Supplemental Information

Multiscale Study of Bacterial Proliferation Modes within Novel E. coli@Si(HIPE) Hybrid Macrocellular Living Foams

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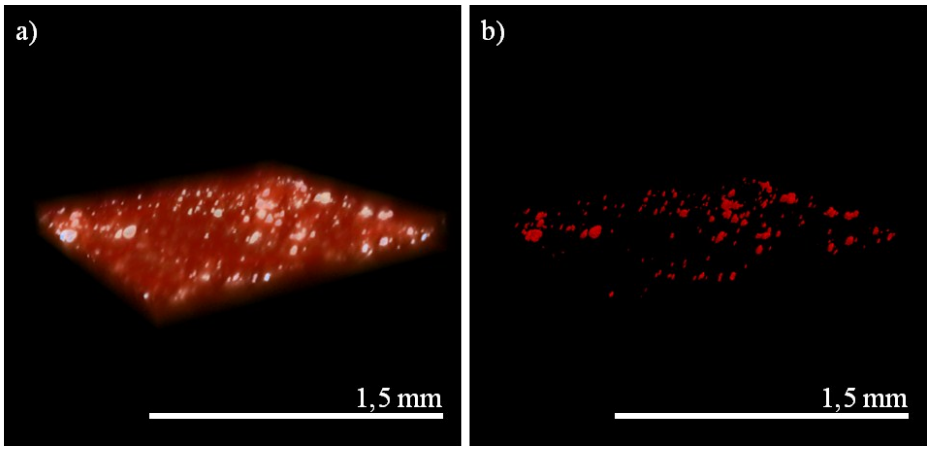

Figure 1S. Tridimensional reconstructions from confocal microscopy observations of a thin Si(HIPE) slice containing bacteria. a) about 200 slices were combined to obtain a representation of the bacteria's positions in the material. The red halo is due to the silica diffusing the light. b) same data treated with a threshold function in order to only conserve the high fluorescence intensity areas which correspond to bacteria.

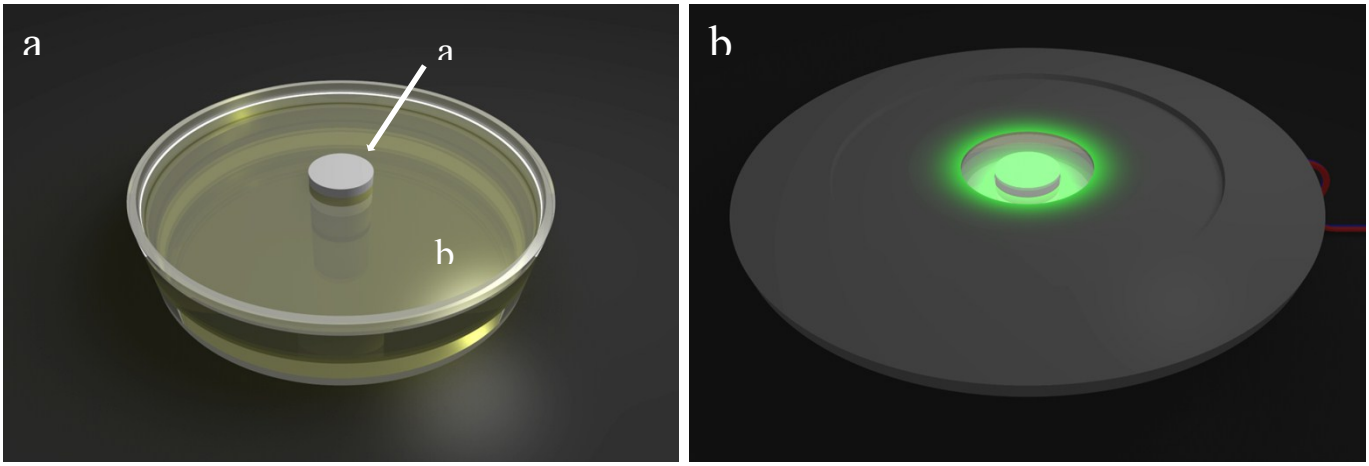

Figure 2S. Schematical representation of the manipulation. a) Si(HIPE) (a) in a petri dish containing the growth medium (b) b) experiment covered by a silica blade and a temperature regulation device, illuminated and observed from above.

