

Supporting Information

Solvent-Free Nanocomposite Colloidal Fluids with Highly Integrated and Tailored Functionalities: Rheological, Ionic Conduction, and Magneto-Optical Properties

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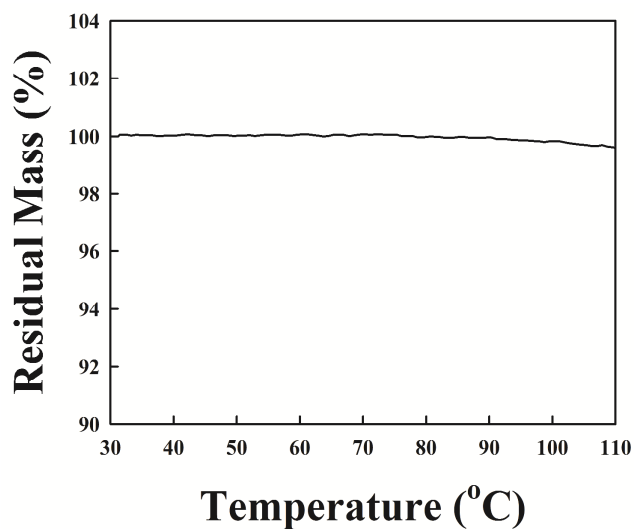


Figure S1. TGA data of SiO₂ colloid/(dendrimer/OA-Fe₃O₄)₃/dendrimer/(PSS/IL-SH-QD)₄. The scan rate was 5 °C·min⁻¹ in range of temperature from 30°C to 110°C.

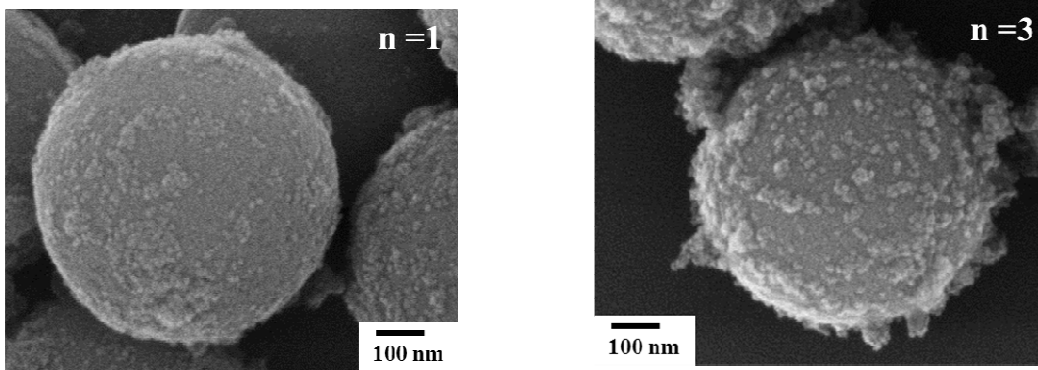


Figure S2. SEM images of $(\text{PAH}/\text{octakis-Fe}_3\text{O}_4)_{n=1 \text{ and } 3}$ multilayer-coated silica colloids.

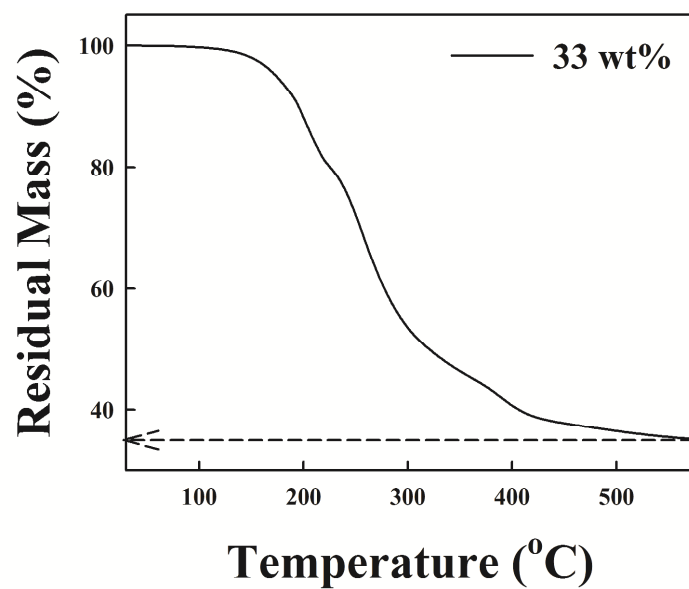


Figure S3. TGA data of the nanocomposite colloidal fluids coated with dendrimer/(PSS/IL-SH-QD_{green})₉.

