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SERS-active Ag, Au and Ag-Au alloy nanoparticles obtained by laser ablation in liquids for sensing methylene blue

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Highlights for the article: "SERS-active Ag-Au alloy nanoparticles obtained by laser ablation in liquids for sensing methylene blue" by Oscar Olea-Mejía, Mariana Fernández-Mondragón, Gabriela Rodríguez-de la Concha and Marco Camacho-López

- We synthesized Ag/Au nanoparticles by laser ablation in liquids
- We characterized such particles by UV-Vis, TEM and EDS/STEM
- The SERS effect was studied for the obtained nanoparticles
- Pure silver nanoparticles showed the highest SERS signals
- We can sense methylene blue at a concentration of 10^{-10} mole/L

Abstract

We have synthesized Ag-Au nanoparticles by laser ablation in liquids using five different targets: 100% Ag, 80%Ag/20%Au, 50%Ag/50%Au, 20%Ag/80%Au and 100%Au (weight