

Cellulose nanocrystal assisted trace silver nitrate to synthesize green silver nanocomposites with antibacterial activity

Jiang Zhu,^{*a} Tao Tang,^a Chun-Yan Hu,^a Wen-Cai Xiang,^a Zhi-Qiang Chen,^a Liu Luo,^a He-Shan Yang^b and Hong-Pan Liu^b

^a Chongqing Key Laboratory of Environmental Materials & Remediation Technologies, Chongqing University of Arts and Sciences, Yongchuan 402160, China.

^b College of Chemistry and Environmental Engineering, Chongqing University of Arts and Sciences, Yongchuan 402160, China.

Table S1. L9 (3⁴) The range analysis of the intensity of UV absorption peak at 420 nm.

#	CNC(mg/ml)	Ag+ ×10 ² (mM)	Power(w)	Time(s)	UV/vis absorbance at 410 nm
T1	1.5	3.00	320	200	0.80
T2	1.5	1.50	240	250	0.39
T3	1.5	0.75	160	300	0.28
T4	0.5	3.00	240	300	0.56
T5	0.5	1.50	160	200	0.29
T6	0.5	0.75	320	250	0.24
T7	0	3.00	160	250	0.38
T8	0	1.50	320	300	0.14
T9	0	0.75	240	200	0.10
K1	1.47	1.74	1.18	1.19	
K2	1.09	0.82	1.05	1.01	
K3	0.62	0.62	0.95	0.98	
k1	0.49	0.58	0.39	0.40	
k2	0.36	0.27	0.35	0.34	
k3	0.21	0.21	0.32	0.33	
Range	0.28	0.37	0.07	0.07	

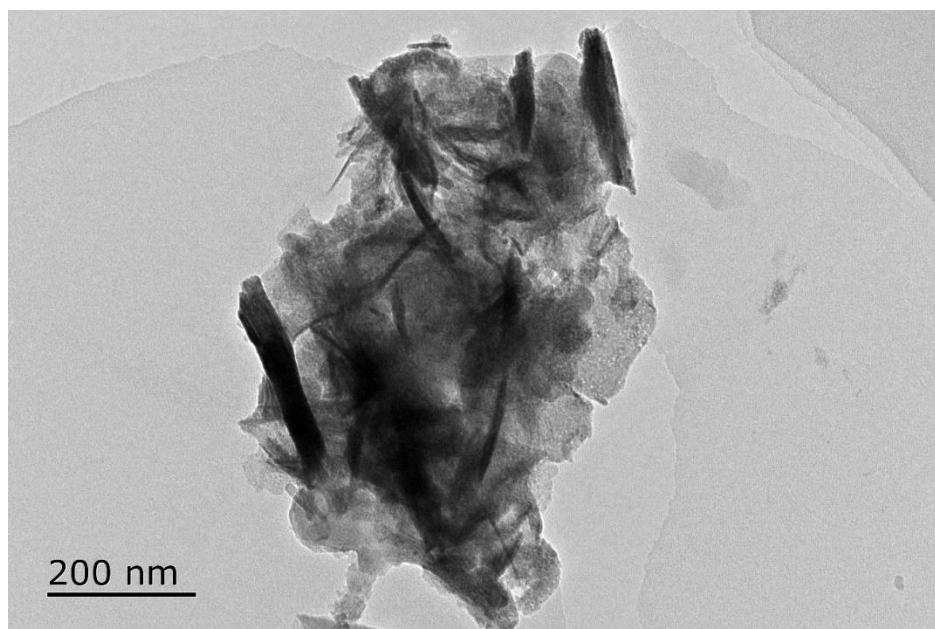


Figure S1. TEM image of pure CNC.

