Supporting Information

Plasmonic Behavior of Ionic Liquid Stabilized Gold Nanoparticles in Molecular Solvents

Sachin Thawarkar, a Balu Thombare, a Nageshwar D Khupse,a,n*
a. Department of Physics, Savitribai Phule Pune University, Ganeshkhind, Pune, 411008 India,
b. Physical and Materials Chemistry Division, CSIR-National Chemical Laboratory, Dr. Homi bhabha Road, Pune, 411008, India
Email: nageshkupse@gmail.com

Supporting Data

Fig. SI1: TEM image and particle size distribution histogram for the AuNPs capped with [C_4,C_{14}\text{-im}]Br (Au@[C_4,C_{14}\text{-im}]Br)

![TEM Image and Particle Size Distribution Histogram](image1)

Fig. SI2: TEM image and particle size distribution histogram for the AuNPs capped with [C_4,C_{16}\text{-im}]Br (Au@[C_4,C_{16}\text{-im}]Br) after redispersion in water

![TEM Image and Particle Size Distribution Histogram](image2)
Fig SI3: Plot of $\lambda_{\text{SPR}}$ of Au@[C$_4$C$_{16}$-im]Br vs dielectric constant ($\varepsilon$) of PEGs (■) and alcohols (△).

Fig. SI4: TEM image and particle size distribution histogram for the AuNPs capped with [C$_4$C$_{16}$-im]Br (Au@[C$_4$C$_{16}$-im]Br) after transferring to methanol.
Fig. SI5: TEM image and particle size distribution histogram for the AuNPs capped with \([C_4,C_{16}\text{-im}]\text{Br}\) (Au@[C_4,C_{16}\text{-im}]\text{Br}) after transferring to ethanol.

Fig. SI6: TEM image and particle size distribution histogram for the AuNPs capped with \([C_4,C_{16}\text{-im}]\text{Br}\) (Au@[C_4,C_{16}\text{-im}]\text{Br}) after transferring to Butanol.