Electronic Supplementary Information:

 Carbon-Nanotube Sponges Enabling High-Efficiency and Reliable Cell Inactivation by Low-Voltage Electroporation

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Figure S1. Photographs of (a) the SACNT array rolled into a unidirectional multilayer film with 200 layers, (b) the CNT sponge immersed in the piranha solution for 3 days and (c) the prepared CNT sponge. (d) Image of the experiment setup showing an EDC device during operation. Bacteria in water sample pumped by pump flowed through an EDC device and were inactivated by electroporation-disinfection. (e) Image of an opened EDC showing a CNT sponge electrode attached with a conducting wire.
Figure S2. Investigation of the adsorption phenomenon of CNT sponge. Without applied voltage, bacteria solution was flowed through the CNT sponge for 60 min at a fixed contact time (5 s). (a) The bacteria concentrations of inlet and effluent. (b and c) Scanning electron microscope (SEM) images shown no cell attachment on the CNT sponge after the bacteria solution flowing through.
Figure S3. (a) Electric currents and concentrations of total chlorine in effluent varied with applied voltage at a contact time of 5 s. (b) Linear sweep voltammetry test of CNT sponge showing the exactly potential when electrolysis occurred was 3.0 V. A three electrode system was employed in the solution of 9 g L\(^{-1}\) NaCl. The CNT sponges were made as the working electrode and counter electrode and saturated calomel electrode (SCE) was used as the reference electrode. The linear sweep voltammetry test shown that the exactly potential when electrolysis occurred was 3.0 V.