

Tailoring Gold and Silver Colloidal Bimetallic Nanoalloys Towards SERS Detection of Rhodamine 6G

A. V. Girão,^{a†} P. C. Pinheiro,^b M. Ferro^a and T. Trindade^b

^a Department of Materials and Ceramic Engineering - CICECO, University of Aveiro, Campus de Santiago, 3810-193 Aveiro, Portugal

^b Department of Chemistry - CICECO, University of Aveiro, Campus de Santiago, 3810-193 Aveiro, Portugal

[†] Corresponding Author
Email: avgirao@ua.pt

Supporting Information

Figures

S1 - UV-Vis absorption spectra for colloidal NPs Au, Ag and physical mixture of Au and Ag NPs

S2 - TEM-EDX spectra showing the elemental composition of the obtained gold and silver BNPs

S3 - SEM images showing the morphology of the obtained thin films for the NPs and BNPs deposited onto the surface of glass substrates

S4 - SEM-EDX spectra and mapping showing the elemental composition of the obtained thin films of BNPs deposited onto the surface of glass substrates

S5 – UV-Vis absorption spectrum obtained for the aqueous solution of Rhodamine 6G 10^{-4} M showing the different absorption bands along the analyzed range

S6 - UV-Vis reflectance spectra for the thin films of colloidal Au, Ag, AuAg and AgAu NPs deposited by controlled evaporation onto the glass slide surface

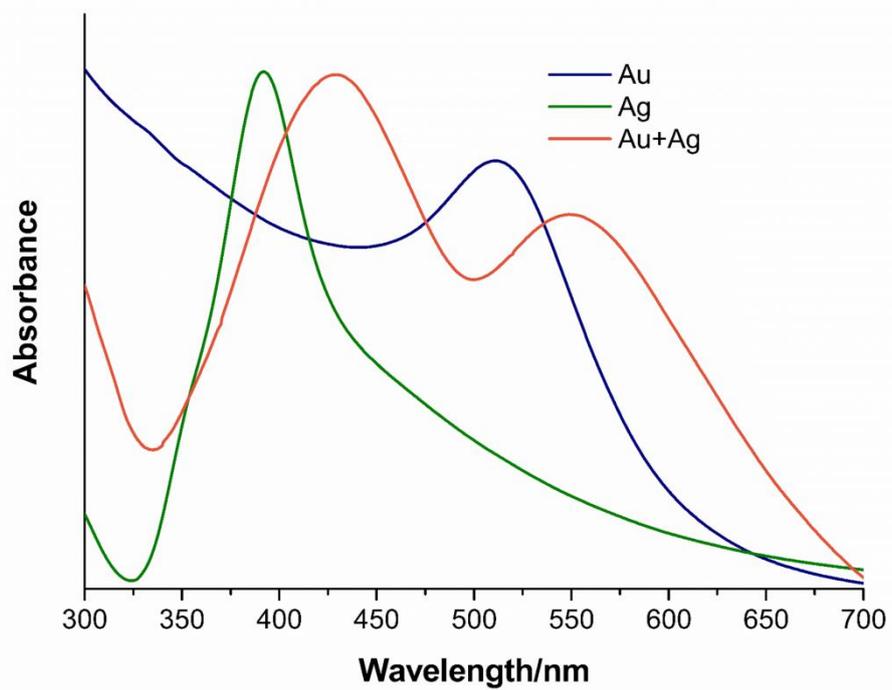


Figure S1. UV-Vis absorption spectra for colloidal NPs Au, Ag and physical mixture of Au and Ag NPs.

