

## Supporting Information

# Preparation and Formula Analysis of Anti-Biofouling Titania-Polyurea Spray Coating with Nano/Micro-Structure

Yuanzhe Li <sup>1</sup>, Boyang Luo <sup>1</sup>, Claude Guet <sup>1</sup>, Srikanth Narasimalu <sup>2</sup>, and Zhili Dong <sup>1,\*</sup>

<sup>1</sup> School of Materials Science & Engineering, Nanyang Technological University, Singapore 639798, Singapore

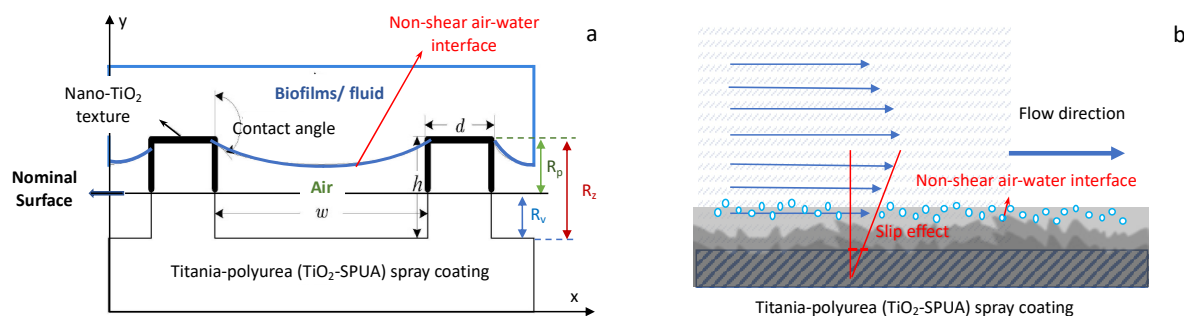
<sup>2</sup> Energy Research Institute @ NTU (ERI@N), CleanTech One, Singapore 637141, Singapore

\* Correspondence: zldong@ntu.edu.sg; Tel.: +65-6790-6727

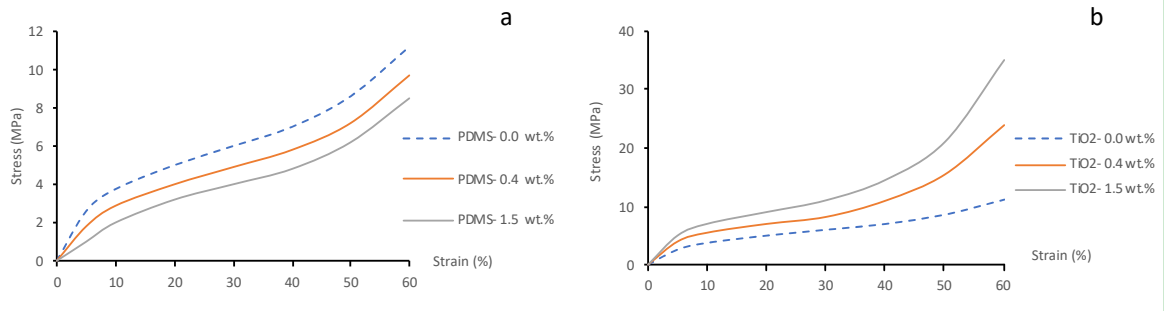
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**Table S1.** Bactericidal effects of different surfaces on *Pseudomonas* biofilms.

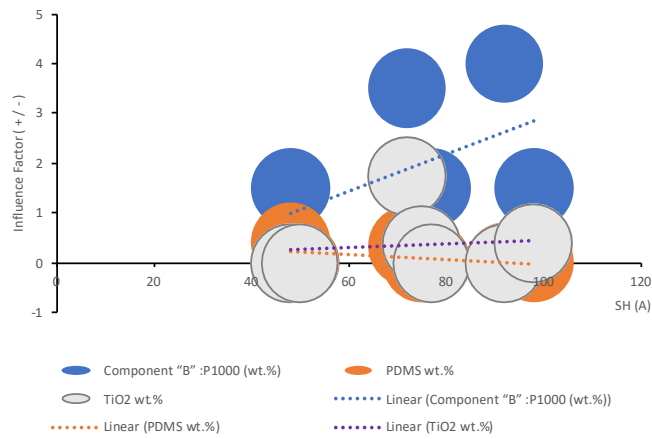
Formulation Code Name	Surface Features	Nano-TiO <sub>2</sub> wt. %	N	log <sub>10</sub> (CFU/mL)	
				60 ± 5 rpm/ 10 days	240 ± 5 rpm/ 10 days
CVD Titania Surface	Super hydrophilic (CA < 5°)	100.0	5	0.00 ± 0.00	0.00 ± 0.01
Concrete coupon of CDC biofilm reactor	Super hydrophilic (CA < 5°)	0.0	5	9.35 ± 0.88	7.86 ± 0.75
Fluoro-modified elastomeric polyurethane	Superhydrophobic (CA > 150°)	0.0	5	7.65 ± 0.38	4.65 ± 0.46
T-PG1E2	Hydrophilic (5° < CA < 90°)	0.4	5	2.36 ± 0.70	1.26 ± 0.51
T-PG3E2	Hydrophobic (90° < CA < 150°)	1.5	5	1.05 ± 0.48	0.02 ± 0.29



**Figure S1.** Schematic diagram of *Pseudomonas* detachment influenced by surface roughness and morphology (a) surface roughness/morphology and non-shear air-water interface, and (b) non-shear air-water interface and slip effect of TiO<sub>2</sub>-SPUA spray coating.



**Figure S2.** Graph of compression stress vs. strain (a) compression stress vs. strain by PDMS wt.%, and (b) compression stress vs. strain by TiO<sub>2</sub> wt.%.



**Figure S3.** Influence factors for three main components to the surface hardness.