Supplementary Information

Functionalized MIL-125(Ti) Based High-Performance Triboelectric Nanogenerators for Hygiene Monitoring

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SI 1: Fabrication of TENG device

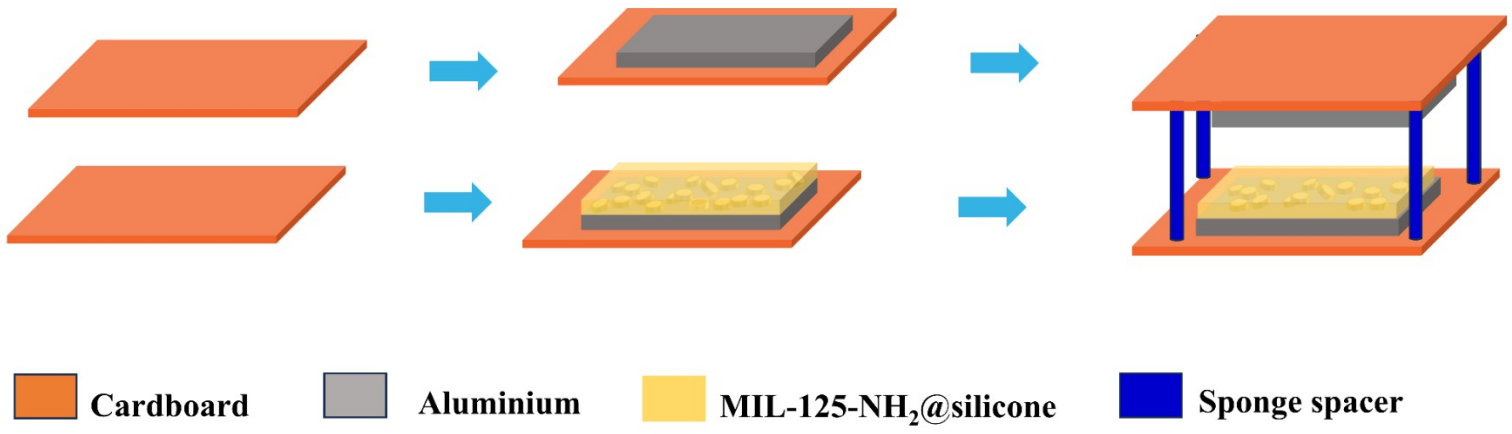


Figure S1: The detailed fabrication steps for the TENG device.