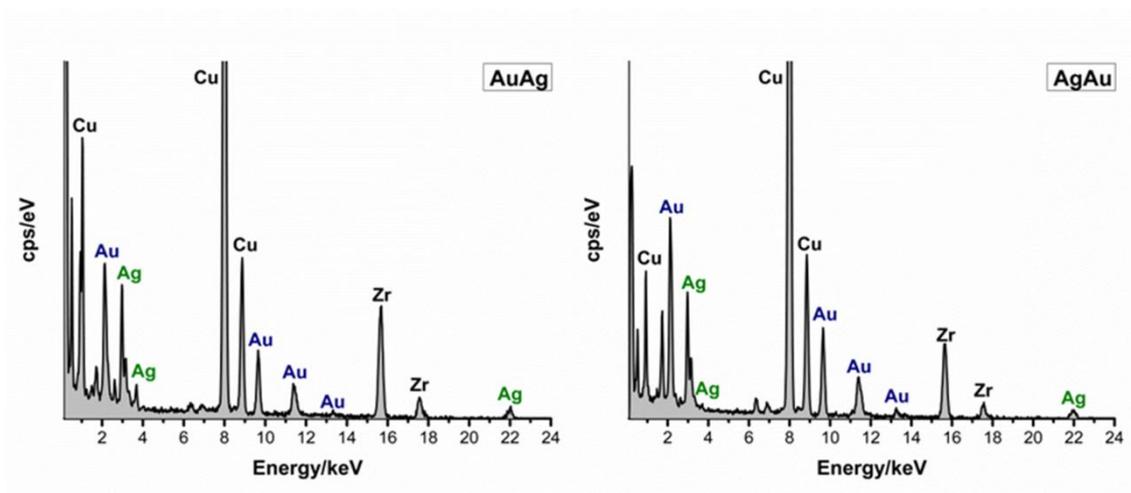


Figure S2. TEM-EDX spectra showing the elemental composition of the obtained gold and silver BNPs.

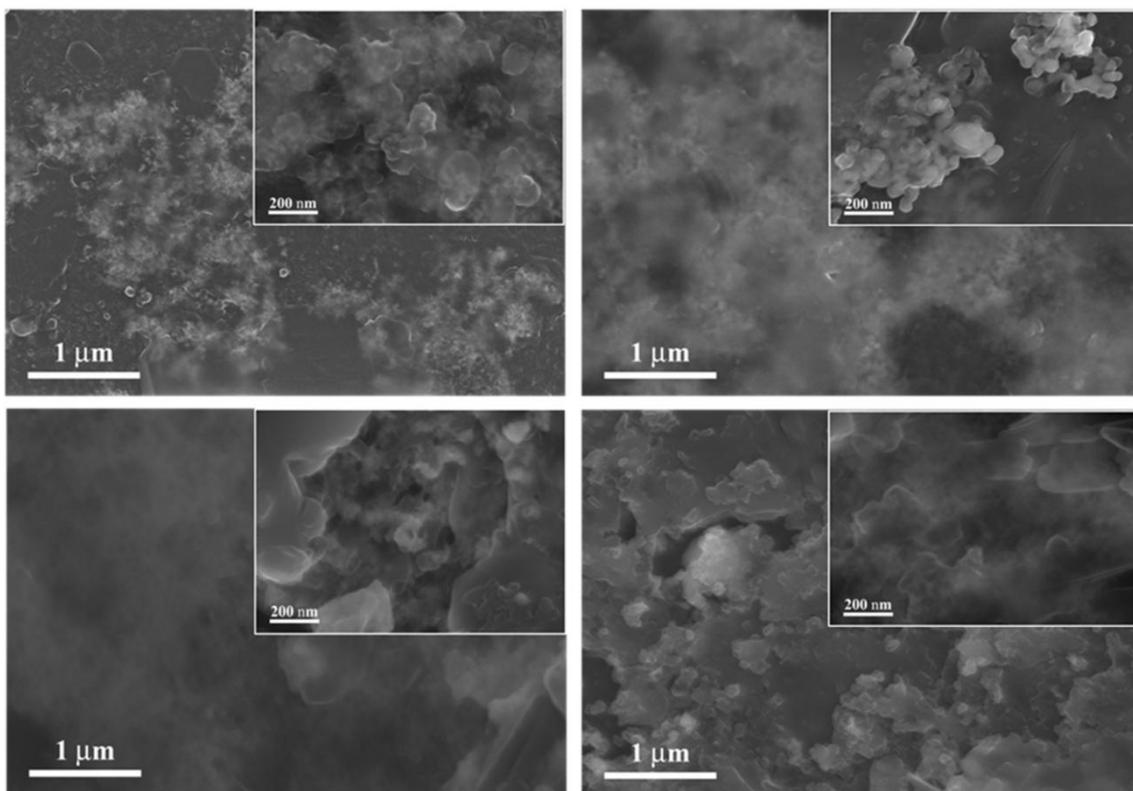


Figure S3. SEM images showing the morphology of the obtained thin films for the NPs (Au: upper left; Ag: upper right) and BNPs (AuAg: lower left; AgAu: lower right) deposited onto the surface of glass substrates.

