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Title: Chemiluminescence reactions enhanced by silver nanoparticles and silver alloy nanoparticles: applications in analytical chemistry

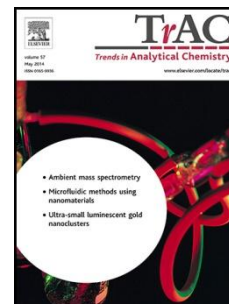
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Chemiluminescence reactions enhanced by silver nanoparticles and silver alloy nanoparticles: applications in analytical chemistry

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Highlights

- AgNPs and Ag alloy NPs–enhanced chemiluminescence (CL) systems were discussed.
- AgNPs and Ag alloy NPs improved the analytical performance of the CL methods.
- AgNPs and Ag alloy NPs as catalysts, reductants and energy acceptors in CL systems.
- Silver nano–sized islands can intensify CL reactions through the plasmonic effect.
- AgNPs and luminol–functionalized AgNPs were used as labels in CL immunoassays.

Abstract

Silver nanoparticles (AgNPs) and silver alloy nanoparticles (Ag alloy NPs) are capable of amplifying the intensity of chemiluminescence (CL) reactions by different ways such as participating in phenomenon of surface plasmon resonance and cooperating as catalysts, reductants and even energy acceptors. Because of these properties, AgNPs and Ag alloy NPs have played important roles in improvement of analytical performance of CL–based techniques; consequently, leading to further extension of analytical applications of these techniques. In this paper, the literature on AgNPs and Ag alloy NPs–enhanced CL systems and their analytical applications were

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