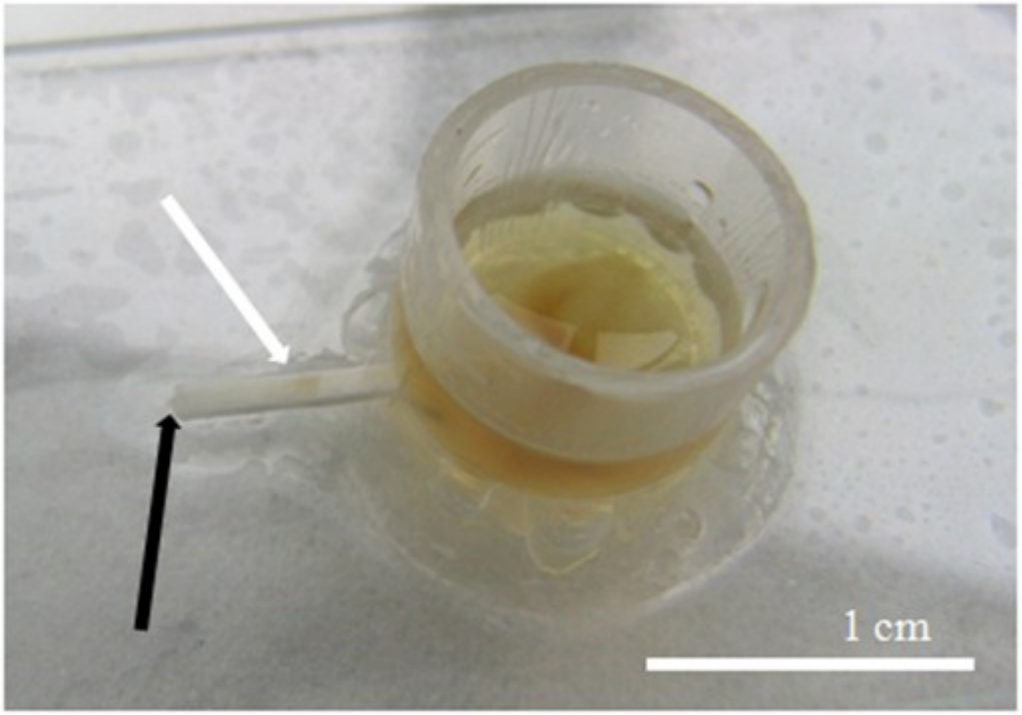

Figure 3S. Si-HIPE rod (white arrow) infiltrated with a LB growth media. One of the extremities is immerged into a reservoir containing an LB growth solution (right). The bacteria are deposited on the left side of the Si(HIPE) rods (black arrow).

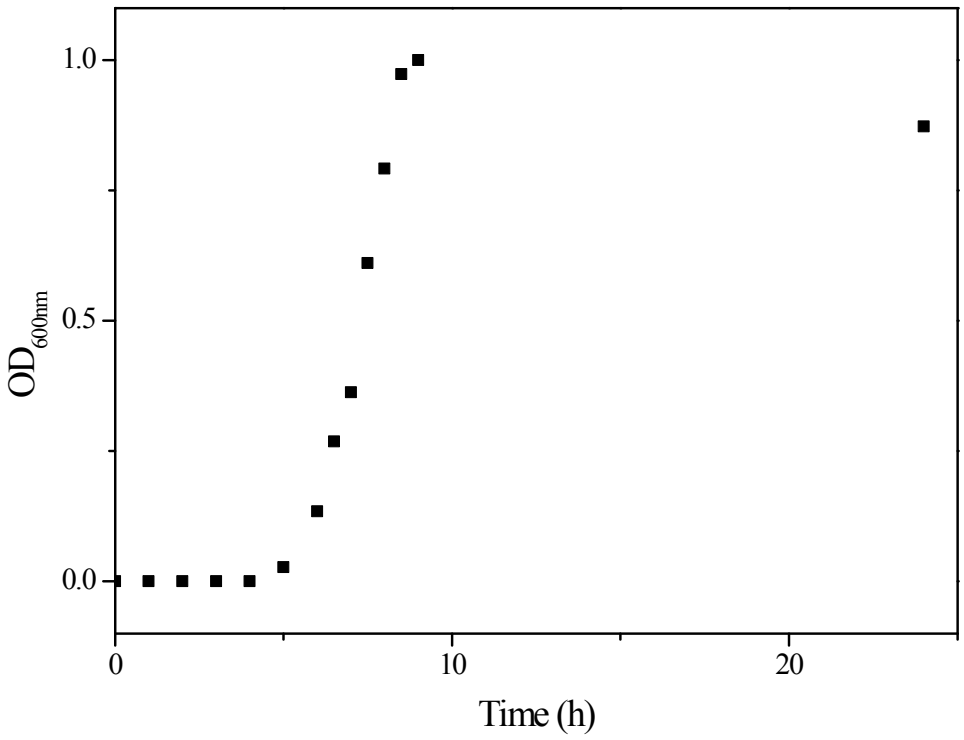

Figure 4S. Typical growth curve of a classical E.Coli culture in a LB medium, monitored by optical density.