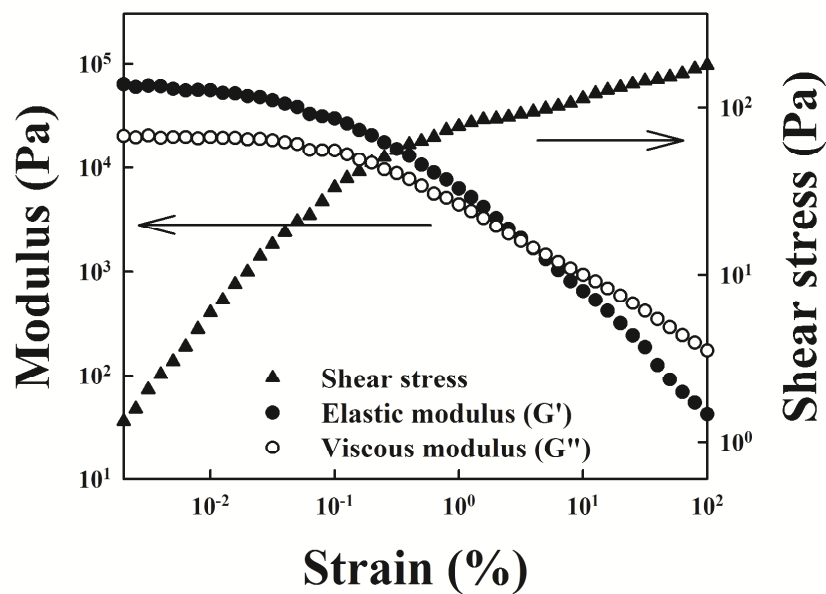


Figure S4. Strain-dependent elastic/ viscous moduli (G' / G'') and shear stress data of solvent-free CdSe@Zns QD_{green} fluids composed of 6 nm-sized QD_{green} and IL-SH ligands

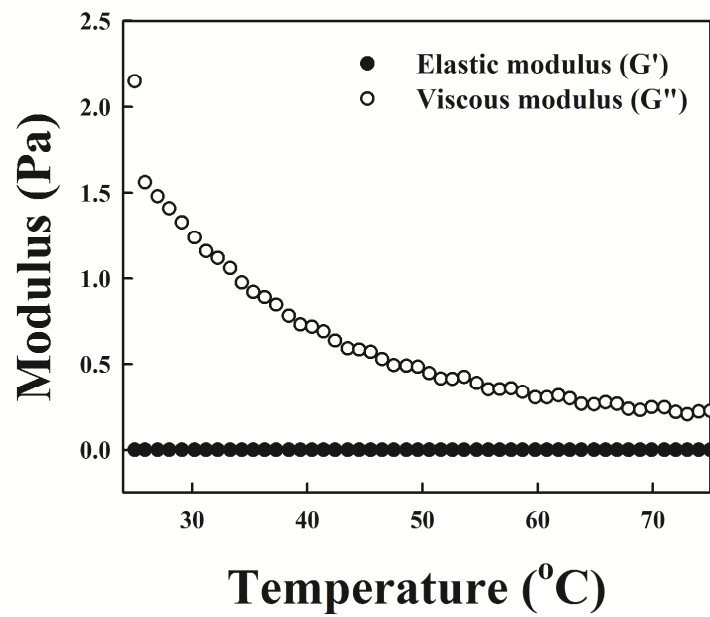


Figure S5. Elastic and viscous modulus as a function of temperature for pure IL-SH media.

