Supporting Information

Low-temperature biosynthesis of silver nanoparticles using mango leaf extract: Catalytic effect, antioxidant properties, anticancer activity and application for colorimetric sensing

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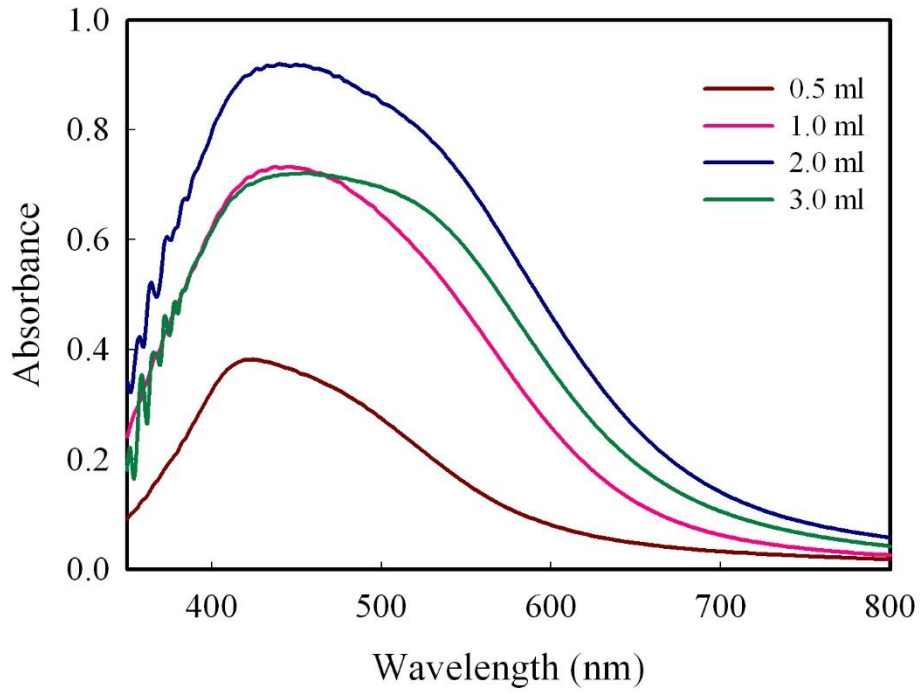

Figure S1. UV–Vis spectra of the silver nanoparticles synthesized at different mango leaf extract content from 0.5 to 3 mL.

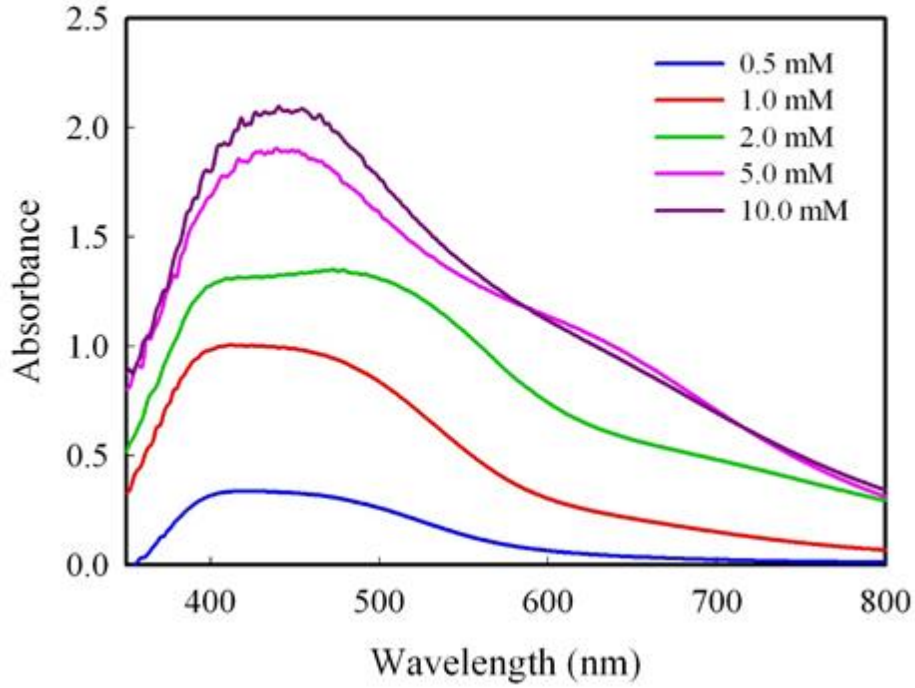

Figure S2. UV–Vis spectra of the silver nanoparticles synthesized at different silver nitrate concentration from 0.5 to 10.0 mM.