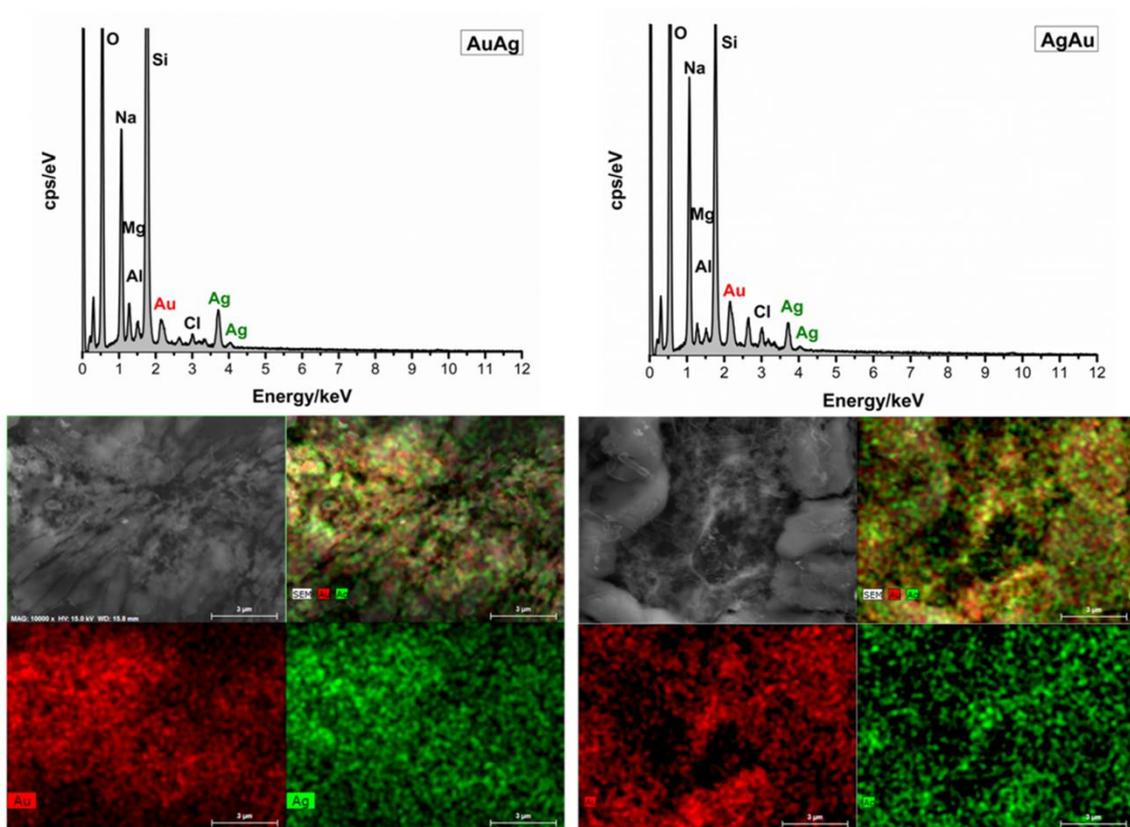


Figure S4. SEM-EDX spectra and mapping showing the elemental composition of the obtained thin films of BNPs deposited onto the surface of glass substrates (AuAg: left; AgAu: right).