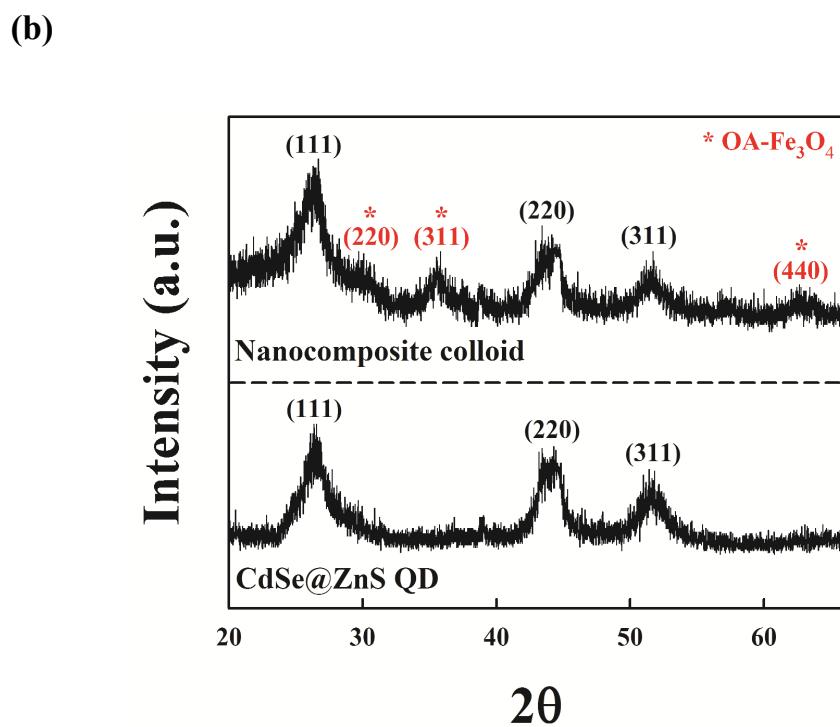
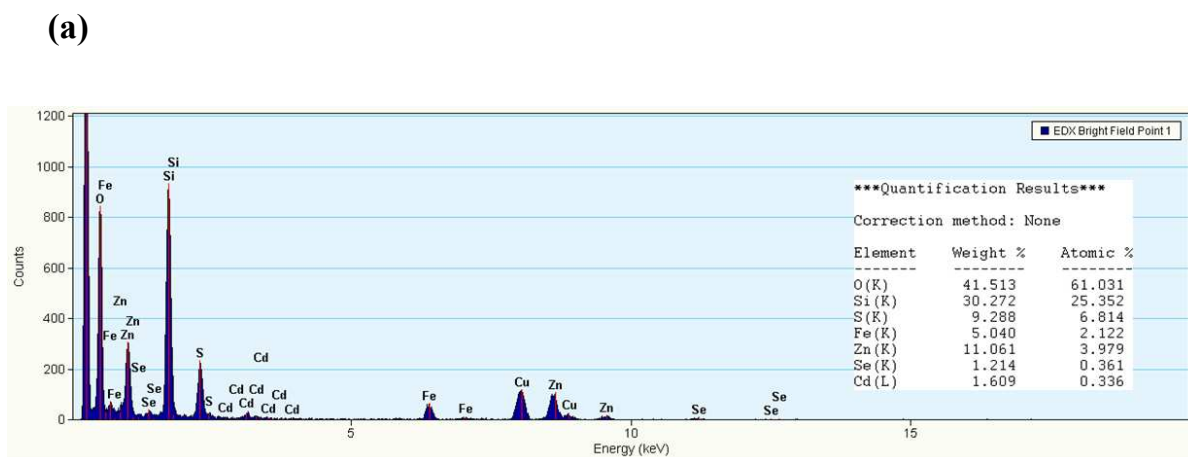
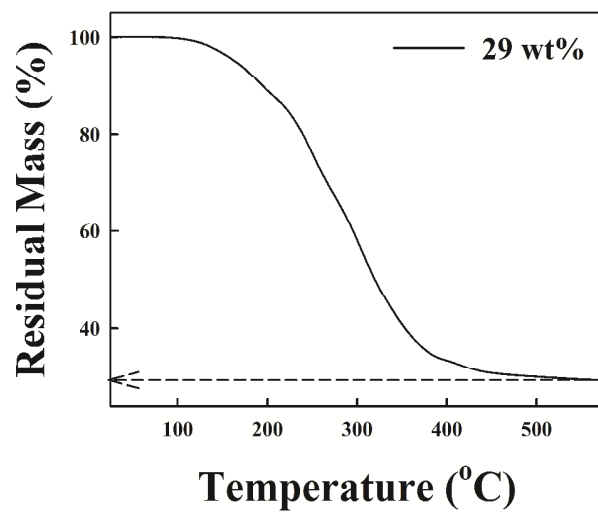


Figure S6. (a) EDS and (b) XRD data of multifunctional colloids (SiO₂ colloid/ (dendrimer/ OA-Fe₃O₄)₃/dendrimer/(PSS/ IL-SH-CdSe@ZnS)₄).

(a)



(b)

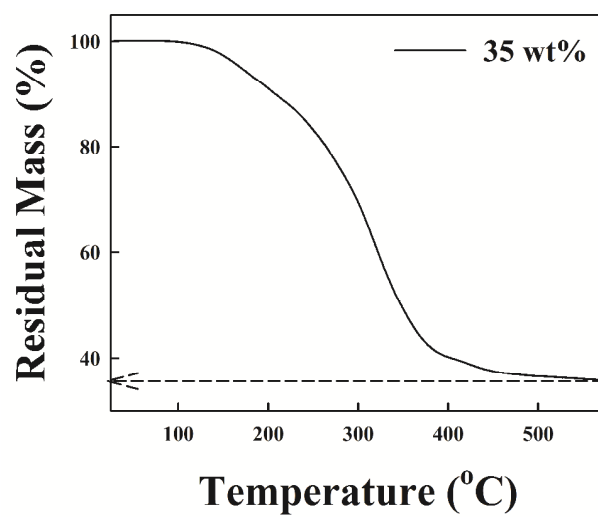
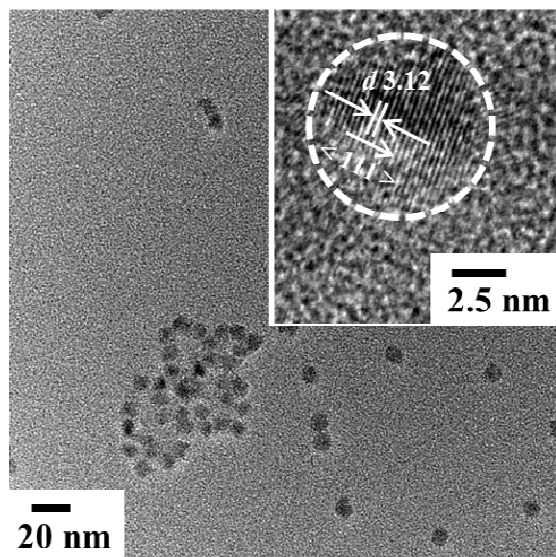


