

Supplementary material

Green synthesis of silver nanoparticles using seed extract of *Alpinia katsumadai* and their antioxidant, cytotoxicity and antibacterial activities

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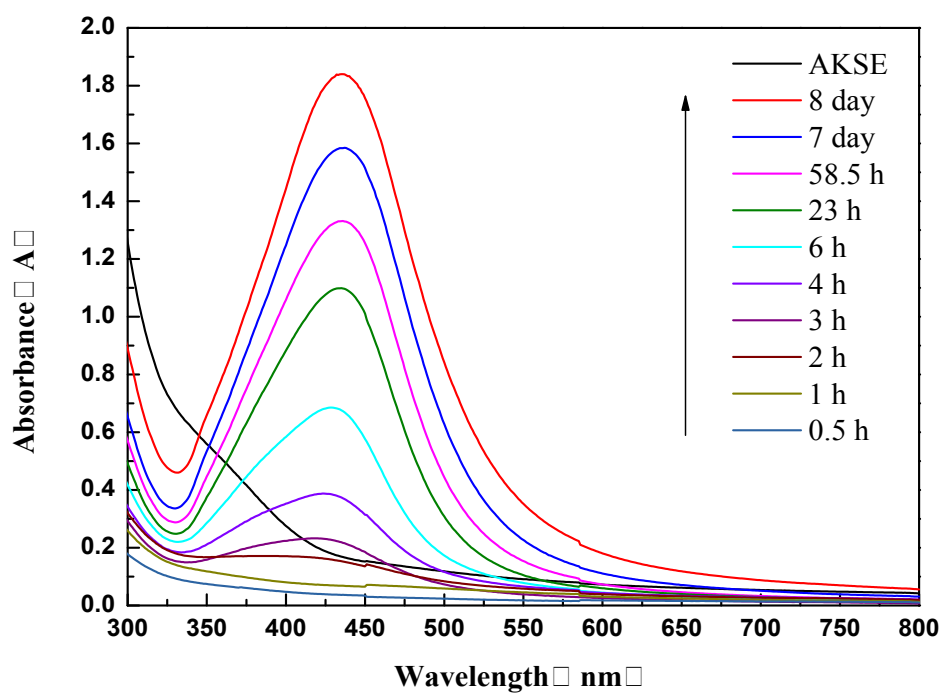


Fig. S1a. UV-Vis absorption spectra of silver nanoparticles recorded at different time at initial pH 4.

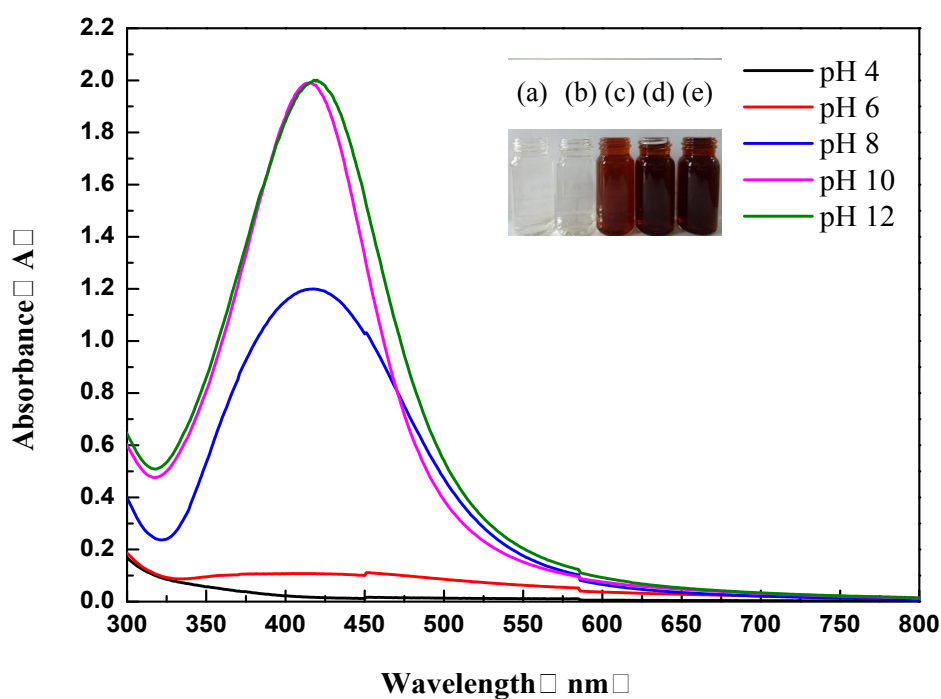


Fig. S1b. Visual observations and UV-Vis absorption spectra of reaction mixture at different pH [(a) pH 4, (b) pH 6, (c) pH 8, (d) pH 10, (e) pH 12] after 1 h of reaction.

