

Figure S1. Reproducibility of the replications performed for each textile functionalized sample (with 0.1 mg/mL of AuNPs dispersion and 4 g/L of surfactant A or 0.5 g/L of surfactant B or 3 g/L of surfactant C, by exhaustion at 60 °C for 60 minutes) during the reflectance readings in the UV-Vis equipment.



Figure S2. Cotton substrates functionalized with 0.1 mg/mL AuNPs. **Left:** Exhaustion with surfactant A + surfactant D; **Right:** Exhaustion with surfactant B + surfactant D.



Figure S3. Master dispersion with AuNPs and Surfactant B + surfactant D.



Figure S4. Samples functionalized with different RB (exhaustion with 0.1 mg/mL of AuNPs and 4 g/L of surfactant A, at 60 °C for 60 min). From left to right: Control sample without NPs; exhaustion with 20:1 ratio; exhaustion with 12:1 ratio and exhaustion with 7:1 ratio.

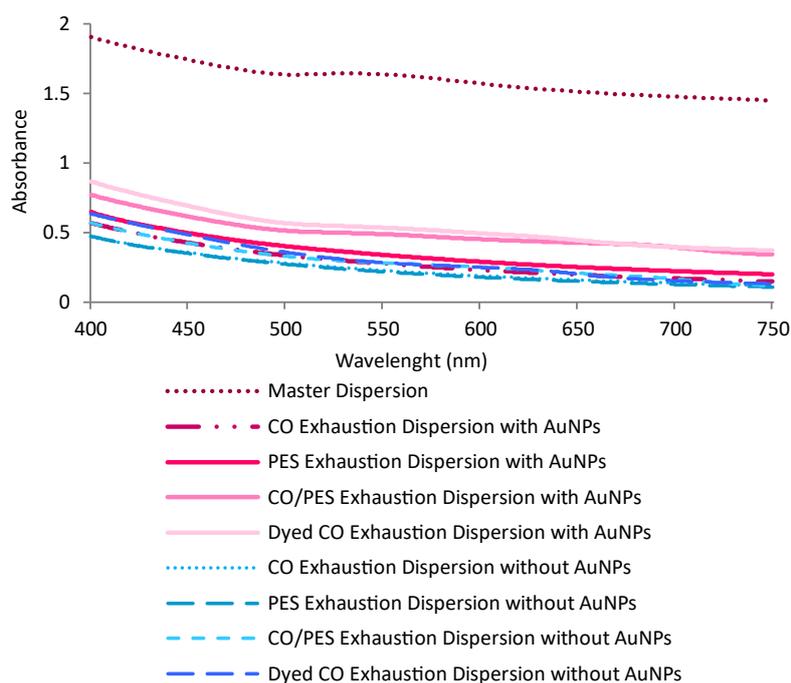


Figure S5. Absorbance of dispersions after exhaustion processes (with 0.1 mg/mL of AuNPs and 4 g/L of surfactant A and 5 g/L of surfactant D, at 70 °C for 10 min) in different substrates.