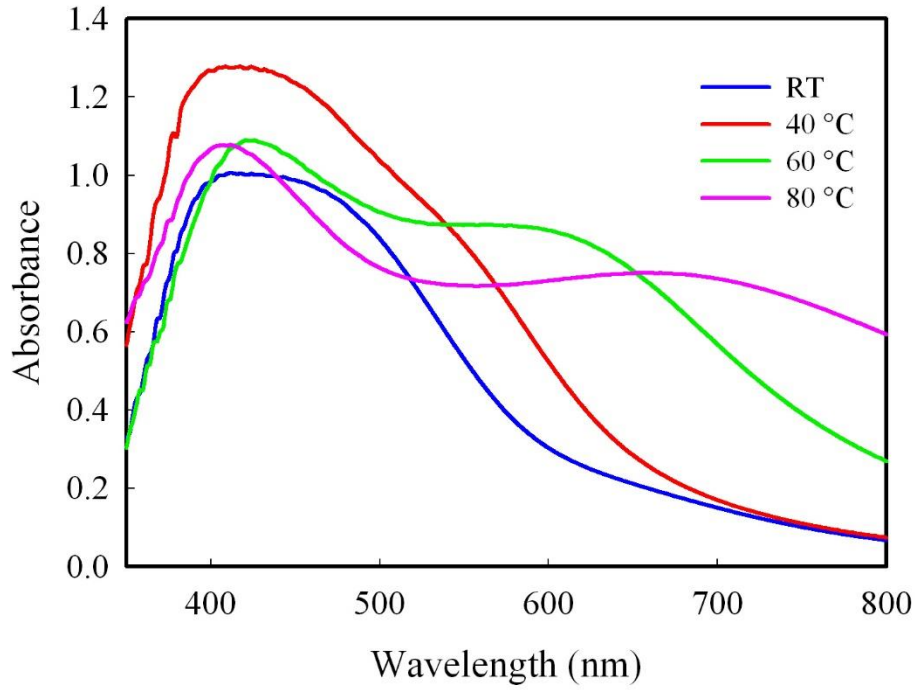

Figure S3. UV–vis spectra of the silver nanoparticles synthesized at different reaction temperature (◦C).

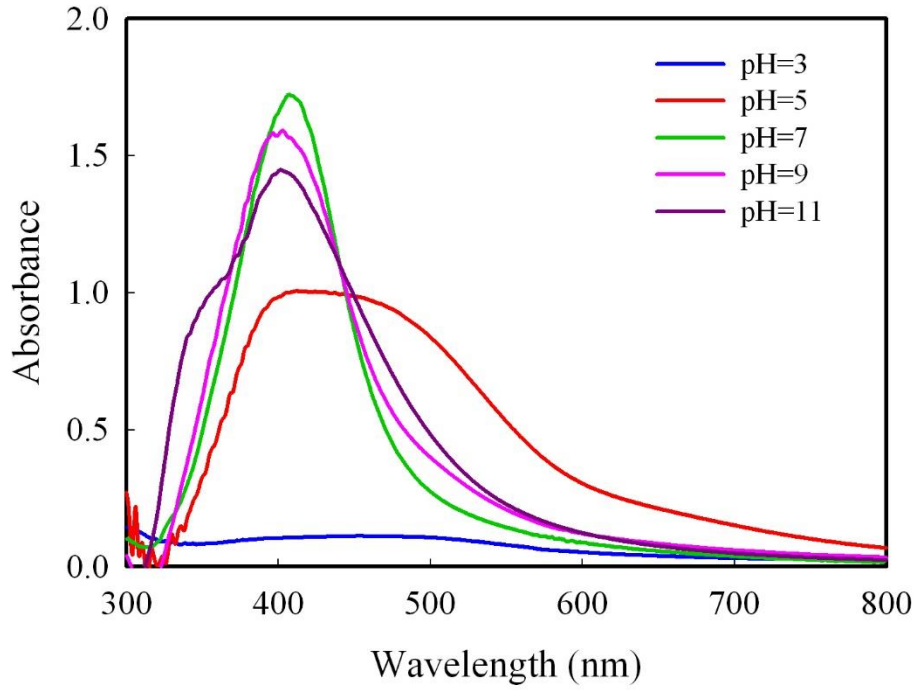

Figure S4. pH dependence UV-Vis. absorption spectra of AgNPs.

