Supporting information for

Polarization and wavelength dependence in two-photon excited luminescence of a single gold nanosphere

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Figure S-1

![Log-log plot showing the evolution of rotation time with respect to diffusion time](image1)

Figure S-1. Evolution of the rotation time with respect to the diffusion time of gold nanoparticles of diameter 20 nm in samples of growing viscosity; log-log plot; crosses, experimental data; line, linear fit. In non logarithmic scale, the constrained linear fit crosses the origin.

Figure S-2

![Log-Log plot showing the evolution of rotation time with respect to diameter](image2)

Fig. S-2. Evolution of the rotation time with respect to the diameter of the gold nanoparticles in an aqueous sample. Log-Log plot, open squares, experimental data; line, linear fit, slope 2.95.