

Table S1 Semi-quantitative analysis of bacterial morphological parameters (length and projected area) for *E. coli* and *S. aureus* under different treatment groups based on SEM images.

		blank	CMC	CMC/Cu	CMC/PDA@Cu
Length(nm)	<i>E. coli</i>	804. 99	759. 94	696. 24	620. 99
	<i>S.aureus</i>	197. 60	169. 30	147. 82	131. 14
Area(nm ²)	<i>E. coli</i>	148131. 25	143626. 29	139071. 28	137026. 23
	<i>S.aureus</i>	56239. 31	49970. 78	39591. 36	38696. 28

CMC/PDA@Cu		Light (-)	Light (+)
Length(nm)	<i>E. coli</i>	569.65	472.55
	<i>S.aureus</i>	137.99	126.69
Area(nm ²)	<i>E. coli</i>	113886.38	72608.84
	<i>S.aureus</i>	32334.39	29805.55