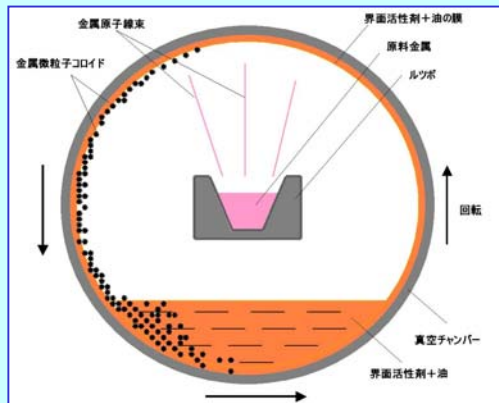


Nano sized Metallic Colloids

Feature

1. Available to supply 11 nano colloids of base metals and noble metals with a particle size under ϕ 10nm
2. Available to choose liquid medium from hydrophobic to hydrophilic or amphiphilic colloid dispersions



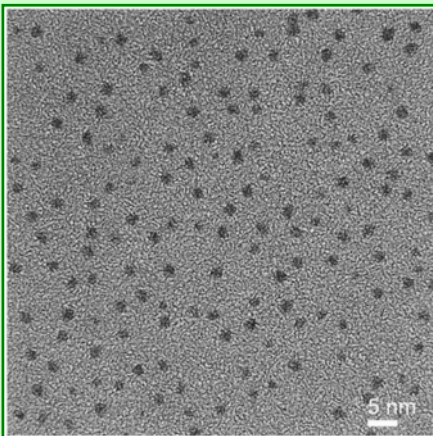
The continuous vacuum deposition on surface-active running oil film (*)



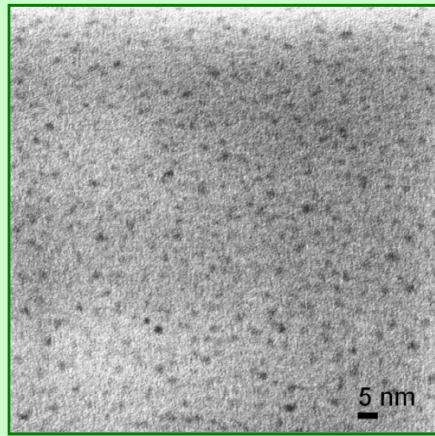
A metal melted in the crucible

Sized single nano metals

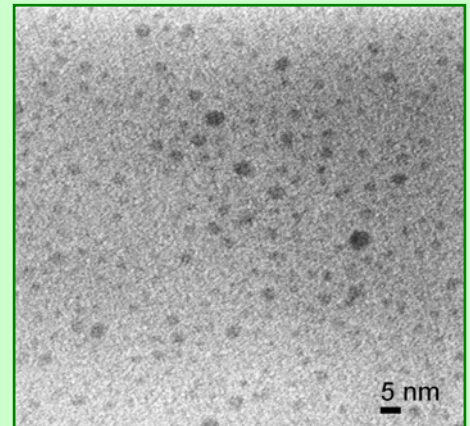
Available metals: Pt Pd Fe Co Ni Cu Au Ag Ge Sn and In



Pt \leq 2nm



Ni \leq 3nm



Fe \leq 5nm

Tailoring

Particle size: \leq 2nm Highest m. p. metal \sim \leq 10nm Lower m. p. metal

Liquid media: Hydrophobic, Hydrophilic and Amphiphilic

Dispersants: Amines, Thiols, Carboxylics and Hydroxyls

Particle shapes available on request for a specific metal

Applications

Electronics :Wiring, Electrodes, QDs, TFT

Catalysts : Exhausted gas purifier, Fuel Cell

Bio materials: Biomarker, Biosensor

(*) This synthetic built-up process for nano metallic colloids is licensed from NIMS, Tsukuba.