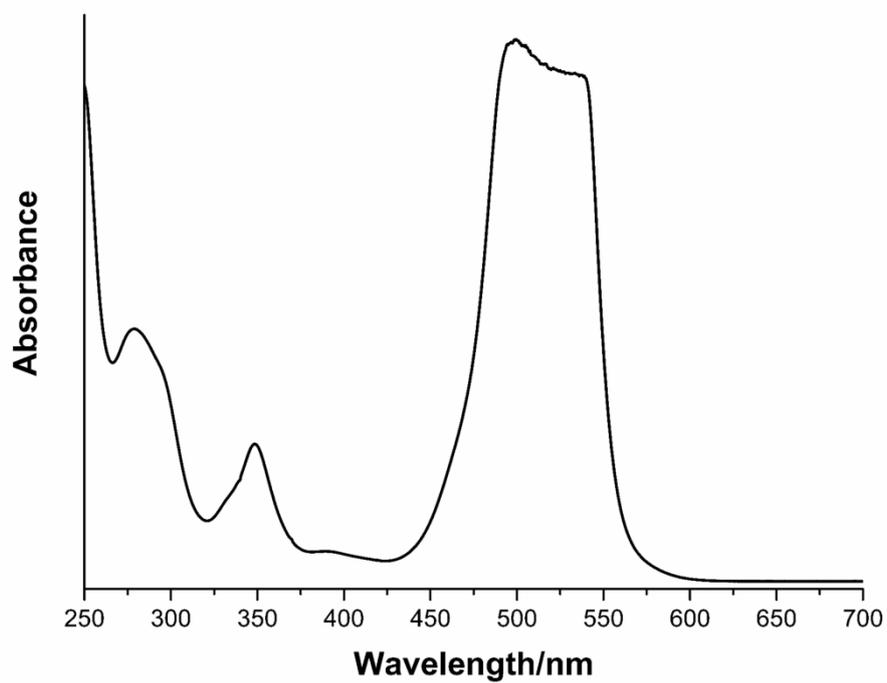


Figure S5. UV-Vis absorption spectrum obtained for the aqueous solution of Rhodamine 6G 10^{-4} M showing the different absorption bands along the analyzed range.

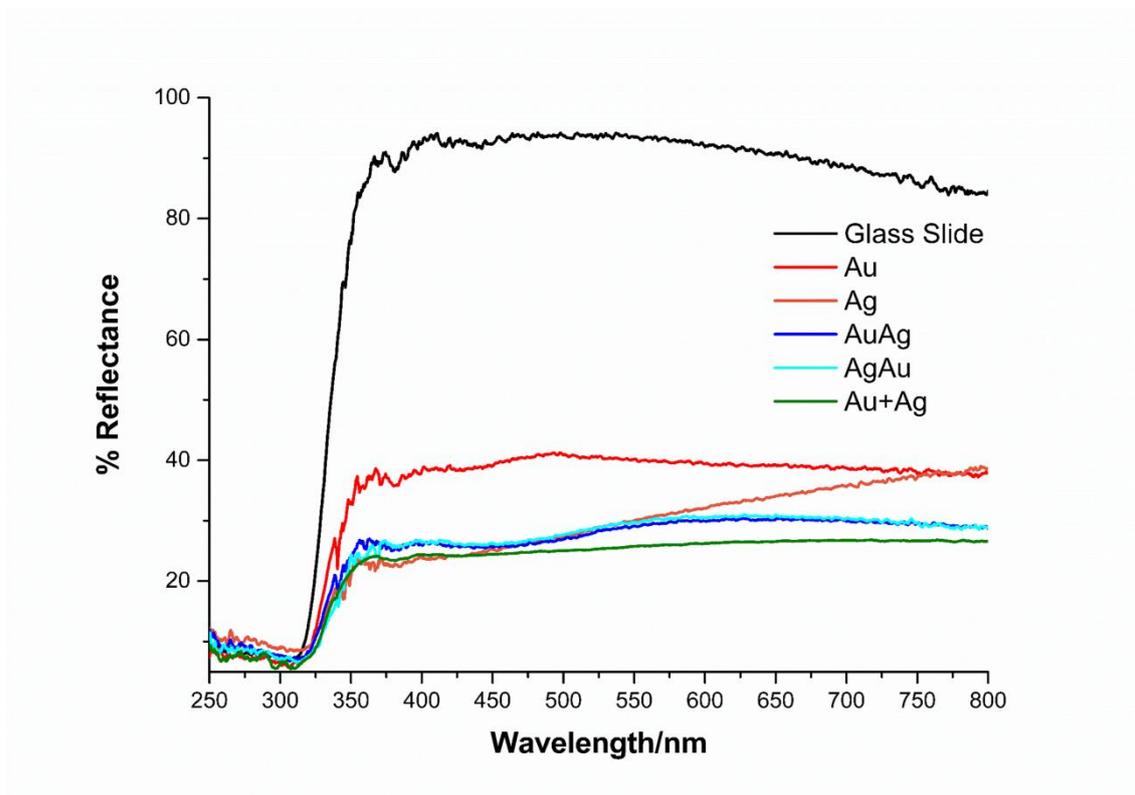


Figure S6. UV-Vis reflectance spectra for the thin films of colloidal Au, Ag, AuAg and AgAu NPs deposited by controlled evaporation onto the glass slide surface.