Supporting information to accompany

# Highly efficient antibacterial surfaces based on bacterial/cell size selective microporous supports

Nelson Vargas-Alfredo,[1] Ana Santos-Coquillat,[2] Enrique Martínez-Campos,[2] Ane Dorronsoro,[3] Aitziber L. Cortajarena,[3,4] Adolfo del Campo[5] and Juan Rodríguez-Hernández[1]*

1. Instituto de Ciencia y Tecnología de Polímeros (ICTP), Consejo Superior de Investigaciones Científicas (CSIC), C/Juan de la Cierva 3, 28006 Madrid, Spain. Email: jrodriguez@ictp.csic.es .

2. Tissue Engineering Group; Instituto de Estudios Biofuncionales, Universidad Complutense de Madrid.

3. CIC biomaGUNE, Parque Tecnológico de San Sebastián, Paseo Miramón 182, 20014 Donostia-San Sebastián, Spain

4. Ikerbasque, Basque Foundation for Science, Mª Díaz de Haro 3, 48013 Bilbao, Spain

5. Instituto de Cerámica y Vidrio (ICV-CSIC), C/Kelsen 5, 28049-Madrid, Spain.

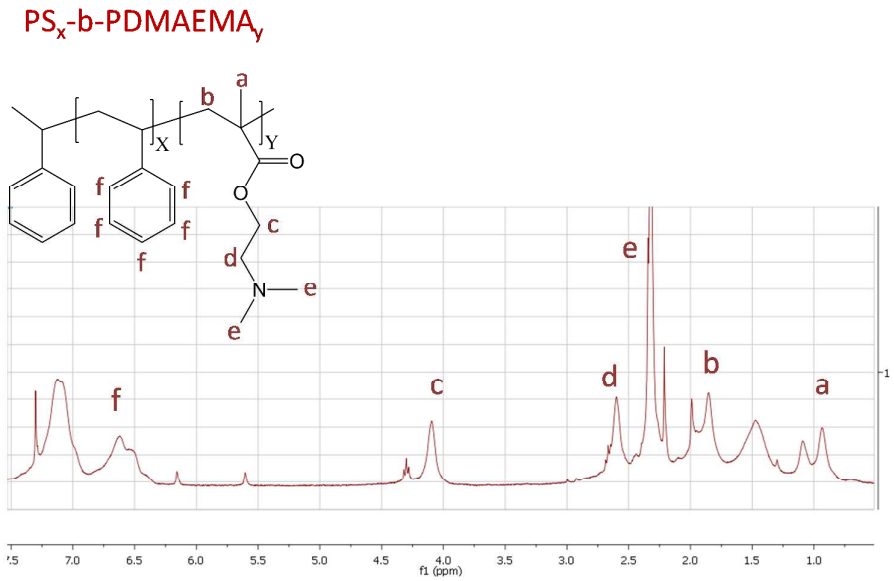


Figure S1. $^{1}$H-NMR spectra of the $PS_{43}$-*b*-$PDMAEMA_{16}$ diblock copolymer