SI 2- UV visible absorption spectra of prepared MIL-125

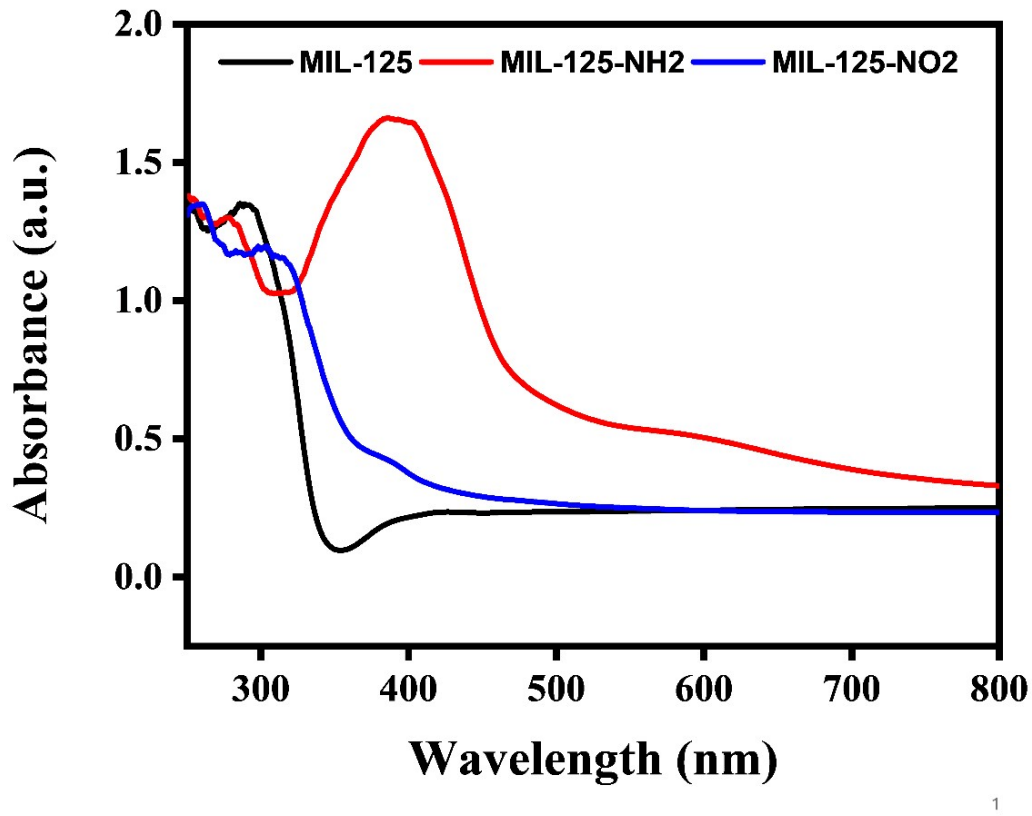
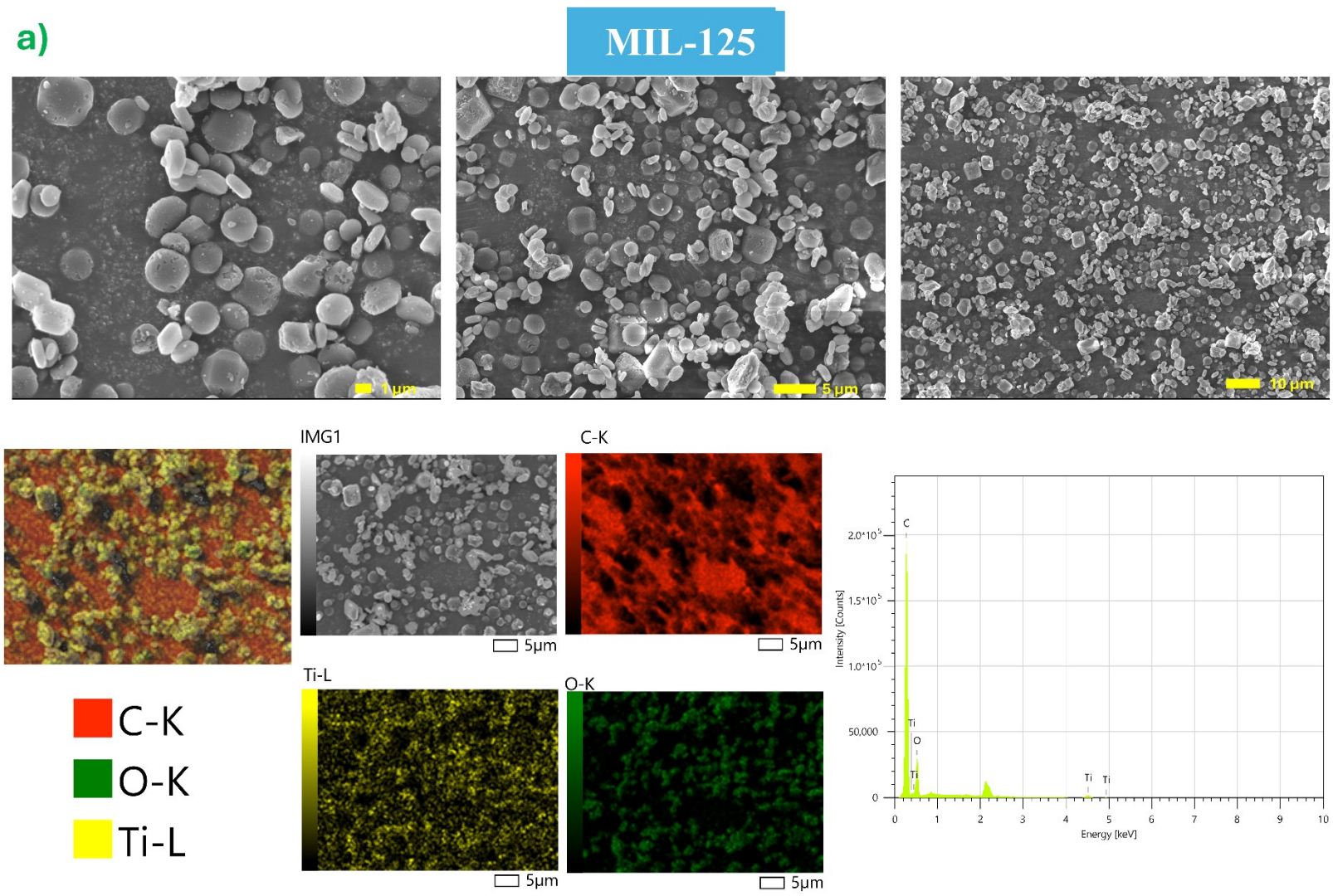


