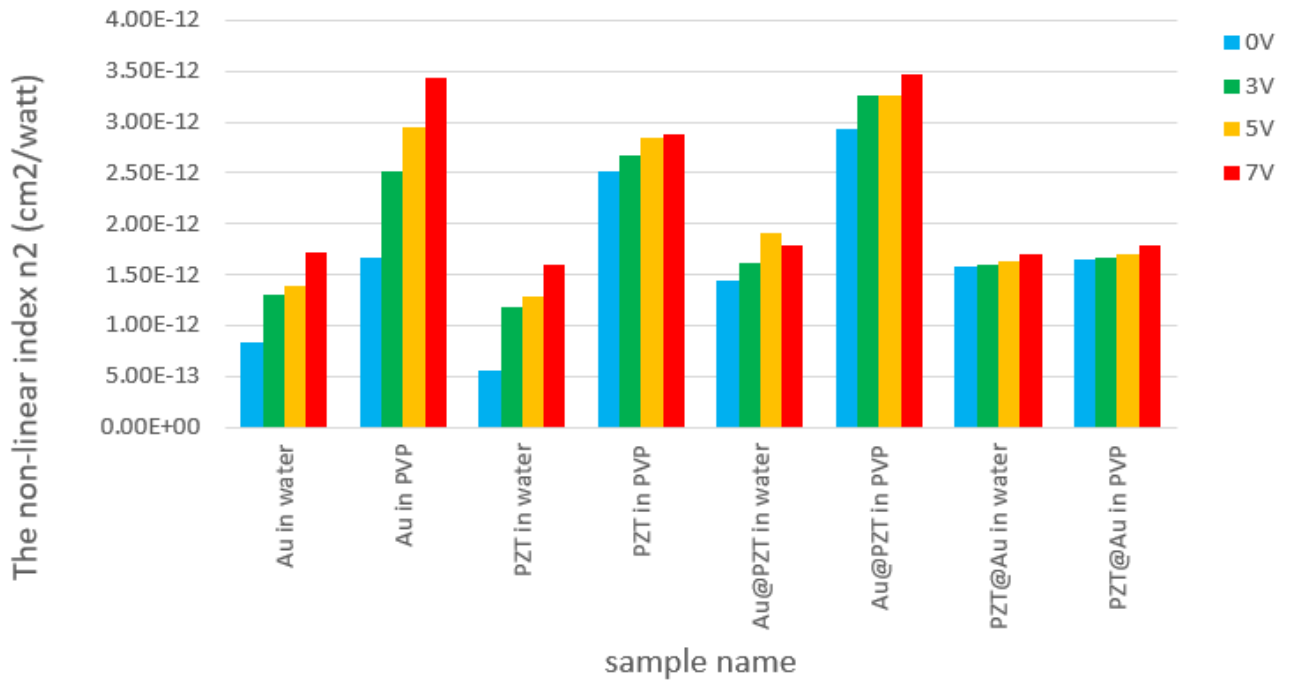


Our new paper in nanotechnology journal

Congratulations to our new paper " Tunable Piezophotonic effect in core shell nanoparticles prepared by laser ablation in liquids under external voltage", by A.K. Kodeary, S. M. Hamidi.

We report an experimental study on the piezophotonic effect of gold and Lead Zirconate Titanate (PbZrTiO_3) nanoparticles (NPs) and also core shell of them which prepared by laser ablation in liquid method. To reach these NPs and composite materials, the targets immersed in deionized water, and a polymeric solution of Poly vinyl pyrrolidone (PVP) under Nd: YAG laser pulses irradiation. Linear and non-linear properties of these NPs were studied by optical spectroscopic and Z-scan technique. Furthermore, tunable nonlinear properties of them was measured under external electric field under light illumination to investigate the piezophotonic effect. Our results show that at the interface of PZT and Au, due to the schottky barrier, we have electron / hole recombination prevention which lead to the efficient enhancement in the nonlinear properties.



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