

Bioinspired Superhydrophobic Surfaces for Anti-Corrosion and Drag Reduction using Additive Manufacturing for Marine applications

Aaishwarika Raj Sharma, Harpreet Arora, and Harpreet Singh Grewal*

Surface Science and Tribology Lab, Department of Mechanical Engineering, Shiv Nadar

Institution of Eminence, Gautam Buddha Nagar, Uttar Pradesh- 201314, India

*Corresponding Author Email: harpreet.grewal@snu.edu.in

Supplementary Information

The coating exhibits high contact angles even after significant abrasion cycles due to self-regeneration ability as shown in Fig. S1 (a). Similarly, coatings demonstrated low corrosion current density of $0.34 \mu\text{A}/\text{cm}^2$ for abraded samples, which is near to corrosion current density of fresh (without abrasion) coating ($0.3 \mu\text{A}/\text{cm}^2$). Fig. S1 (b) shows potentiodynamic polarization curve of abraded sample.

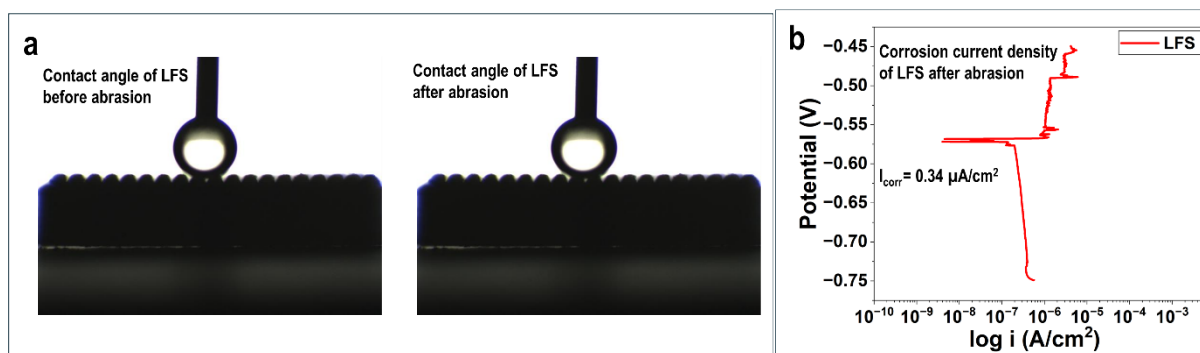


Fig. S1: (a) Contact angles before and after abrasion, (b) potentiodynamic polarization result showing coating exhibits low corrosion current density for abraded sample.