Electronic Supplementary Material (ESI) for Biomaterials Science.

Nitric Oxide Releasing Coatings for the Prevention of Viral and Bacterial Infections

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Supplementary Information

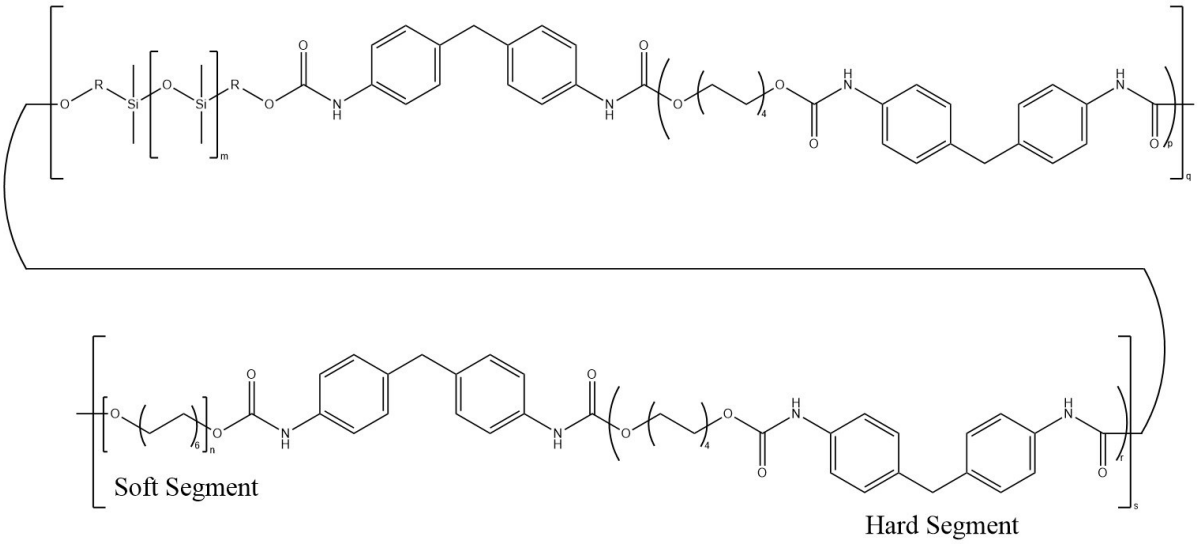

Figure S1: The structure of Elast-Eon type polymers. Elast-Eon is a urethane-silicone elastomer with a 40% hard segment content and a mixed polyether/siloxane soft segment. Structure taken from Gunatillake, P. A., Dandeniyage, L. S., Adhikari, R., Bown, M., Shanks, R., & Adhikari, B. (2019). Advancements in the Development of Biostable Polyurethanes. *Polymer Reviews*, *59*(3), 391–417. https://doi.org/10.1080/15583724.2018.1493694

