

Supporting Information

for

Laser-processed antiadhesive bionic combs for handling nanofibers inspired by nanostructures on the legs of cribellate spiders

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Additional experimental data

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Table S1: Morphological data of the nanoripples found on the calamistrum of fourdistantly related cribellate spiders.

Species	Periodicity (nm)	Height (nm)	
Amaurobius similis	222 ± 8 (n = 3)	210 (<i>n</i> = 1)	
Hickmania troglodytes	205 ± 13 (n = 3)		
Jamberoo johnnoblei	233 (<i>n</i> = 1)		
Uloborus plumipes	216 ± 10 (<i>n</i> = 3)	200ª	

^aData taken from [1].

Table S2: Statistical analysis of the presented measurement results (Two-tail *t*-testassuming equal variances, confidence level 95%).

Sample 1	Sample 2	P value	Statistically significant
Al alloy polished	AI alloy LIPSS	0.91	No
Steel polished	Steel LIPSS	8.85e-7	Yes
Ti alloy polished	Ti alloy LIPSS	3.14e-4	Yes
Ti alloy faced	Ti alloy LIPSS	2.49e-5	Yes
Ti alloy 240	Ti alloy LIPSS	6.66e-5	Yes
Ti alloy 80	Ti alloy LIPSS	4.76e-7	Yes
Ti alloy faced	Ti alloy polished	0.25	No
Ti alloy 240	Ti alloy polished	0.01	Yes
Ti alloy 80	Ti alloy polished	8.09e-4	Yes



Figure S1: Scanning electron micrographs of the surface of the investigated samples. (a) Al alloy LIPSS-covered; (b) steel LIPSS-covered; (c) Ti alloy LIPSS-covered; (d) Ti alloy faced; (e) Ti alloy 240; (f) Ti alloy 80.

References

 Joel, A.-C.; Meyer, M.; Heitz, J.; Heiss, A.; Park, D.; Adamova, H.; Baumgartner, W. ACS Appl. Nano Mater. 2020, 3, 3395–3401. <u>doi.org/10.1021/acsanm.0c00130</u>