Figure S2: Absorption spectra of MIL-125 and its functional derivatives.

SI 3- FESEM Studies



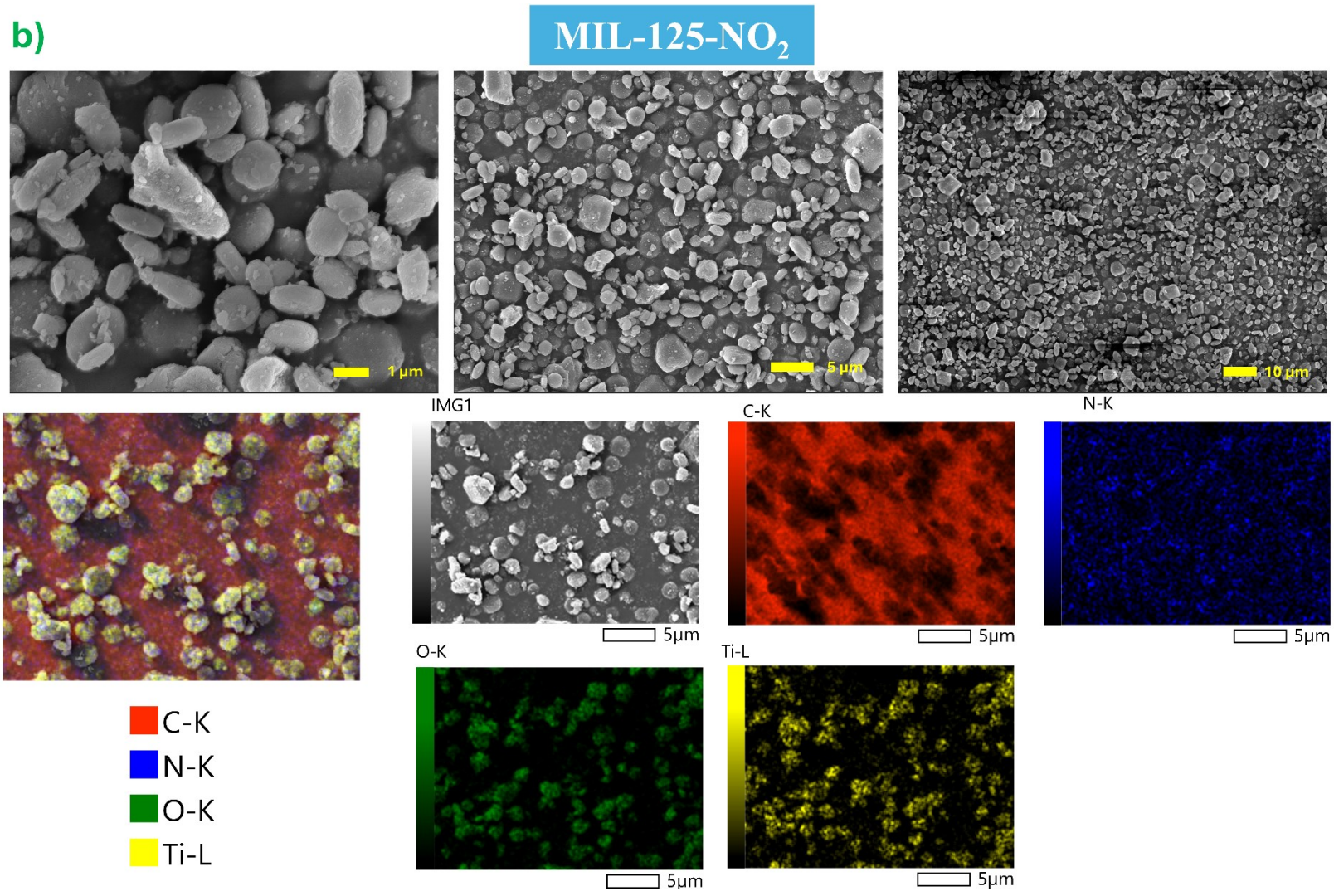


Figure S3: FESEM and EDAX of (a) MIL-125(Ti), (b) MIL-125-NO_2, and (c) MIL-125-NH_2.

SI 4:

