

## Supporting Information

### Propidium Monoazide Pretreatment on a 3D-printed Microfluidic Device for Efficient PCR Determination of ‘Live versus Dead’ Microbial Cells

Yanzhe Zhu<sup>1</sup>, Xiao Huang<sup>1</sup>, Xing Xie<sup>1,2</sup>, Janina Bahnemann<sup>1,3</sup>, Xingyu Lin<sup>1</sup>, Xunyi Wu<sup>1</sup>, Siwen Wang<sup>1</sup>, and Michael R. Hoffmann<sup>1\*</sup>

1. Linde+Robinson Laboratories, California Institute of Technology, Pasadena, California 9112, E-mail: mrh@caltech.edu; Tel: +1-626-395-4391
2. School of Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta, Georgia 30332, E-mail: xing.xie@ce.gatech.edu; Tel: +1-404-894-9723
3. Institute of Technical Chemistry, Leibniz University, Hannover, Germany

### **PCR conditions, primers and probe**

The PCR thermocycling involves 3 minutes of initialization at 95 °C, and 42 cycles of denaturation 95 °c for 15 seconds followed by annealing/extension at 55 °C for 30 seconds. The primers and probe are targeting at the universal 16s rRNA gene. The sequences are listed below.<sup>1</sup>

	Sequence
Forward primer	5'CGGTGAATACGTTCYCGG3' where Y is either C or T
Reverse primer	5'GGWTACCTTGTACGACTT3', where W is either A or T
TaqMan probe	FAM-5'CTTGTACACACCGCCCCGTC3'

### **Supplementary Table**

**Table S1** Water quality parameters of the pond water tested

pH	7.75	
Electrical Conductivity	925.9	µS/cm
UV254	0.003	
COD	74.7	mg/L

### **Reference**

- 1 M. T. Suzuki, L. T. Taylor and E. F. DeLong, *Appl. Environ. Microbiol.*, 2000, **66**, 4605–4614.