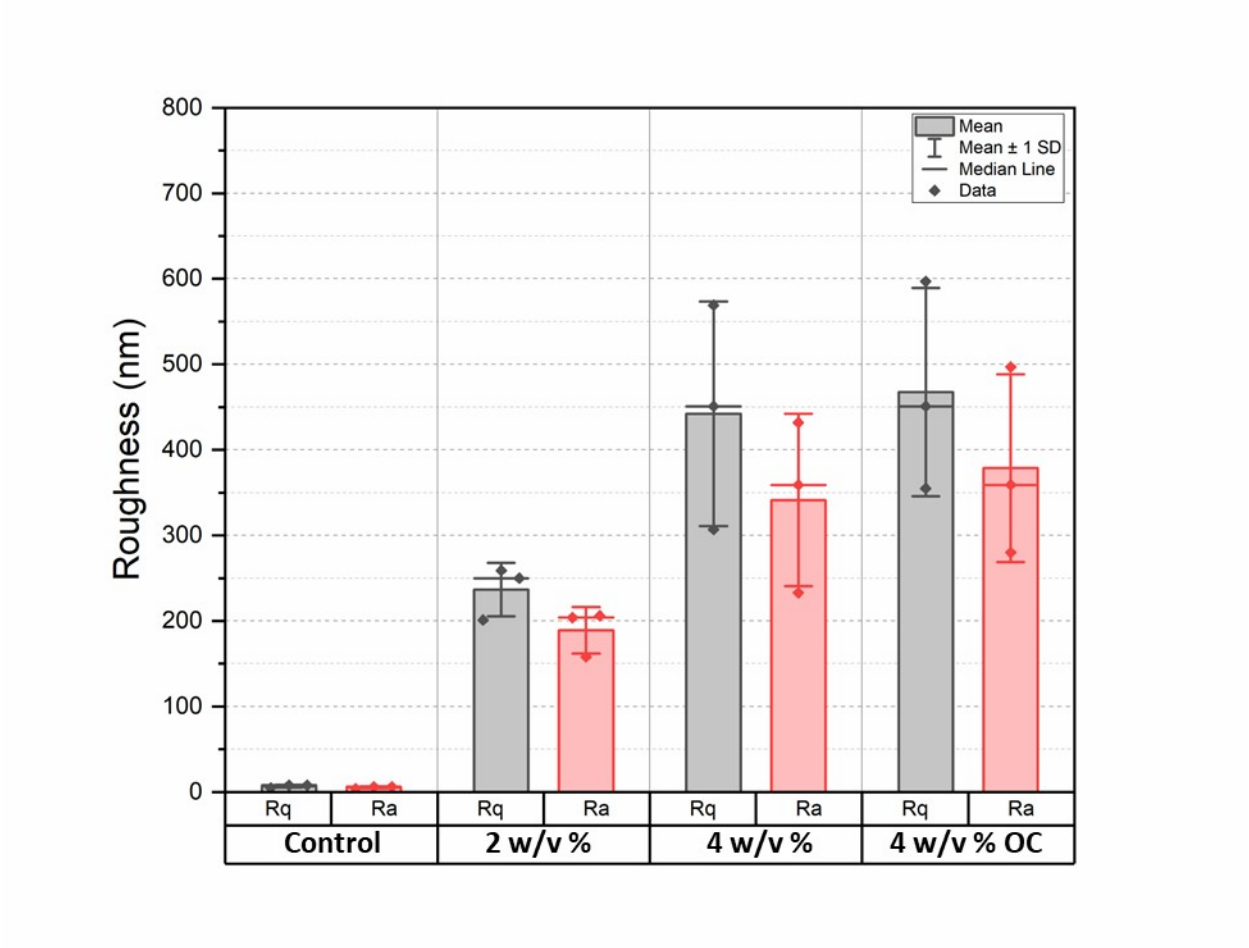

Figure S2: Graph detailing Rq/Ra results obtained from AFM measurement of SNAP coated substrates. As the concentration of SNAP increases, the roughness increases. The surface roughness of the substrates with a polymer overcoat is not significantly different to the 4 w/v% coated substrate, indicating that there is a thin layer of E2As applied to the surface.