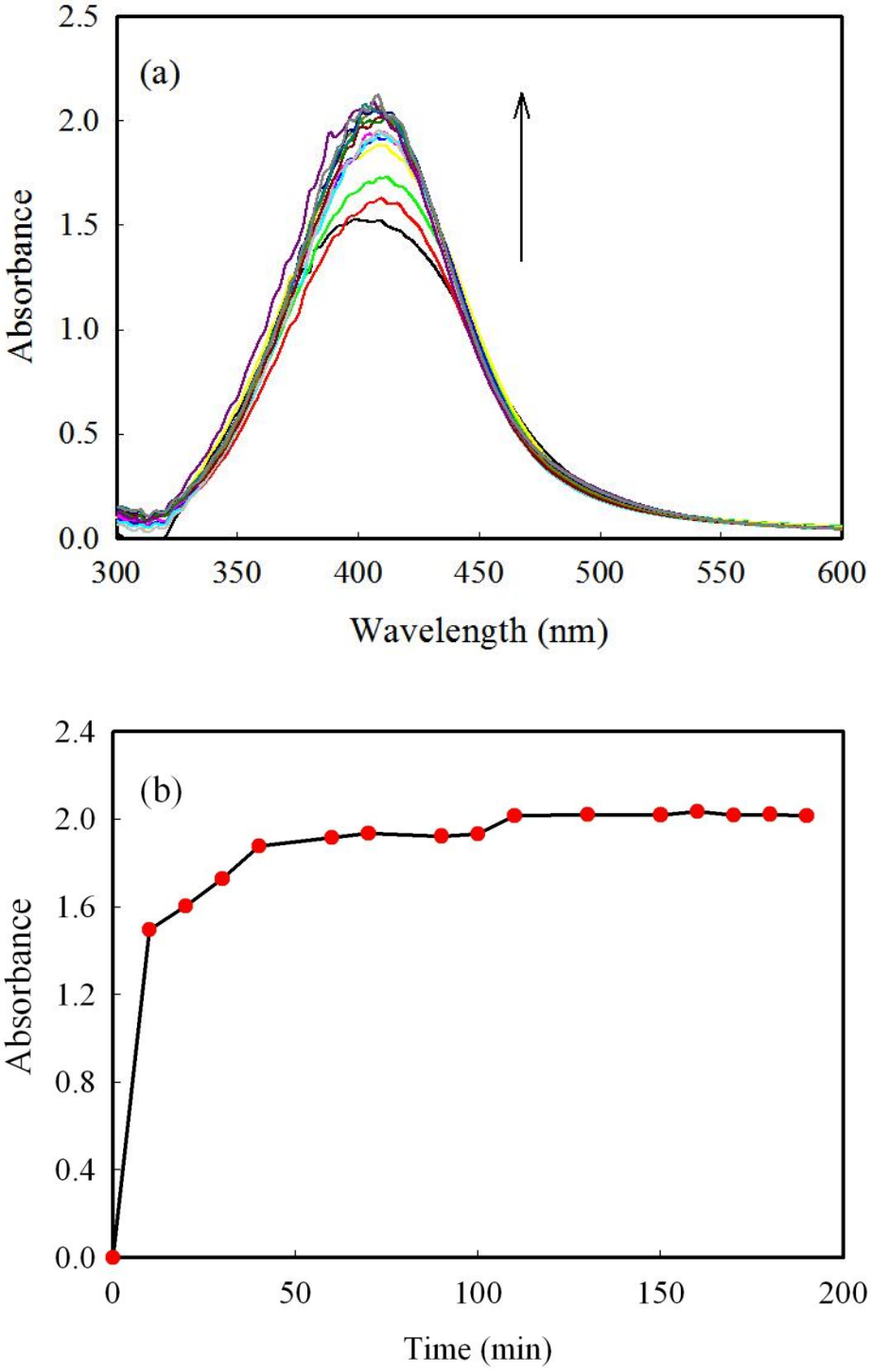

Figure S5. UV–Vis spectra of the AgNPs synthesized at different reaction time **(a)**. Optimization the reaction time for synthesis of AgNPs **(b)**.

