

Supporting Information

Construction of robust electrothermal superhydrophobic surface via femtosecond laser for anti-icing and deicing

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Additional Figures

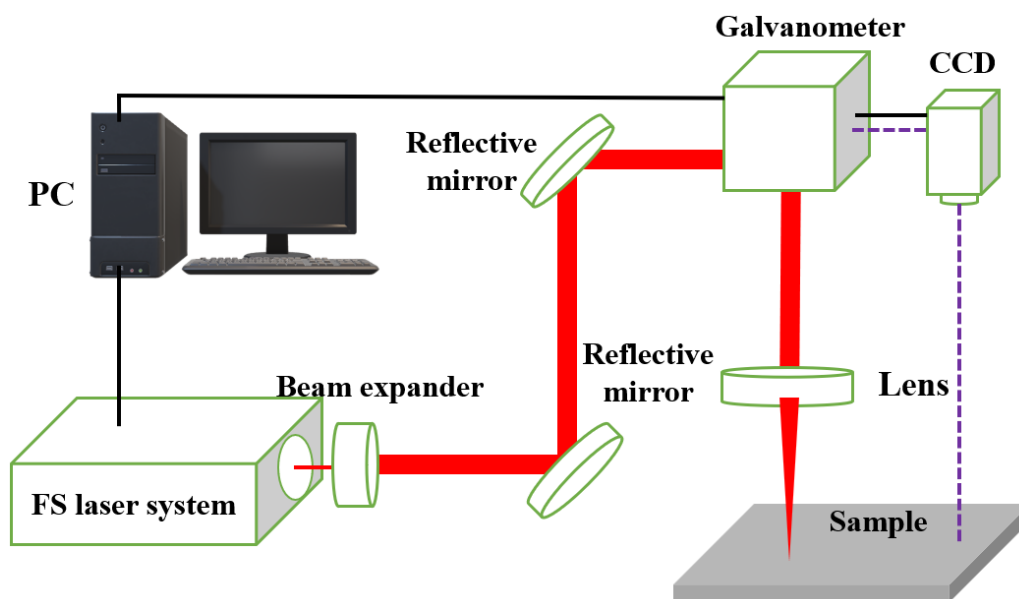


Figure S1. Schematic diagram of the femtosecond laser system.

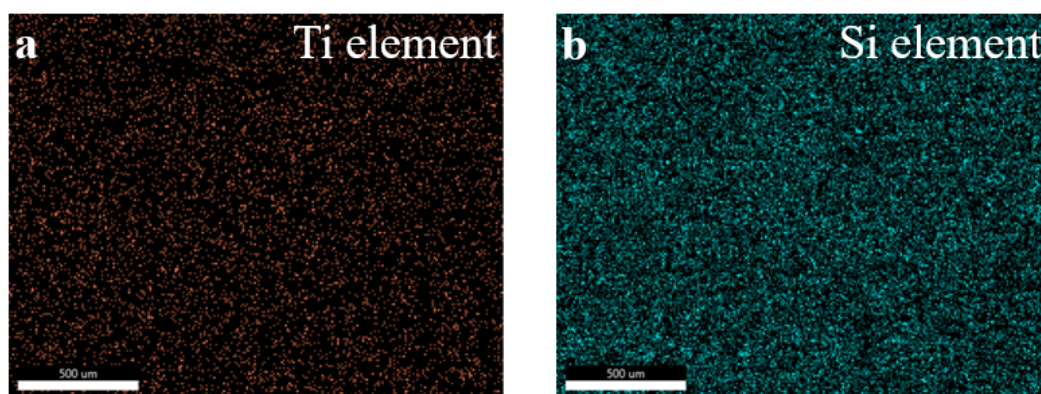


Figure S2. (a) Element distribution map of Ti element of the laser-textured sample after being filled with Ti_3C_2 MXene. (b) Element distribution map of Si element of AEES.

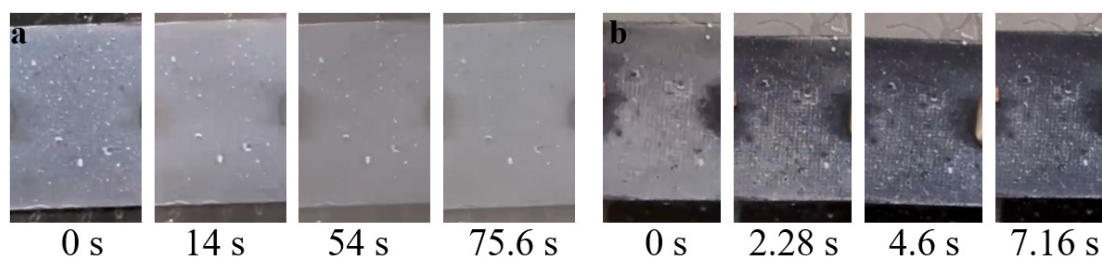


Figure S3. (a) Frosting and (b) defrosting process of AEES.

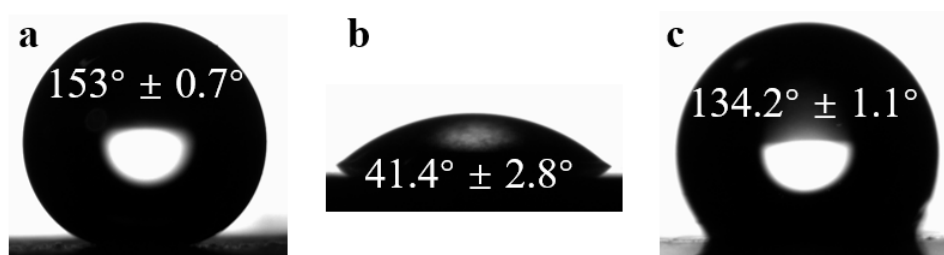


Figure S4. WCA of CESS (a) before and (b) after 10 times of sandpaper abrasion. (c) WCA of AEES after 200 times of abrasion.

Table S1. Comparison between this work and other reports.

Reference	Water contact angle	Electrothermal performance	Ice adhesion strength	Icing delay time	Mechanical durability test
This work	160.2°	90.3°C (5 V)	14.65 kPa	75.2 s (-35°C)	Yes
Ref 15	155°	No	-	25.2 s (-20°C)	No
Ref 12	153°	No	-	-	No
Ref 37	151°	81.5°C (5 V)	-	68 s (-23°C)	Yes
Ref 38	168.36°	No	-	53 s (-23°C)	No
Ref 39	159.2°	No	-	No freezing (-8.5°C)	Yes