materials

MDPI

Supplementary Materials

Surface Functionalization of Ureteral Stents-Based Polyurethane: Engineering Antibacterial Coatings

Kardelen Ecevit [1,2], Eduardo Silva [1,2], Luísa C. Rodrigues [1,2], Ivo Aroso [1,2], Alexandre A. Barros [1,2], Joana M. Silva [1,2,*] and Rui L. Reis [1,2]

[1] 3B's Research Group, I3Bs–Research Institute on Biomaterials, Biodegradables and Biomimetics, University of Minho, Headquarters of the European Institute of Excellence on Tissue Engineering and Regenerative Medicine, Avepark, Parque de Ciência e Tecnologia, Zona Industrial da Gandra, 4805-017 Barco GMR, Portugal; kardelen.ecevit@i3bs.uminho.pt (K.E.); eduardo.silva@I3Bs.uminho.pt (E.S.); luisa.rodrigues@i3bs.uminho.pt (L.C.R.); ivo.aroso@i3bs.uminho.pt (I.A.); ip@i3bs.uminho.pt (A.A.B.); rgreis@i3bs.uminho.pt (R.L.R.)

[2] ICVS/3B's PT Government Associated Laboratory, 4805-017 Guimaraes, Portugal

* Correspondence: joana.marques@i3bs.uminho.pt

Citation: Ecevit, K.; Silva, E.; Rodrigues, L. C.; Aroso, I.; Barros, A.A.; Silva, J.M.; Reis, R.L. Surface Functionalization of Ureteral Stents-Based Polyurethane: Engineering Antibacterial Coatings. *Materials* **2022**, *15*, 1676. https://doi.org/10.3390/ma15051676

Academic Editor: Anton Nikiforov

Received: 29 December 2021
Accepted: 14 February 2022
Published: 23 February 2022

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.

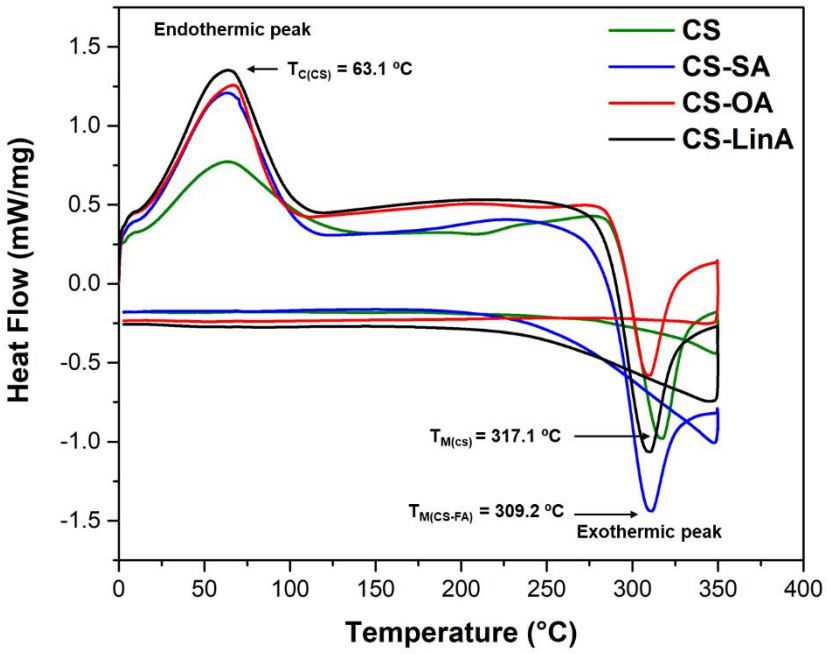

Figure S1. DSC thermograms for CS and synthesized CS-FA derivatives.

Table S1. Elemental composition (% C, N, O) of untreated PU stent, acrylic acid-modified PU stent (PU-AAc) and CS-FA derivatives coated PU stents.

	ATOMIC CONCENTRATION [%]		
	C	**O**	**N**
PU	79.64 ± 0.24	17.02 ± 0.07	3.34± 0.01
PU-AAC	75.97 ± 0.66	19.80 ± 0.80	1.61± 1.5
CS-PU	70.97 ± 2.59	24.23 ± 3.32	2.93 ± 0.96
CS-SA-PU	71.78 ± 2.16	21.74 ± 1.53	3.38 ± 0.86
CS-OA-PU	68.29 ± 3.39	23.93 ± 2.03	4.79 ± 0.15
CS-LINA-PU	71.74 ± 1.01	22.15 ± 0.78	3.85 ± 0.24

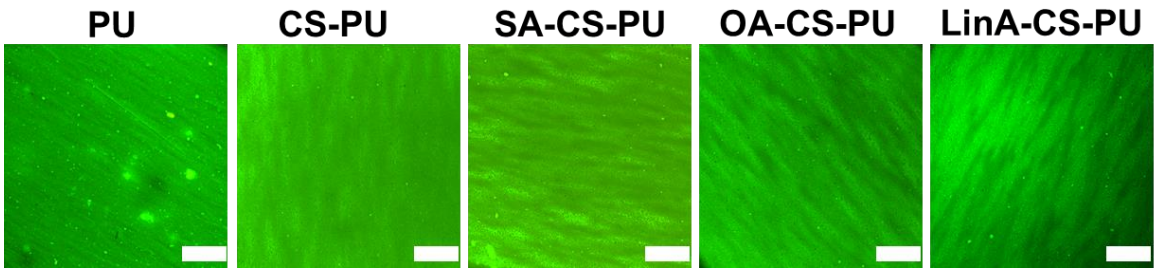

Figure S2. Live/dead fluorescence assay performed on all formulations to infer background effect of the counterparts: Images of the outer surface of untreated PU stent (control), CS-PU, CS-SA-PU, CS-OA-PU and CS-LinA-PU. Scale bar is 100 μm.