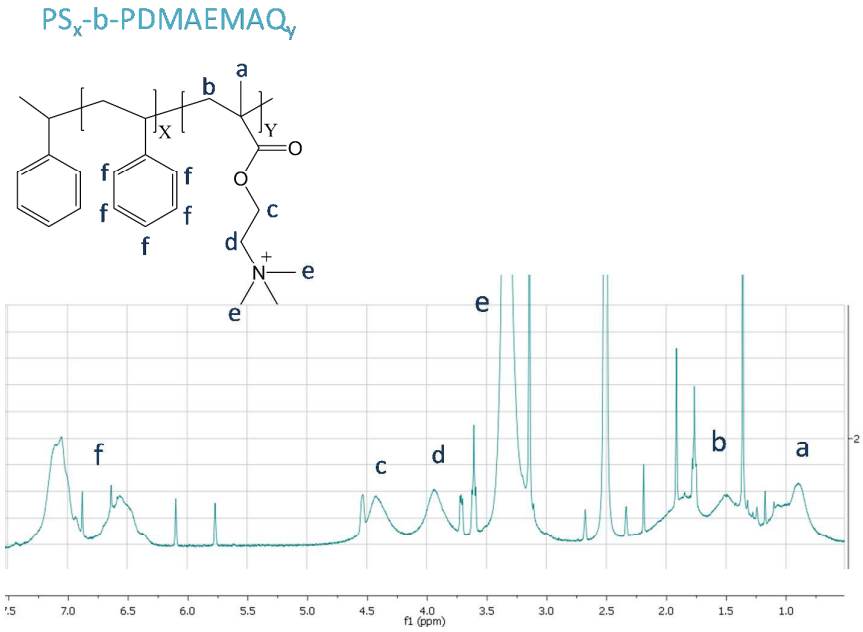


**Figure S2.** $^{1}$H-NMR spectra of the $PS_{43}$-*b*-$PDMAEMAQ_{16}$ diblock copolymer

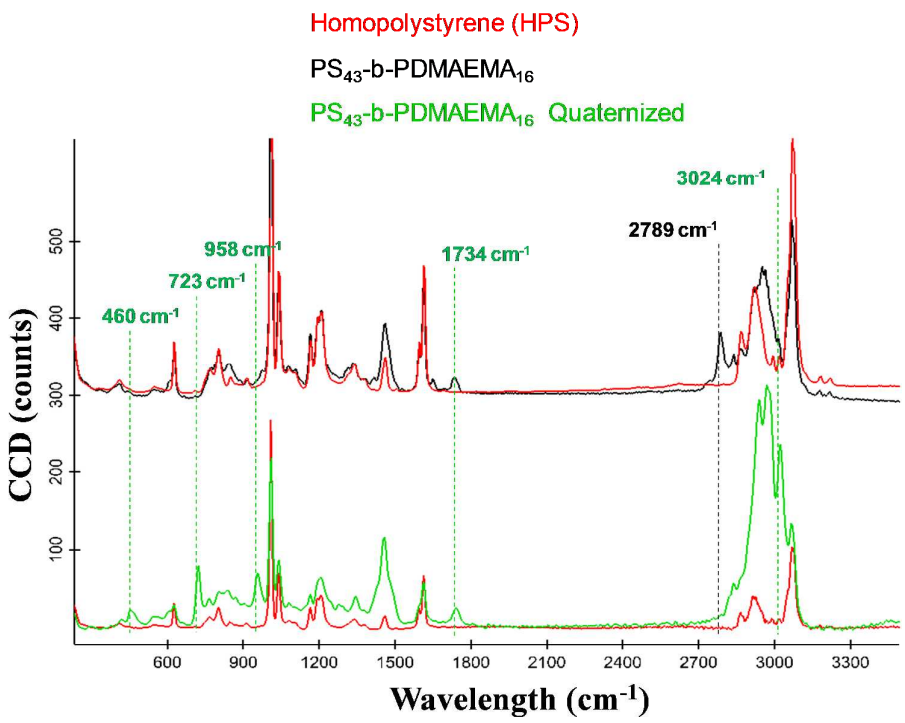


**Figure S3.** Confocal Raman spectra of the components employed for the fabrication of the porous films.

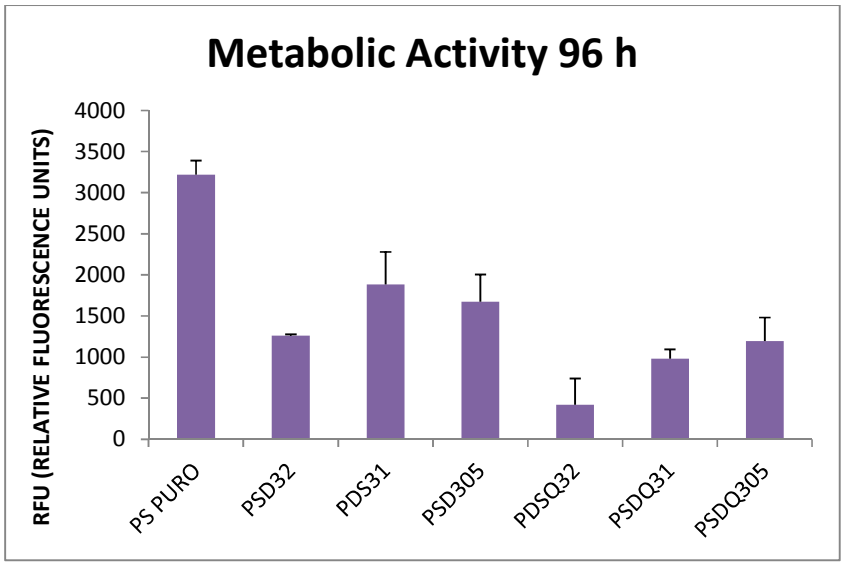


**Figure S4.** Evaluation of the mitochondrial metabolic activity (Alamar Blue) at 96 h of cell seeding on different porous surfaces with variable chemical composition quaternized and non-quaternized.

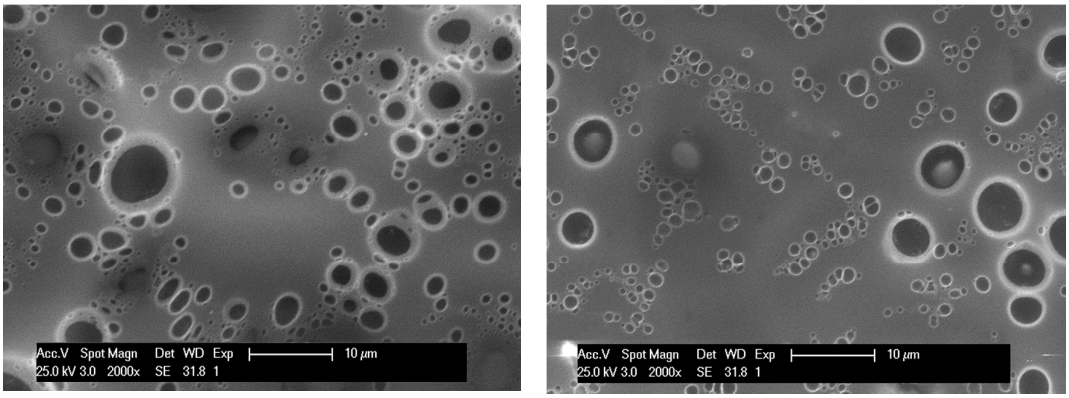


**Figure S5**. Scanning electron microscopy images of the surfaces prepared at a relative humidity of 70 % (Left) and 80% (right) respectively.