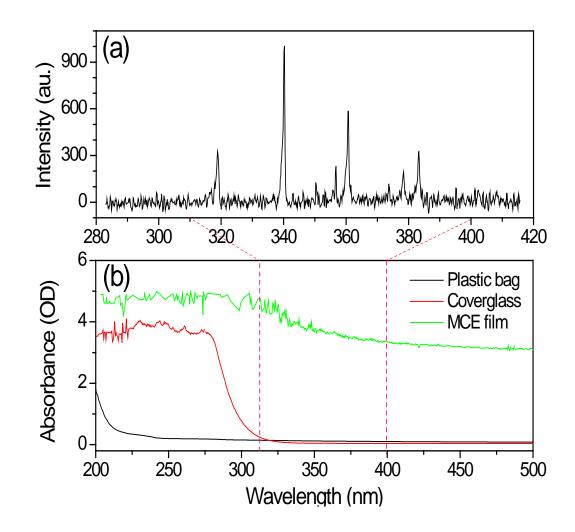
2	Characterization of cold atmospheric plasma inactivation of individual
3	bacterial spores using Raman spectroscopy and phase contrast microscopy
4	
5	Shiwei Wang ^{1,2} , Christopher J. Doona ³ , Peter Setlow ⁴ and Yong-qing Li ^{1,*}
6	¹ Department of Physics, East Carolina University, Greenville, North Carolina, USA, 27858-4353,
7	² State Key Laboratory of Microbial Resources, Institute of Microbiology, Chinese Academy of
8	Sciences, Beijing, China, 100101, ³ U.S. Army-Natick Soldier RD&E Center, Natick,
9	Massachusetts, USA and ⁴ Department of Molecular Biology and Biophysics, UConn Health,
10	Farmington, Connecticut, USA, 06030-3305.
11	Key words: Bacillus; spores; cold atmospheric plasma decontamination; germination
12	Running title: Effects of plasma on bacterial spore properties
13	*Corresponding author
14	Address: Department of Physics, East Carolina University, Greenville, North Carolina 27858-
15	4353
16	Phone: 252-328-1858
17	Fax: 252-328-6314
18	Email: <u>liy@ecu.edu</u>

20 FIG S1

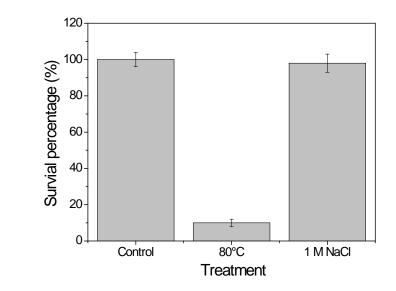


21

FIG S1 (a) Optical emission spectrum of CAP discharge (note UV-A radiation emitted). (b) Absorbance spectra of different materials placed over spore samples. The plastic bag and coverglass are nearly transparent to UV-A light from 315-400 nm, and the MCE filter blocks UV-A light.

26

27 FIG S2



28

FIG S2 Changes in spore resistance properies after CAP treatment. After a 1 min CAP treatment of *B. subtilis* spores, spores were spread on LB medium plates without (Control) or with 1 M NaCl, and were heated at 80°C for 30 min and then spread on LB medium plates without 1 M NaCl.

33

34