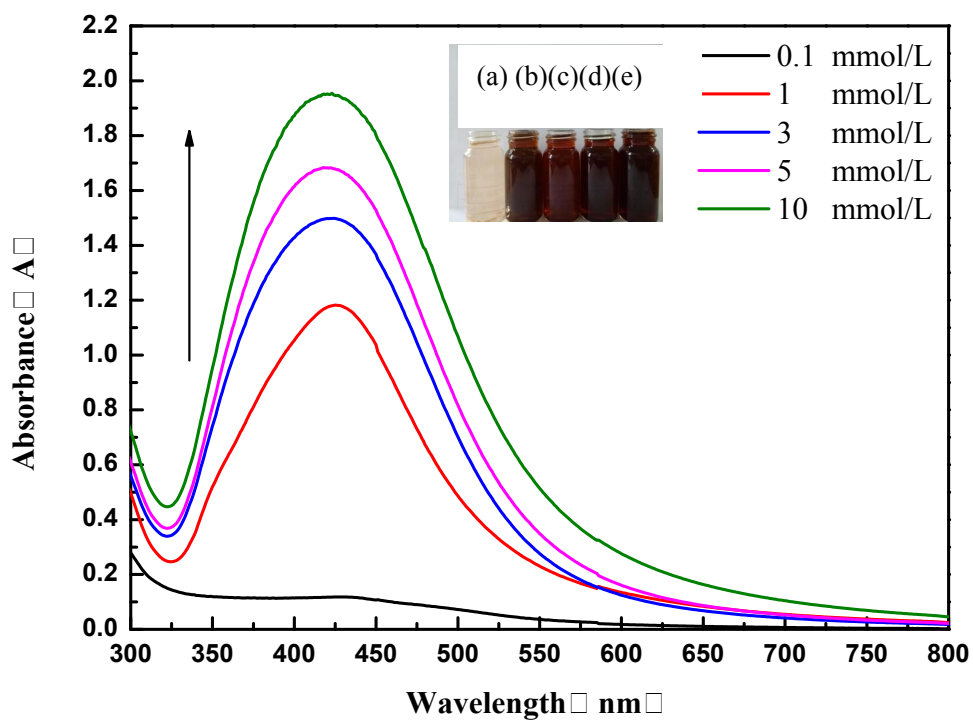


Fig. S1c. Visual observations and UV-Vis absorption spectra of reaction mixture at different concentrations of AgNO_3 (mM) [(a) 0.1 (b) 1.0, (c) 3.0, (d) 5.0, (e) 10] at pH 10 after 1 h of reaction.

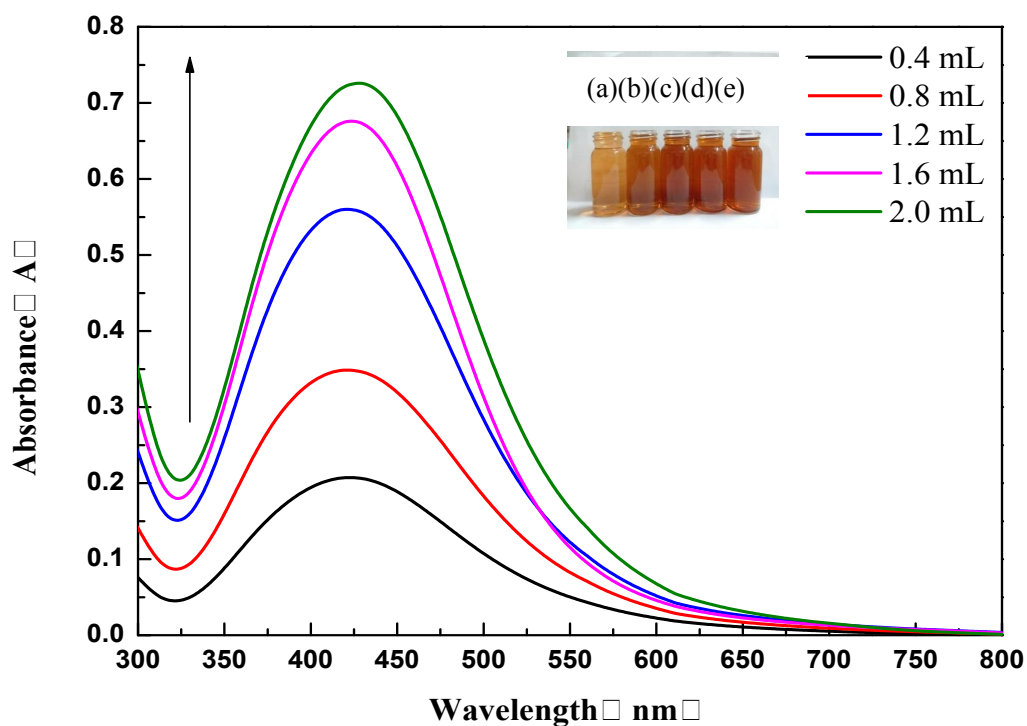


Fig. S1d. Visual observations and UV-Vis absorption spectra of reaction mixtures with varying quantity of AKSE (mL) [(a) 0.4, (b) 0.8, (c) 1.2, (d) 1.6, (e) 2.0] at pH 10 after 1 h of reaction with 10 mM AgNO_3 solutions.

