Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

Table SI 1. Bacterial proliferation calculated from bacteria's numbers measured on zinc phosphates obtained before thermal treatment at 2 h and 3 h of incubation, and Ag^{+} and Zn^{2+} ions contents in M63G medium after 3 h of exposition of solids to medium at 30 °C.

Sample	% bacterial proliferation (2 h to 3 h)	$[Ag^{+}]$ M	$[Zn^{2+}]$ M
SW	+87	-	-
ZnPO/CN	+57	-	$(11.9\pm0.1)\times10^{-5}$
ZnPO/CN/Ag	+22	$< 4.8\times10^{-6}$	$(10.6\pm0.1)\times10^{-5}$

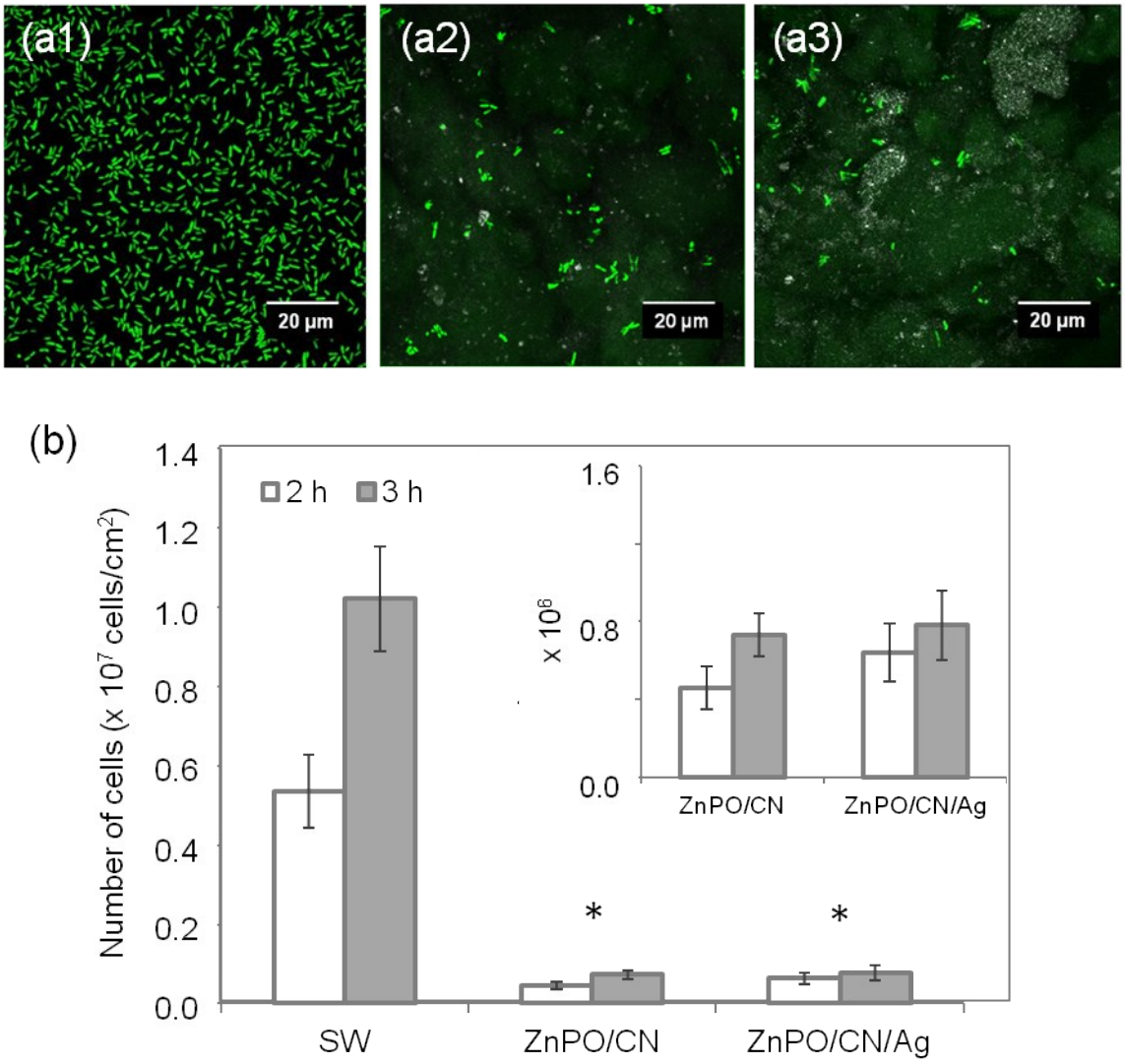

Figure SI 1. (a) 2D z-projection of confocal 3D images of *E.coli* K12 bacteria adherent on (a1) SW (a2) ZnPO/CN and (a3) ZnPO/CN/Ag materials after 3 h of incubation. (b) Number of bacteria on SW control, ZnPO/CN and ZnPO/CN/Ag materials after 2 h and 3 h of incubation (average of 6 experimental replicates). * symbol indicates significant differences compared to SW (p-value < 0.05). Significant differences compared to ZnPO/CN have also been tested (p-value < 0.05). Inset is a zoom of histogram showing number of bacteria on ZnPO/CN and ZnPO/CN/Ag materials. Absence of any Ag-related bactericidal effect with ZnPO/CN/Ag material is attributed to both the low release and the low availability of Ag ions: (i) Ag ions released in bacterial culture medium from untreated material (ZnPO/CN/Ag) (undetectable i.e., < 4.8×10^{-6}M) are less or just reaching the minimal concentration for biocidal activity on *E. coli* (10^{-6}M); (ii) Interactions between released Ag ions and culture medium are known to reduce availability of Ag ions for antibacterial activity.