Supporting Figures

OF

Photoluminescence enhancement from silicon quantum dots located in the vicinity of a monolayer of gold nanoparticles

A.L. Muñoz-Rosas¹, A. Rodríguez-Gómez²*, J.A. Arenas-Alatorre², J.C. Alonso-Huitrón¹

¹Instituto de Investigaciones en Materiales, Universidad Nacional Autónoma de México, A.P.70-360, Coyoacán04510, México D. F., Mexico

²Instituto de Física, Universidad Nacional Autónoma de México, A.P.20-364, Coyoacán01000, México D. F., Mexico

*Corresponding Author

E-mail: arodriguez@fisica.unam.mx (A. Rodríguez-Gómez)

Tel: +52 (1) 55-1370-9620
Supporting Figure 1. HRTEM micrograph obtained from a DIEL film. Amorphous and quasi-stoichiometric silicon nitride film is observed. First statistical count showed a particle density of about $3.04 \times 10^4$ particles/cm$^2$. 
Supporting Figure 2. Histogram of sample 5, AuNPs deposited over silicon wafer. This sample showed the highest ratio $R_{Au} = 0.86$ corresponding to a superficial density of $Au-\rho = 2.52E12$ particles/cm$^2$ and an average size of $Au-\Phi = 2.90$ nm.
Supporting Figure 3. Field Emission SEM micrograph from a 20 seconds deposition of AuNPs. Here is observed a $R_{Au}$ near zero. Additionally, it is possible to observe a totally new kind of particles with bigger sizes and irregular shapes.