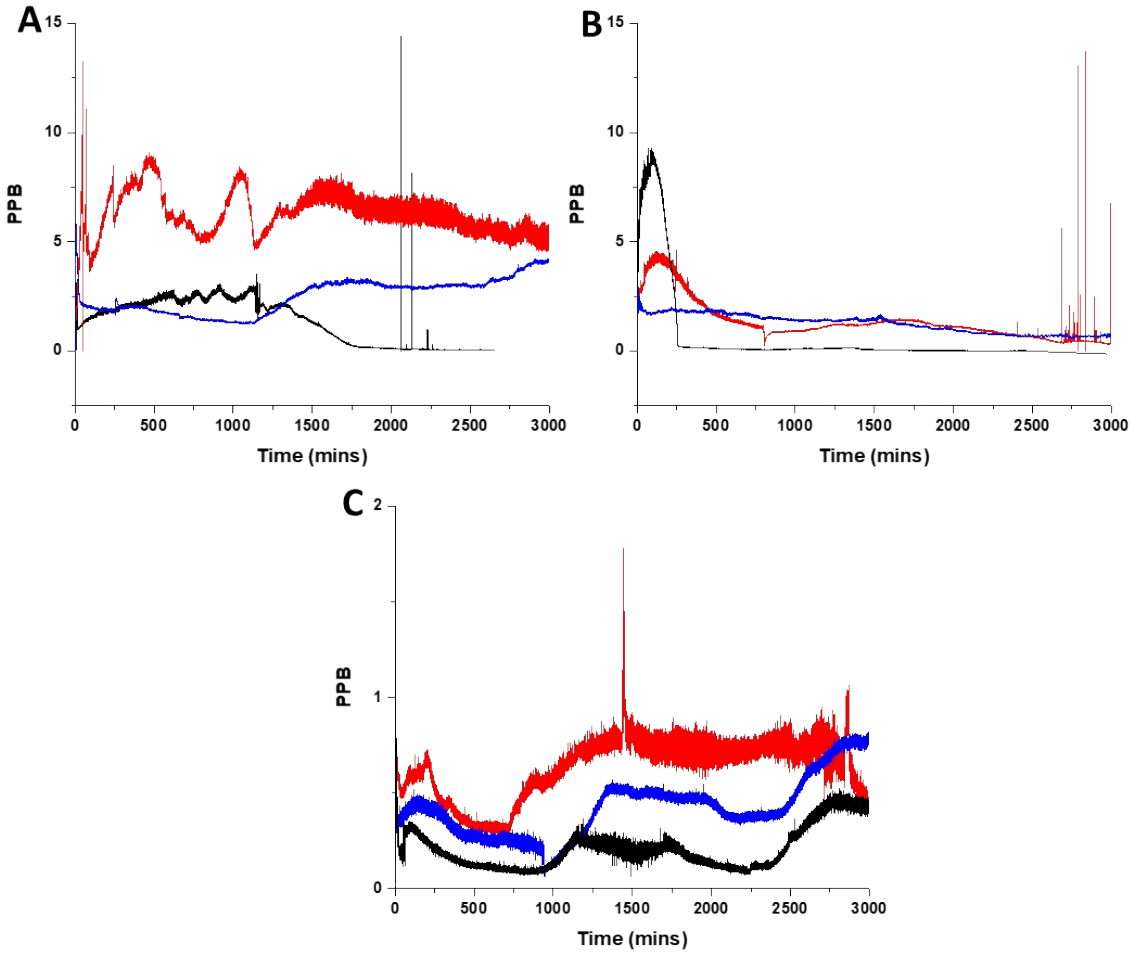

Figure S3: Representative chemiluminescence graphs of SNAP coated substrates in A) PBS B) DMEM C) LB Broth. Black= 2 w/v %; Blue = 4 w/v % OC; Red= 4 w/v %.

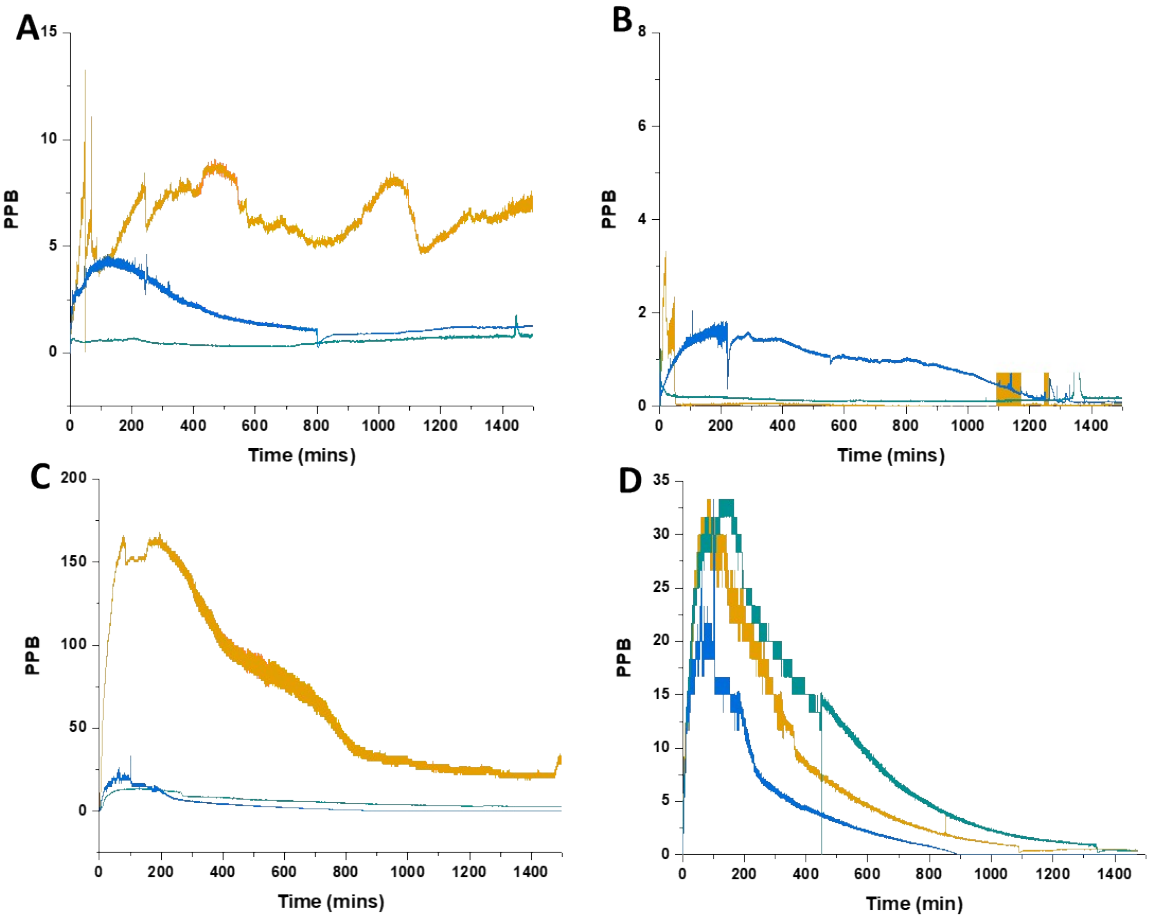

Figure S4: Representative chemiluminescence graphs of 4 w/v % SNAP coated substrates. A) Dark without EDTA B) Dark with EDTA C) Light without EDTA D) Light with EDTA. Orange= PBS; Blue = DMEM; Green= LB broth

