

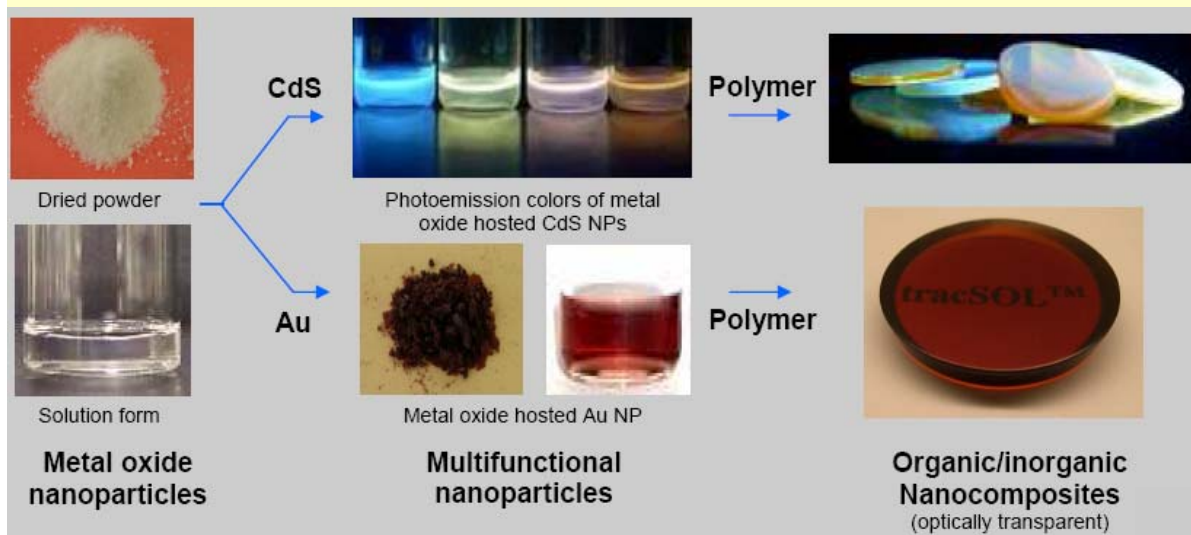
**tracSOL™**

Patented  
Low Cost  
Tractable

Oxide & Phosphate Nanoparticles  
for  
Organic / Inorganic Nanocomposites

Polymers incorporating inorganic nanoparticles with multifunctional capabilities show great promise for a diverse range of applications including flame-retardants, corrosion resistant coating, advanced electronics and photonics, chemical sensors, batteries/fuel cells. Nanoparticles suitably prepared and dispersed in polymers have extraordinarily high surface area to volume ratio which is key in realizing properties such as resistance to combustion and increased structural strength. These benefits have only been realized at great cost as the process for preparing nanoparticles and dispersing them into polymer hosts are very complex and difficult to control.

**tracSOL™ Technology** solves the cost dilemma while preserving the true nanohybrid characteristics.



<b>Features</b>	One-pot synthesis of commercially available precursors to manufacture tractable <b>Metal/Metalloid Oxide and Phosphate Nanoparticles</b>	<b>Applications</b>	Polymer enhancements - flame retardant, corrosion resistant coating, scratch resistance, oxidation/corona resistance
	Good long term stability (> 3 yrs) in both dried & solution forms		
	Can be re-dissolved to form clear solutions even after heat treatment (200° C)		Optics, electronics, magnetics - quantum dot lasers, solar cells, dyes, filters, displays, switches, photo/electrochromic coatings, magnetic fluid
	Can host various metals (e.g., Au, Ag, Pt, Pd, Fe), and/or metal chalcogenide (e.g., CdS, CdSe, CdTe, PbS, ZnS) nanoparticles to form <b>Multifunctional Host-Guest Nanocomposites</b>		
	Easily incorporated into polymers forming optically transparent <b>Organic/Inorganic Nanocomposites</b>		Catalysts, chemical sensors, batteries, fuel cells, gas storage, membranes