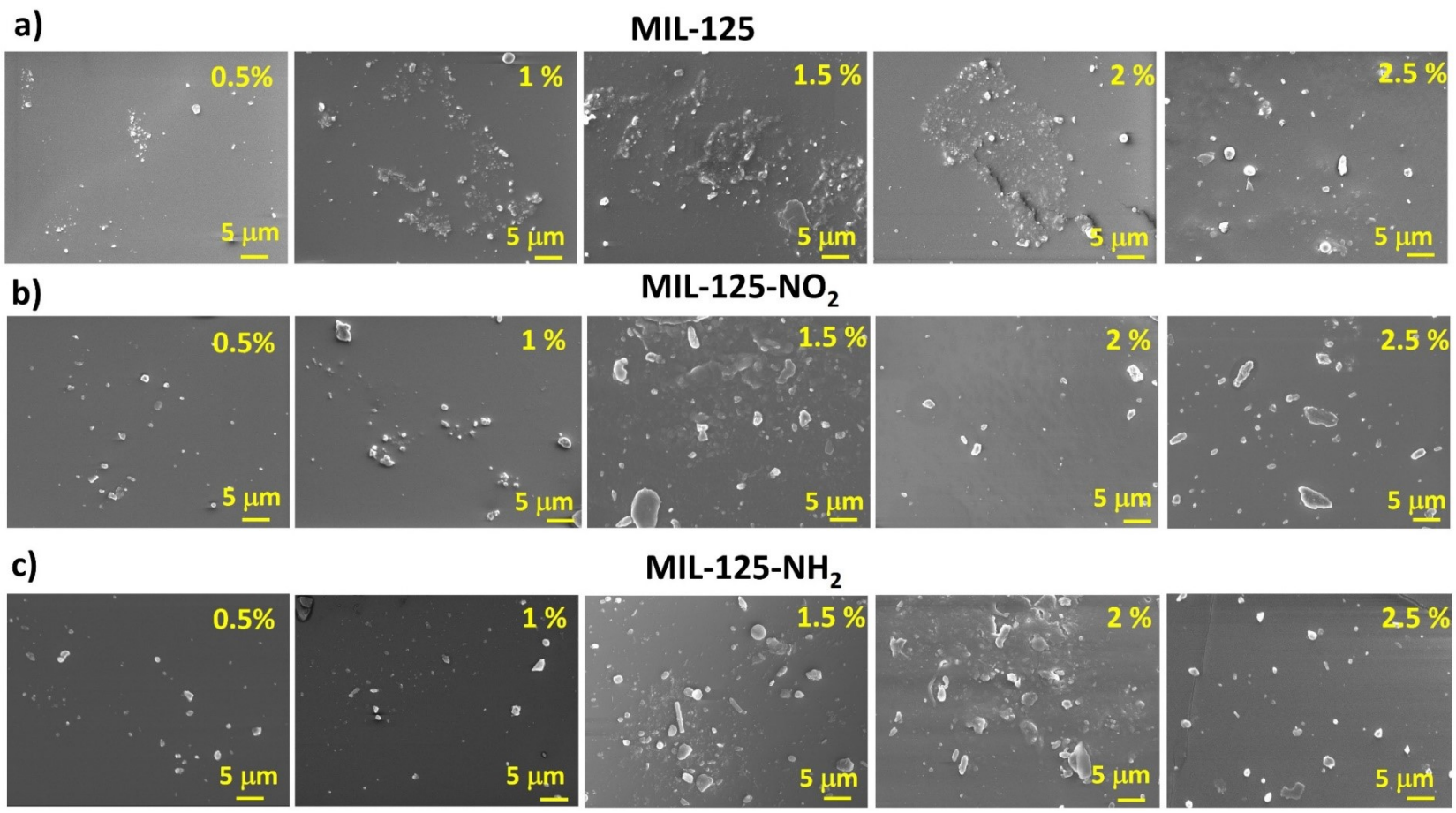


Figure S4. FESEM images of MIL-125(Ti)-X@Silicone composite films at various concentrations ranging from 0.5% to 2.5%: (a) MIL-125; (b) MIL-125-NO_2; (c) MIL-125-NH_2.

SI 5:

