Supplementary information for

Erosion resistant materials demonstrating low interfacial toughness with ice and superior durability.

*Qimeng Yang, Ali Dolatabadi, Kevin Golovin**

Mechanical & Industrial Engineering, University of Toronto, 5 King's College Rd, Toronto, ON M5S 3G8

*Email: kevin.golovin@utoronto.ca

Table S1. Typical mechanical properties of the erosion resistant materials used in the study.

	Young's modulus (GPa)	Hardness (GPa)	Thermal conductivity (W/m·K)
WC	500 – 700[1]	15 – 26[2]	70 – 110[3]
SiC	250 – 400[4]	7 – 26[4]	120 – 150[5]
Alumina	200 – 300[6]	10 – 15[7]	15 – 20[8]
QC	140 – 200[9]	5 – 10[9]	4 – 8[10]

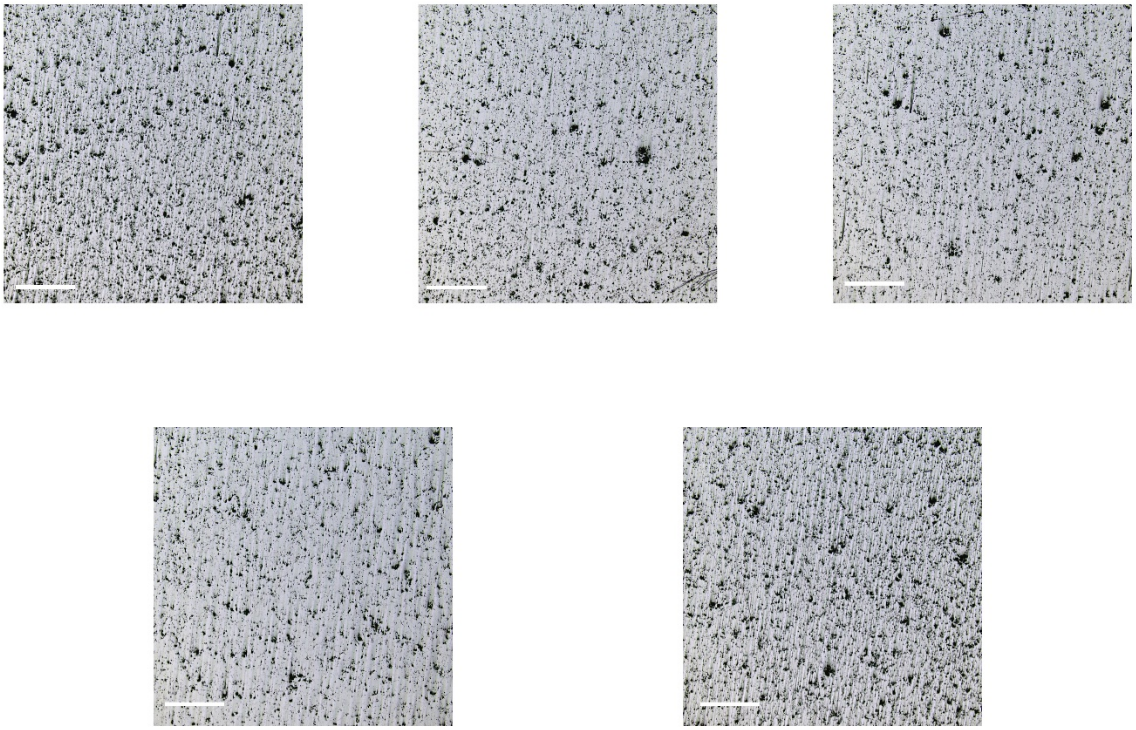

Figure S1. Optical images used for analyzing the ‘rougher’ areas of the QC coating. The dark contrast was recognized as regions with higher roughness and the area percentage of those area was measured by ImageJ. Length of scale bars is 0.5 mm.

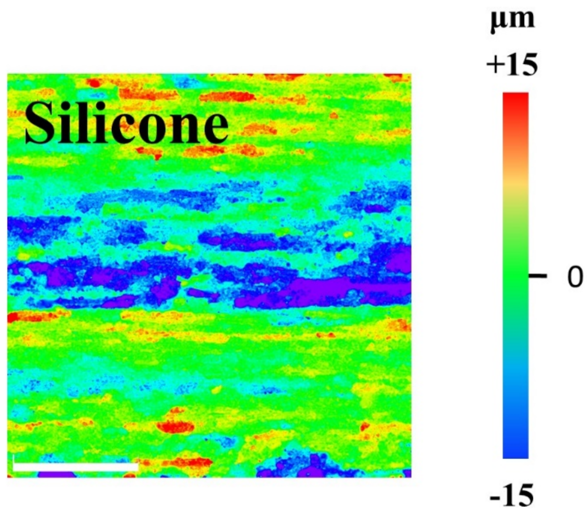

Figure S2. 2D heightmap on Silicone substrate after linear erosion test. The roughness of the linear abraded Silicone surface was much higher than that on the erosion resistant materials. The length of the scale bar is 200 µm.

References

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