Figure S7. TGA data of (a) 29 and (b) 35 wt% colloidal fluids coated with (dendrimer/OA-Fe₃O₄)₃/dendrimer/(PSS/IL-SH-QD_{green})₄.

(a)



(b)

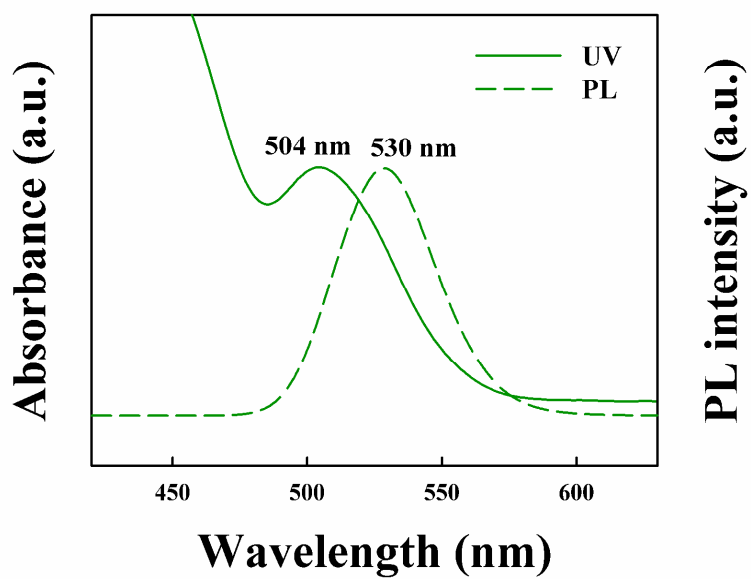
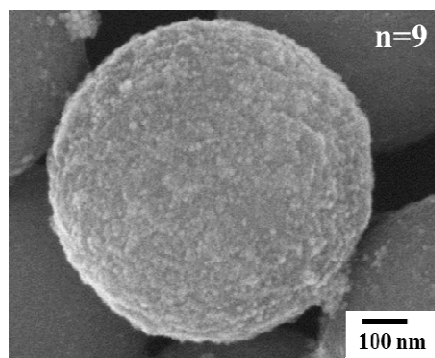


Figure S8. (a) HR-TEM image and (b) UV-vis and photoluminescent spectra of IL-SH CdSe@ZnS with green emissive color.

(a)



(b)

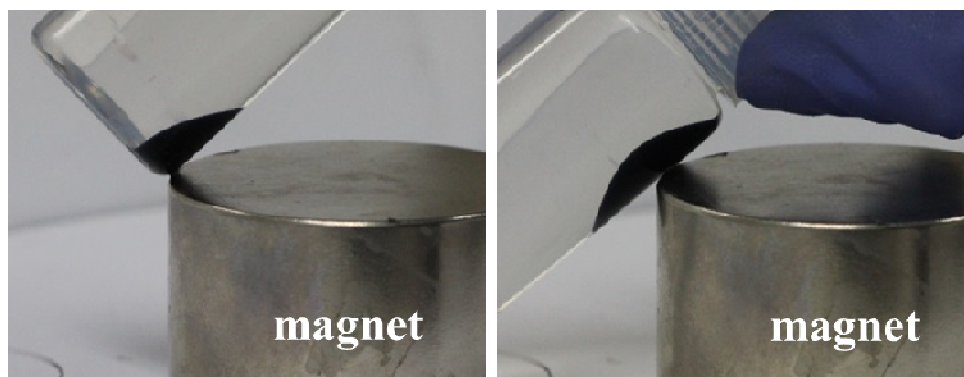


Figure S9. (a) SEM images of SiO_2 colloids coated with [(dendrimer/OA- Fe_3O_4 NP)₃/dendrimer/(PSS/IL-SH-Au NP)_{n=9}]. (b) Photographic images of magnetic NPs and gold NPs multilayer-coated colloidal fluids (22 wt%) when the magnet attracted the fluids.