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(Supporting Information)

## Sonochemical Synthesis of Well-Dispersed Gold Nanoparticles at Iced Temperature

Chia-Hao Su, Pei-Lin Wu\*, and Chen-Sheng Yeh\*

Department of Chemistry

National Cheng Kung University

Tainan 701, Taiwan, R.O.C.

\*Author to whom correspondence should be addressed. wupl@mail.ncku.edu.tw ;csyeh@mail.ncku.edu.tw

**Table S1.** Average Particle Diameters of Gold Particles Attained on Sonication of  $AuCl_4^-$  in the Presence of Different Citrate Concentrations at room temperature.

The concentration	Irradiation time (min)		
of citrate (mM)	15	30	
1.9	18.9 ± 5.3 nm	18.8 ± 3.2 nm	
2.9	17.3 ± 2.6 nm	18.7 ± 3.2 nm	
3.9	17.6 ± 2.9 nm	17.4 ± 2.7 nm	



Figure S1: The profile of the Au colloidal formation as a function of sonication time under various citrate concentrations at room temperature. The intensity ratios were calculated from the intensities of the Au surface plasmon bands and the position at 700 nm (arbitrarily selected).



Figure S2: Typical TEM images of Au nanoparticles were chosen from 2.9 mM citrate after sonication for (a) 15 min and (b) 30min at room temperature.