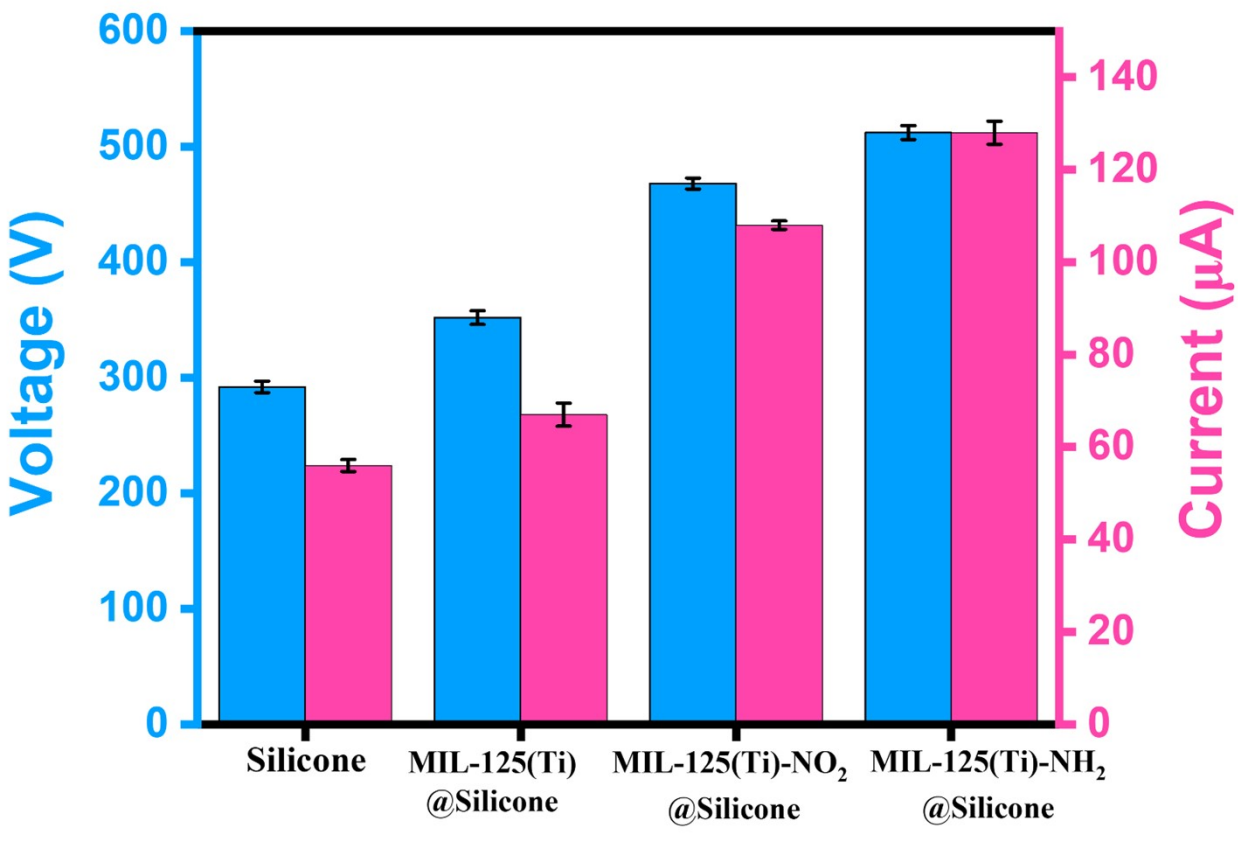


Figure S5: Comparison of TENG device output performances for silicone, MIL-125(Ti)@Silicone, functionalised composite films MIL-125(Ti)-NO_2@Silicone and MIL-125(Ti)-NH_2@Silicone.

SI 6:

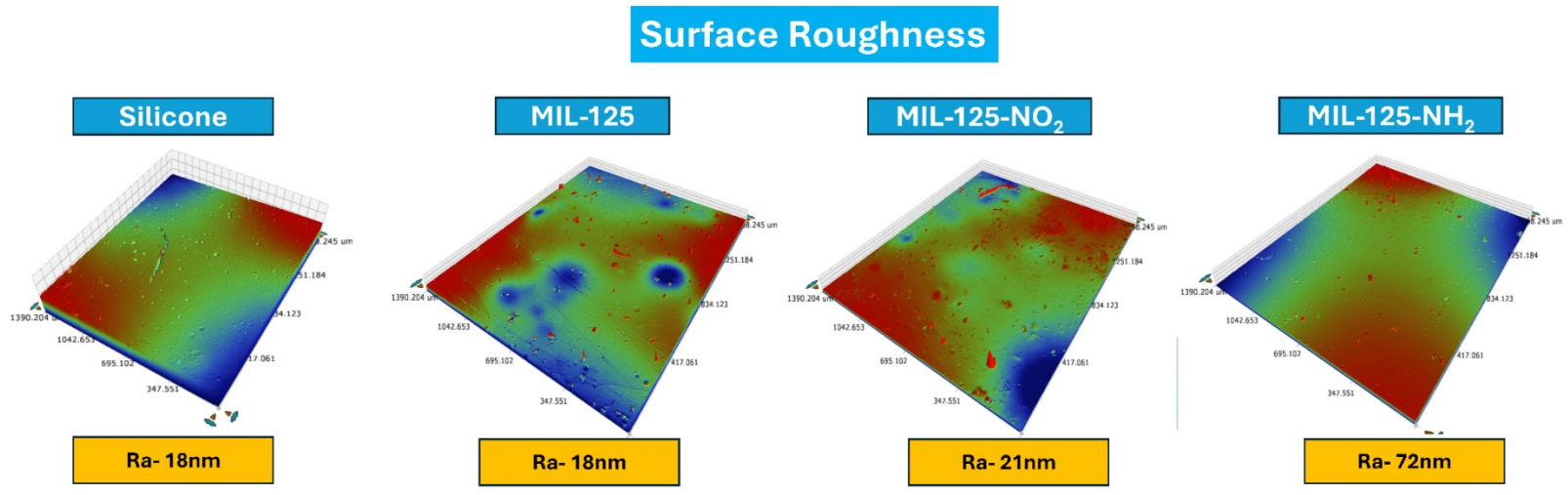


Figure S6: Surface roughness measurements of silicone, MIL-125(Ti), and functionalized composite films MIL-125(Ti)-NO_2 and MIL-125(Ti)-NH_2.