

Supplementary Materials

AgCu NP Formation by the Ag NP Catalysis of Cu Ions at Room Temperature and Their Antibacterial Efficacy: A Kinetic Study

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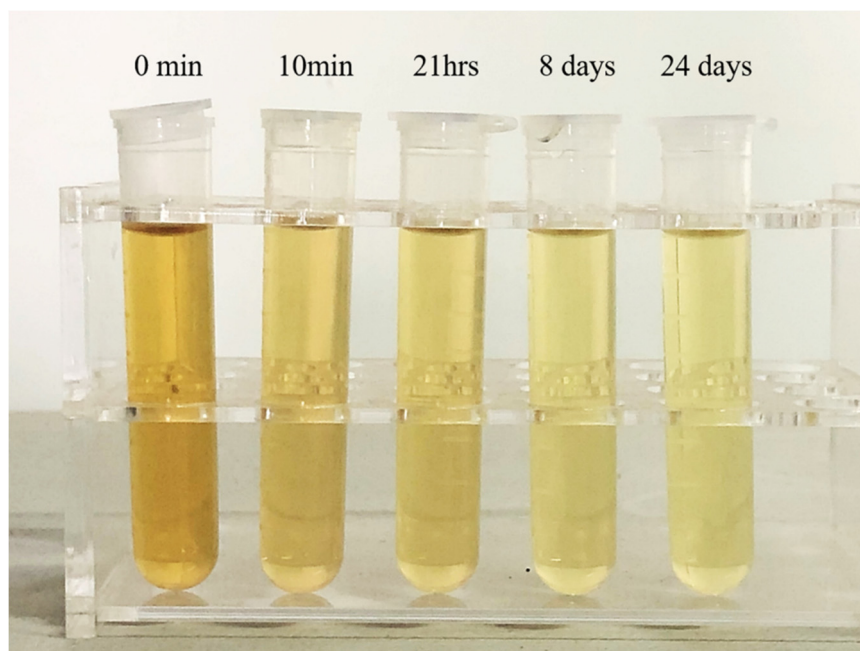


Figure S1. The color change of 10 ppm Ag NPs + 100 ppm Cu²⁺ over time.

Table S1. Zones of Inhibition of samples of Ag NPs+100 ppm Cu²⁺, against two strains at various times (a–e) at room temperature, and at 85 °C (f).

Samples (10 ppm Ag NPs+100 ppm Cu)	Zone of Inhibition (mm) ± SD (Standard Deviation)	
	<i>S. aureus</i>	<i>E. coli</i>
a (0 min, room temperature)	7.90 ± 0.15	8.01 ± 0.12
b (10 min, room temperature)	7.90 ± 0.29	9.92 ± 0.22
c (120 min, room temperature)	9.51 ± 0.28	10.34 ± 0.21
d (24 hrs, room temperature)	10.86 ± 0.37	11.4 ± 0.30
e (38 days, room temperature)	12.28 ± 0.61	14.11 ± 0.07
f (5 hrs, 85°C)	12.32 ± 0.24	14.35 ± 0.20

Table S2. MIC of samples with different time of 10 ppm AgNPs+100 ppm Cu²⁺ against two strains.

Samples (10 ppm Ag NPs+ 100 ppm Cu ²⁺)	MIC(mg/L) against <i>S. aureus</i> (ATCC 6538)		MIC(mg/L) against <i>E. coli</i> (ATCC 8099)	
	Concentration of Ag	Concentration of Cu	C of Ag	C of Cu
a (Ag NPs)	7.8125	--	1.95	--
b (10 min, room temperature)	0.3125	3.125	0.3125	3.125
c (120 min, room temperature)	0.3125	3.125	0.3125	3.125
d (24 hrs, room temperature)	0.3125	3.125	0.15625	1.5625
e (48 hrs, room temperature)	0.3125	3.125	0.15625	1.5625
g (30 days, room temperature)	0.15625	1.5625	0.15625	1.5625
f (5 hrs, 85°C)	0.15625	1.5625	0.15625	1.5625