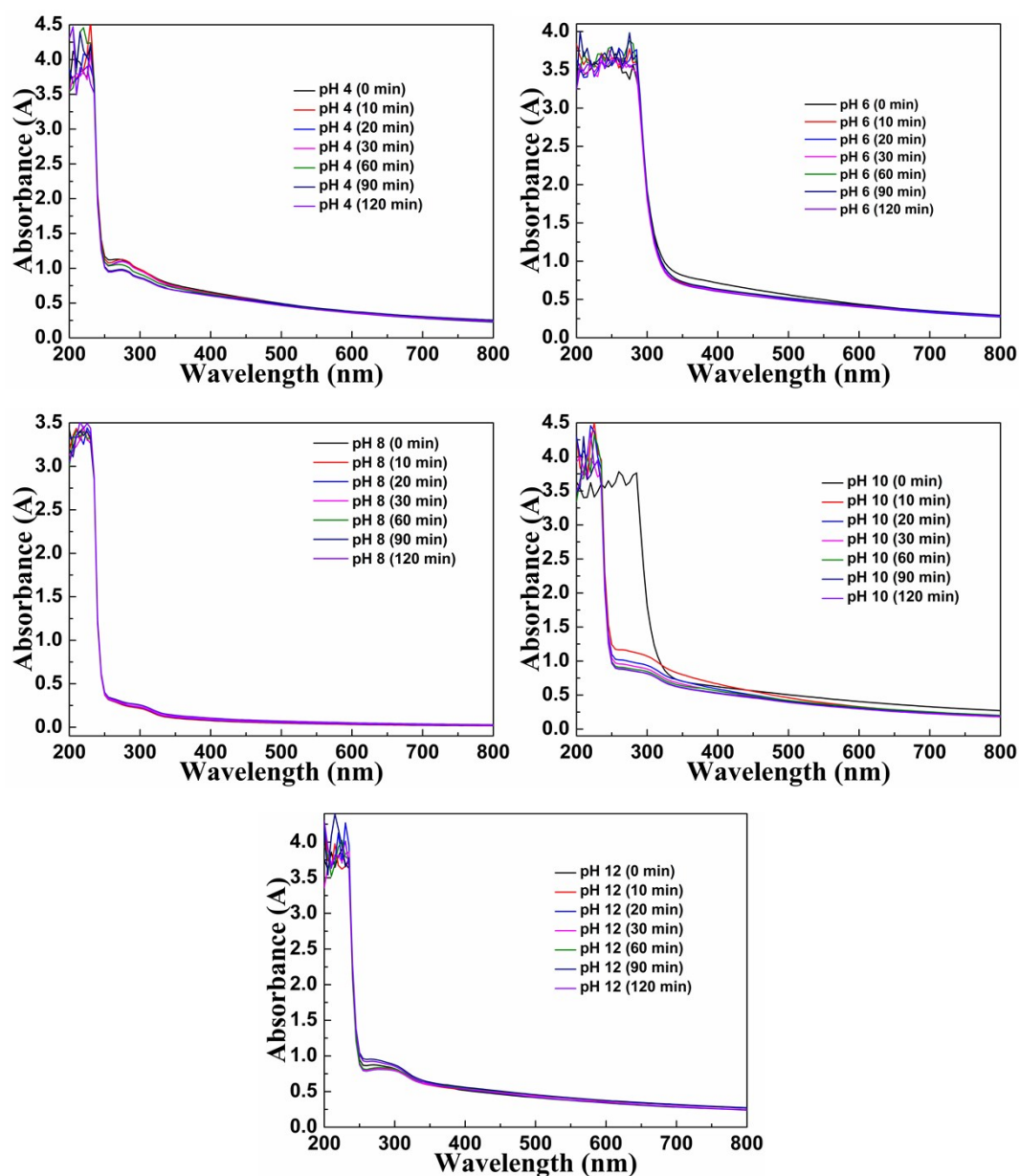


Fig. S2. UV-Vis absorption spectra of 10 mM AgNO_3 solutions at different pH without addition of AKSE in.

