

Supporting Information

Robust Biomimetic-Structural Superhydrophobic Surface on Aluminum Alloy

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S1 Abrasion resistance test. The abrasion resistance of the sample surface was evaluated by a scratch test that previously reported.^{1,2} Figure S1 schematically illustrates the test process, which was carried out on a homemade scratch tester with 800# grit emery papers as an abrasion surface. The sample surface was tested facing this abrasion material with varying applied load and distance at a rate of 5mm s^{-1} .

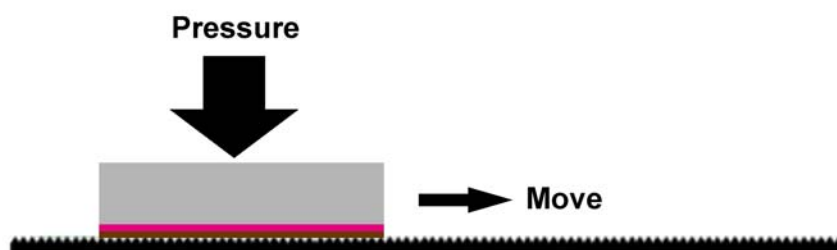


Figure S1. Schematic illustration of the scratch test.

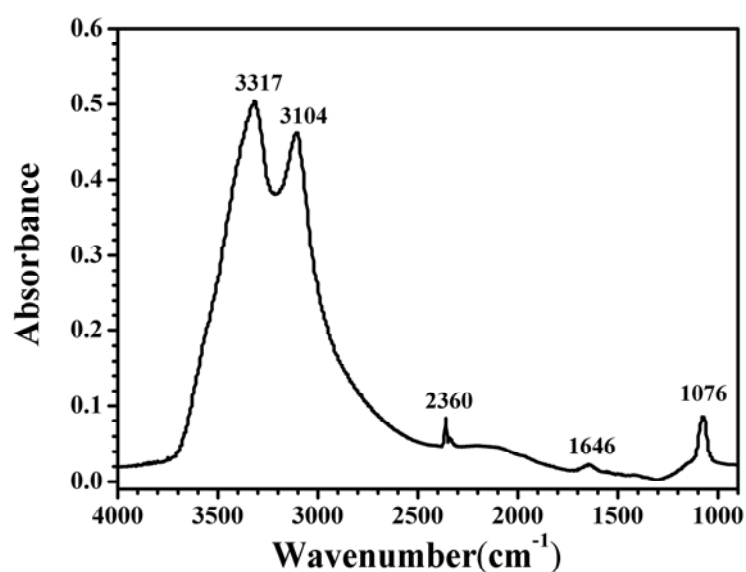


Figure S2. FTIR spectrum of 2024 Al sample after a hydrothermal treatment in a $\text{La}(\text{NO}_3)_3$ aqueous solution.

Figure S2 shows the FTIR result of 2024 Al sample after a hydrothermal treatment in a $\text{La}(\text{NO}_3)_3$ aqueous solution. The intensive bands at 3317 cm^{-1} , 3104 cm^{-1} and 1076 cm^{-1} can be assigned to the tension of the hydroxyl groups of hydroxides of lanthanum and aluminum.³⁻⁵ The weak band at 1646 cm^{-1} can be assigned to the stretching and bending modes of the adsorbed water,^{3,6} and the band at 2360 cm^{-1} ascribed to the adsorbed CO_2 .^{3,7}

References

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