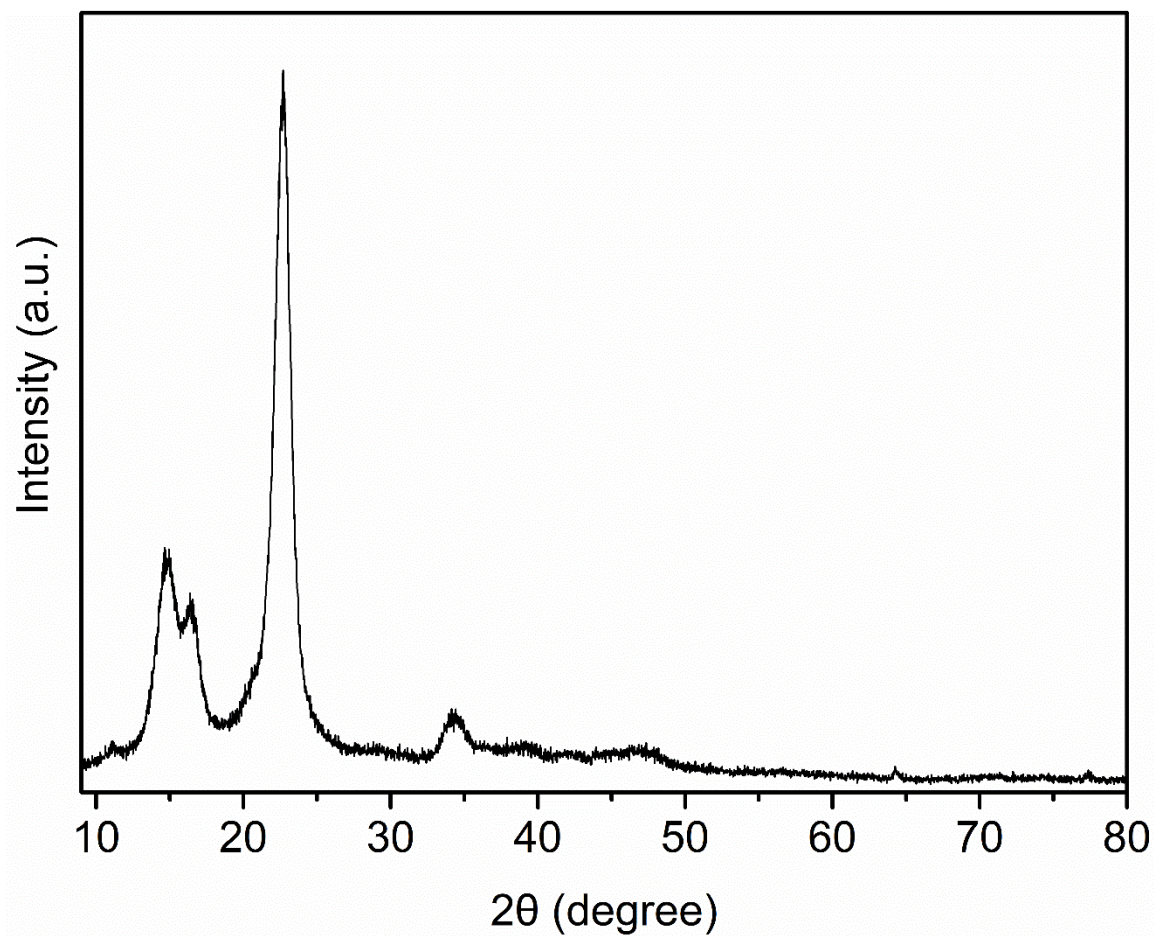


Figure S2. Wide-angle XRD patterns of the pure CNC.

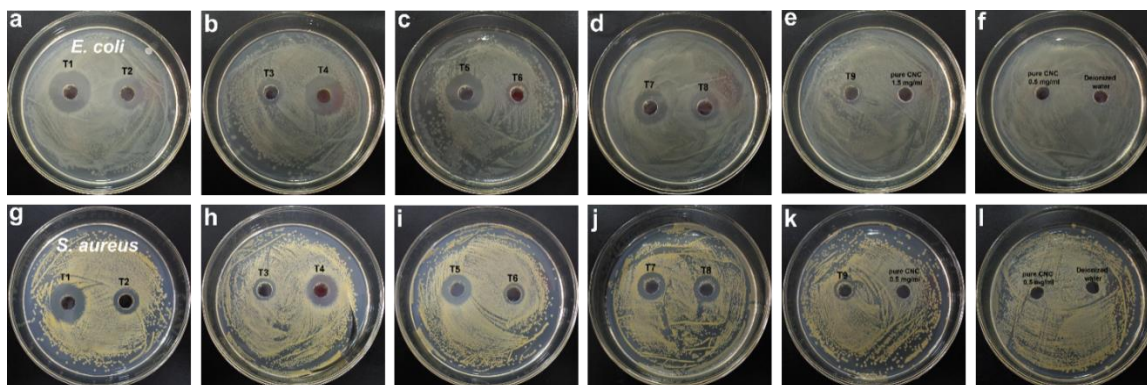


Figure S3. The photos of the antibacterial activity of AgNPs@CNC orthogonal array samples (a-l).