

Supporting Information

Efficient capture and photothermal ablation of planktonic bacteria and biofilms using reduced graphene oxide-polyethyleneimine flexible nanoheaters

Milica Budimir,^{1,2,3} Roxana Jijie,¹ Ran Ye,⁴ Alexandre Barras,¹ Sorin Melinte,⁴
Alejandro Silhanek,⁵ Zoran Markovic,² Sabine Szunerits¹ and Rabah Boukherroub^{1*}

¹*Univ. Lille, CNRS, Centrale Lille, ISEN, Univ. Valenciennes, UMR 8520 - IEMN, F-59000 Lille, France*

²*"Vinca" Institute of Nuclear Sciences, Mike Petrovica Alasa 12-14, 11001 Vinca, Belgrade, Serbia*

³*School of Electrical Engineering, Bulevar Kralja Aleksandra 73, Belgrade, Serbia*

⁴*Institute of Information and Communication Technologies, Electronics and Applied Mathematics, Université catholique de Louvain, 1348 Louvain-la-Neuve, Belgium*

⁵*Experimental Physics of Nanostructured Materials, Q-MAT, CESAM, Université de Liège, B-4000 Sart Tilman, Belgium*

*To whom correspondence should be addressed; rabah.boukherroub@univ-lille1.fr; Tel: +333 62 53 17 24; Fax: +333 62 53 17 01

Table S1. Capture efficiency at 10^3 cfu mL⁻¹ bacteria concentration

Sample	Incubation time	<i>E. coli</i> - Percentage of bacteria in the solution	Capture efficiency of <i>E. coli</i>	<i>S. aureus</i> - Percentage of bacteria in the solution	Capture efficiency of <i>S. aureus</i>
Kapton	1 h	100 %	0	100 %	0
K/Au NH/rGO	1 h	95 %	5 %	98 %	2 %
K/Au NH/rGO-PEI	1 h	58 %	42 %	53 %	47 %

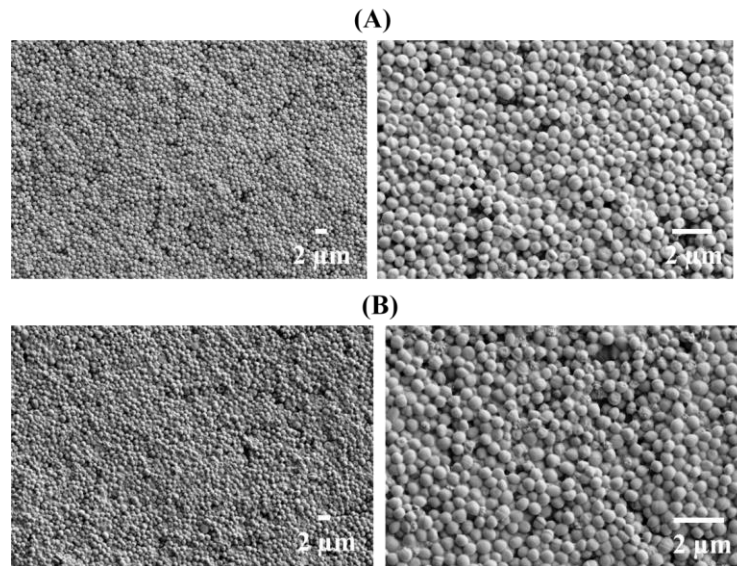


Figure S1: SEM images of *S. epidermidis* biofilm before (A) and after laser irradiation at 980 nm for 10 min (B), following 30 h of incubation on the glass slide.