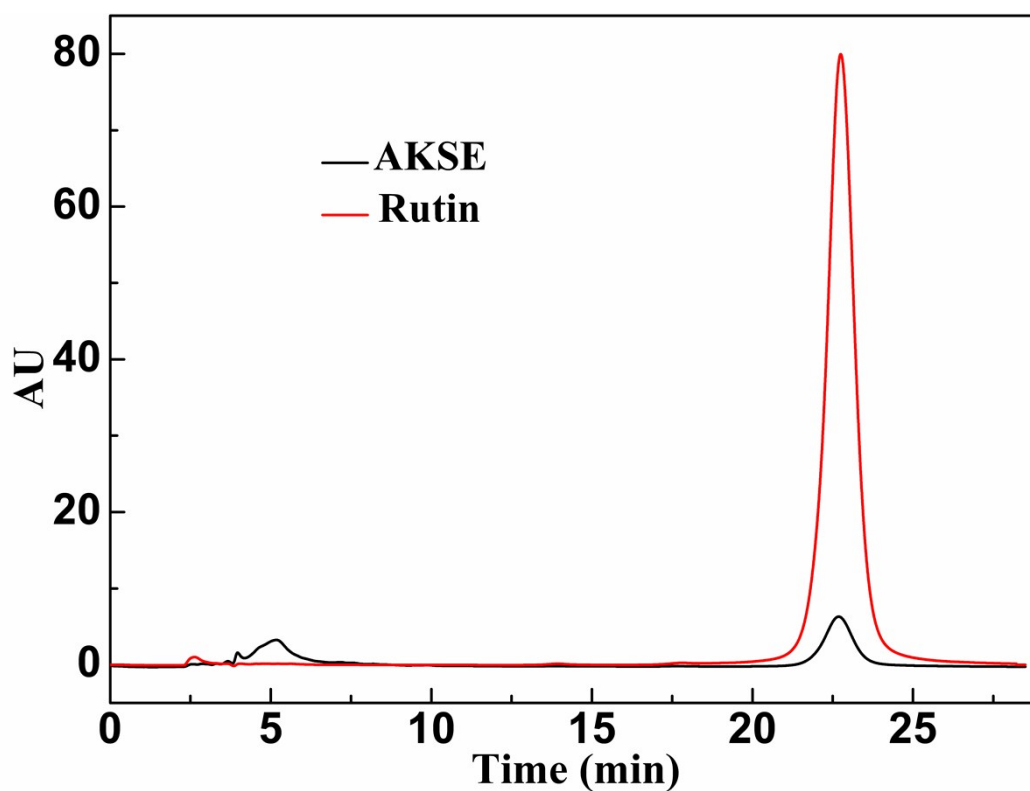


Fig. S3 The HPLC chromatograms of AKES and rutin (loaded on a Shim-park VP-ODS column (5 μm ; 4.6×150 mm) and eluted with 40% MeOH in H_2O + 0.1% CH_3COOH for 30 min at a flow rate 0.5 mL/min).

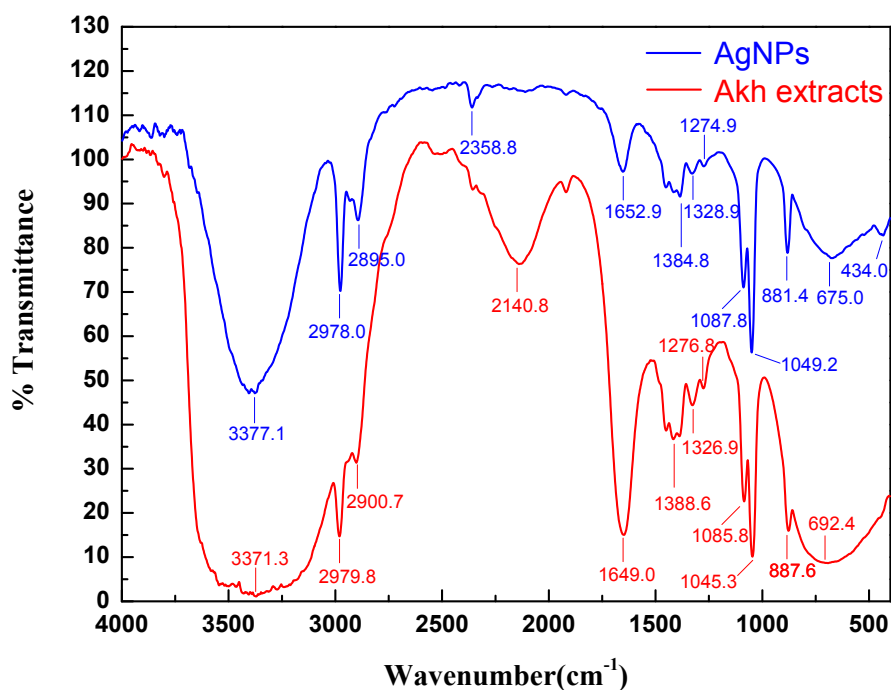


Fig. S4 FT-IR spectra of synthesized AgNPs and AKES.