructures is summarized. This review provides suggestions for guiding controllable synthesis of monodisperse, multifunctional plasmonic gold nanostructures in a simple and effective way.