

Supporting Figures

OF

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

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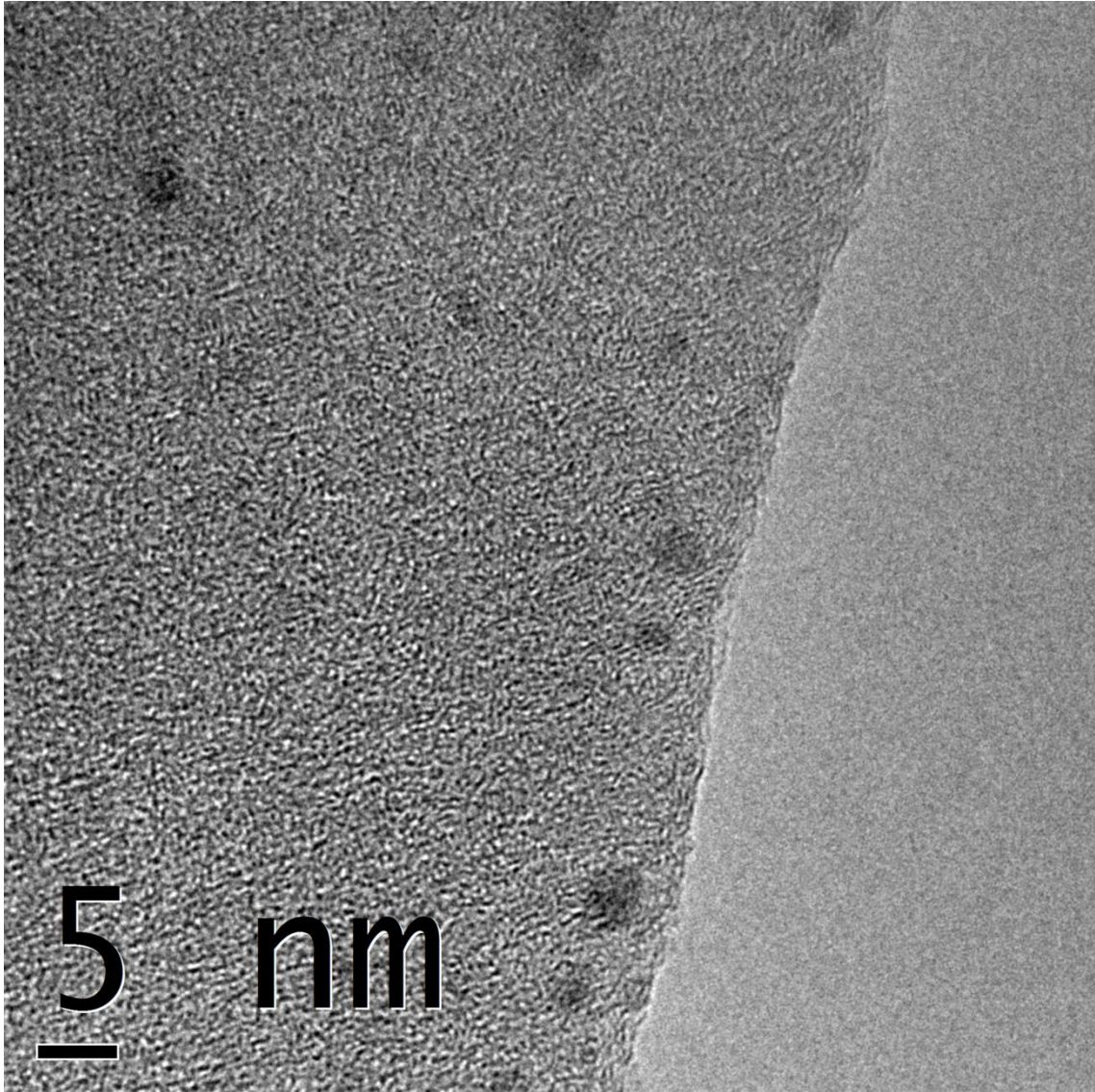
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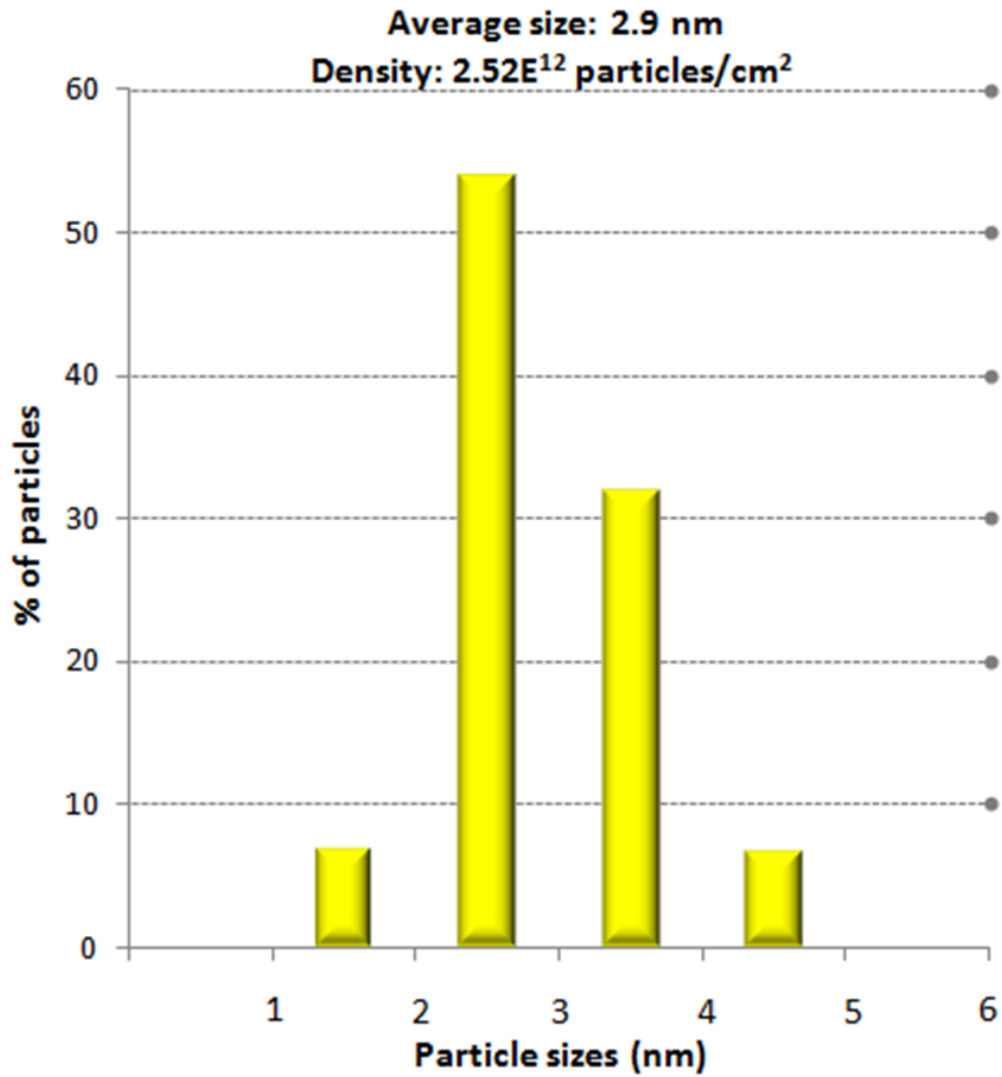
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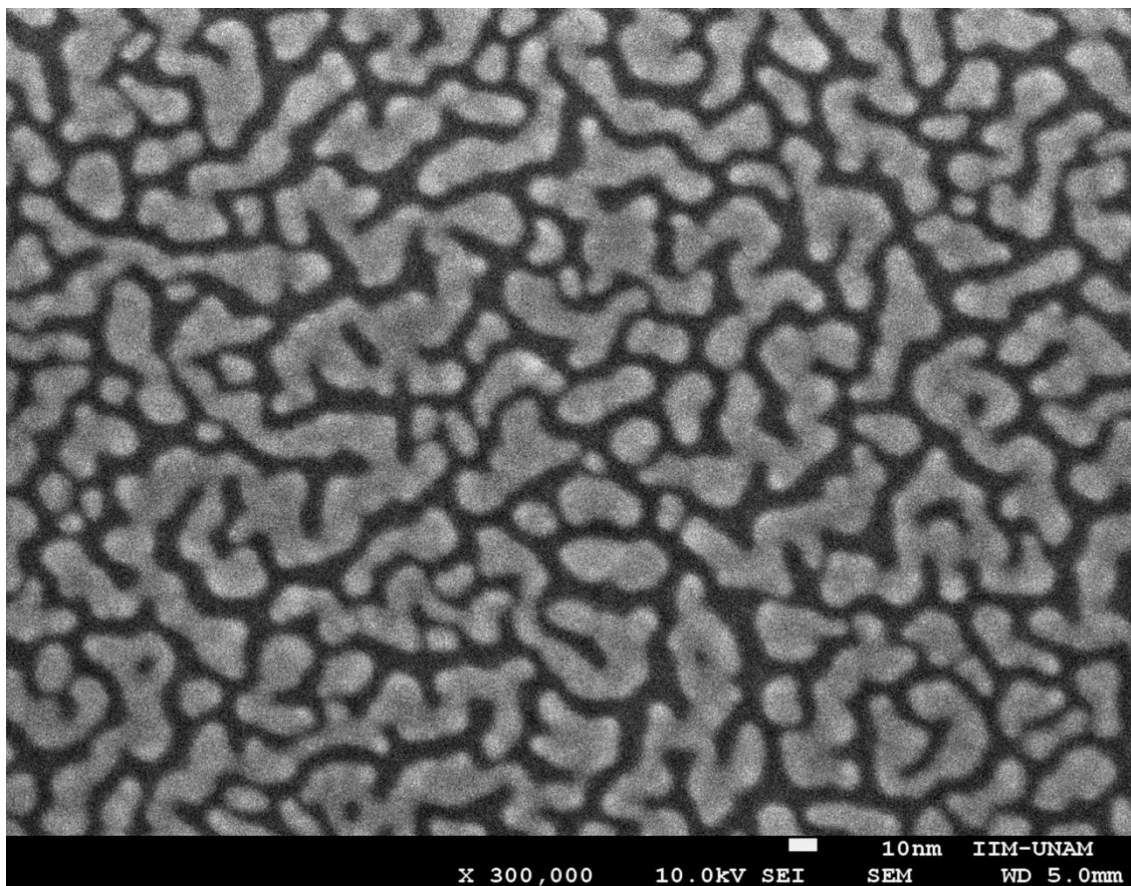


Supporting Figure 1. HRTEM micrograph obtained from a DIEL film. Amorphous and quasi-stoichiometric silicon nitride film is observed. First statistical count showed a particle density of about $3.04E^4$ particles/cm².



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/cm² and an average size of $Au-\varnothing = 2.90$ 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.