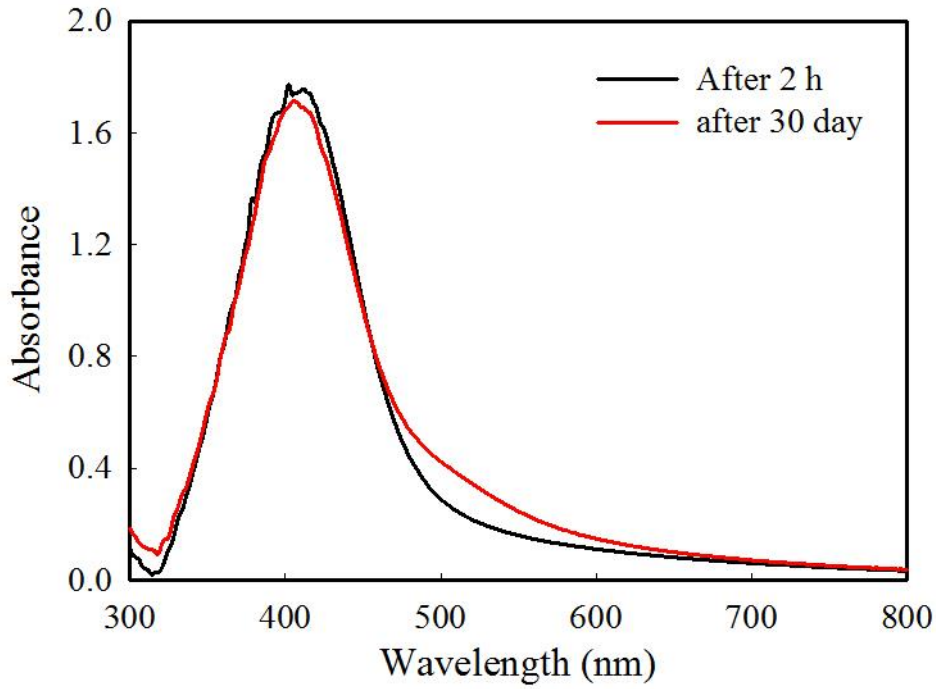

Figure S6. Spectral changes of synthsized AgNPs after one month.

Table S1. Comparison of the biological properties of some previously reported Ag NPs with our work

Utilized Agent (Method)	**Catalytic effect**	**Antioxidant properties**	**Anticancer activities**	**Application as colorimetric sensing**	**Ref. ǂ**
$NaBH_4$ and amine-terminated G5 dendrimers (Chemical)	Not reported	Not reported	Not reported	Sensing Hg^{2+} after using specific stabilizer for Ag NPs	[74]
Citrate and Oligonucleotides	Not reported	Not reported	Not reported	Sensing Hg^{2+} after using specific stabilizer for Ag NPs	[75]
Sodium borohydride and adenine nucleotide (Chemical)	Not reported	Not reported	Not reported	Sensing Hg^{2+} after using specific stabilizer for Ag NPs	[76]
$NaBH_4$ and a Dye-Labeled DNA Scaffold (Chemical)	Not reported	Not reported	Not reported	Sensing Hg^{2+} after using specific stabilizer for Ag NPs	[77]
Sodium borohydride, trisodium citrate, ascorbic acid and chitosan (Chemical)	Not reported	Not reported	Against human non-small lung cancer cells (NCI-H460)	Not reported	[86]
Silver nanoparticle powder coated with 0.2% polyvinyl pyrrolidone (Chemical)	Not reported	Effective on reactive oxygen species (ROS)	Against A549 human lung carcinoma epithelial-like cell	Not reported	[88]
Piper longum fruit (Green biosynthesis)	Not reported	Quantitative determination of total phenol content; diphenyl-picryl-hydrazyl (DPPH) free radical scavenging assay; Superoxide radical scavenging activity; Nitric oxide radical	cancer cell line MCF-7	Not reported	[89]

		scavenging; Hydrogen peroxide scavenging assay			
Iresine herbstii leaf (Green biosynthesis)	Not reported	Determination of total phenolic content (TPC); DPPH free radical scavenging; Reducing power; Total antioxidant capacity;	HeLa cervical cancer cell	Not reported	[90]
Leaf extract of *Morinda pubescens* (Green biosynthesis)	Not reported	DPPH free radical scavenging; Ferric thiocyanate (FTC); Thiobarbituric acid (TBA) method; Superoxide Anion Radical scavenging assay; Hydroxyl radical scavenging assay; Metal chelating assay and Phosphomolybdenum assay	Human Epithelium cells of liver cancer		[91]
Terminalia chebula fruit extract (Green biosynthesis)	Reduction of methylene blue	Not reported	Not reported	Not reported	[92]
Trigonella foenum-graecum seeds (Green biosynthesis)	Reduction of methyl orange, methylene blue and eosin Y	Not reported	Not reported	Not reported	[93]
Mango leaf extract (Green biosynthesis)	Rreduction of methylene blue and rhodamine B	ferric reducing antioxidant power (FRAP)	human colon cancer cell lines HCT116 and SW480	Sensing Hg^{2+} without modification of Ag NPs	This work

ǂ *List of references can be found in the original article*