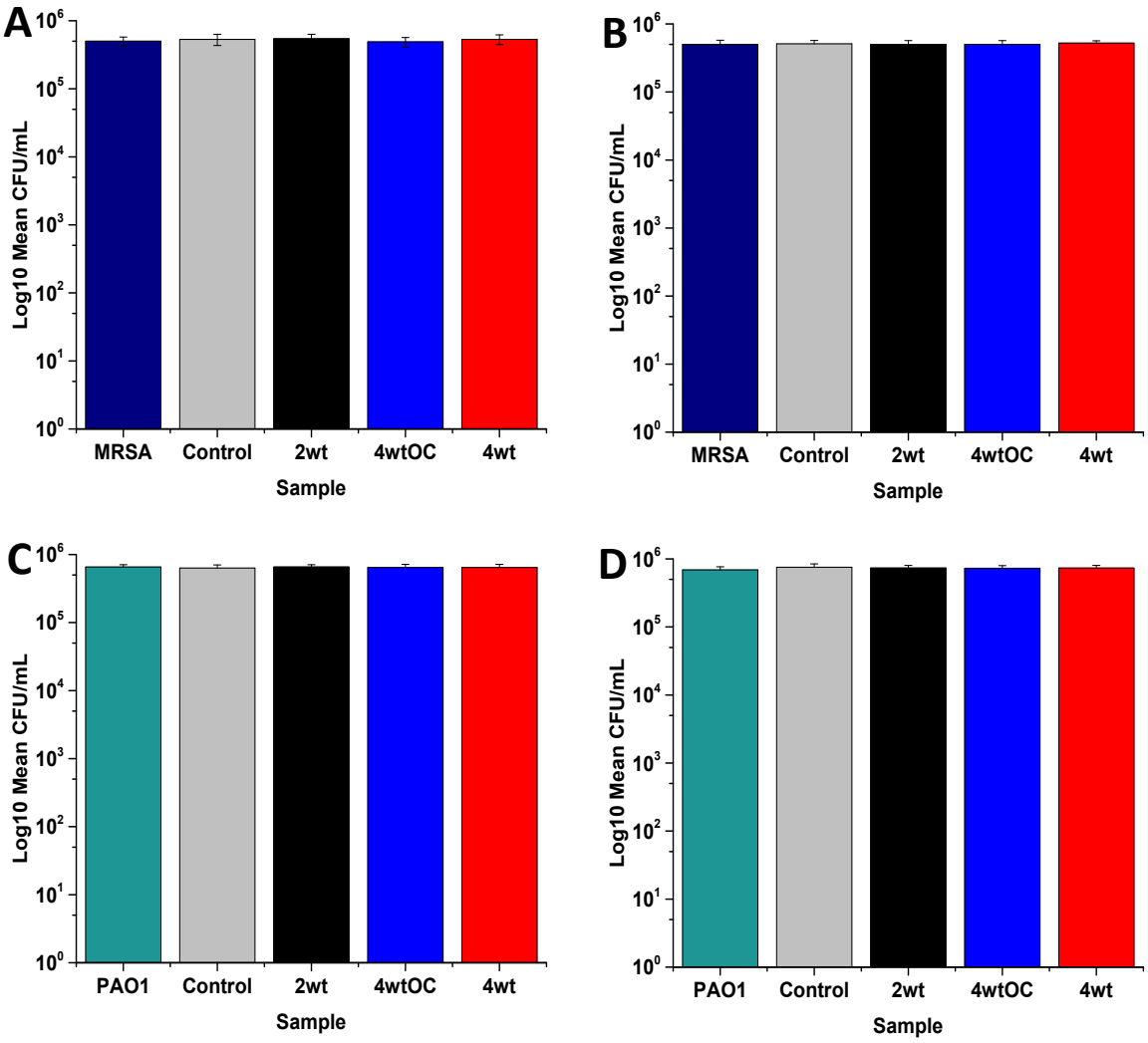

Figure S5: Antibacterial efficacy of NO releasing polymer surfaces in planktonic assays against MRSA (A and B) and PAO1 (C and D) under nutrient poor conditions (PBS) after 1 (A, C) and 2 hours (B, D) incubation. Values represent mean ± SD (n=3). There was no antibacterial activity observed with either bacteria at 1 or 2 hours with any samples tested.