

Supplementary information

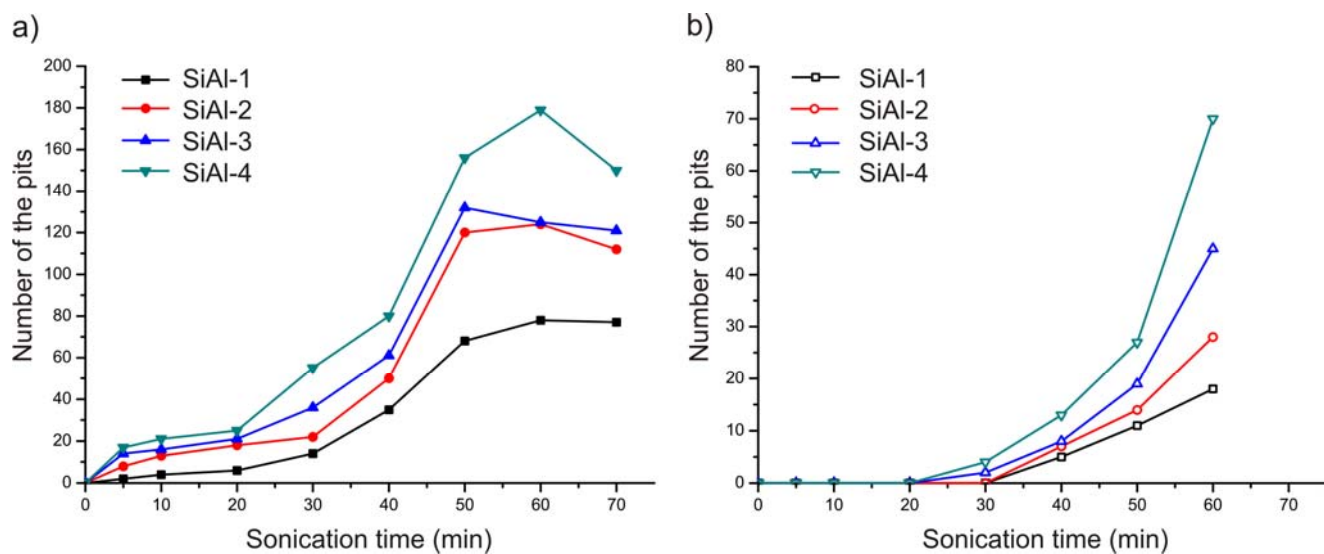


Figure S1 Plot of the pit numbers for different patterns as a function of sonication time: a) number of pits formed on the hydrophobic surface; b) number of pits formed on the hydrophilic surface (temperature of sonication is 330 K, reference area is $230 \times 167 \mu\text{m}^2$). The four types of surfaces SiAl-1 to SiAl-4 correspond to the four different patterns in Table.

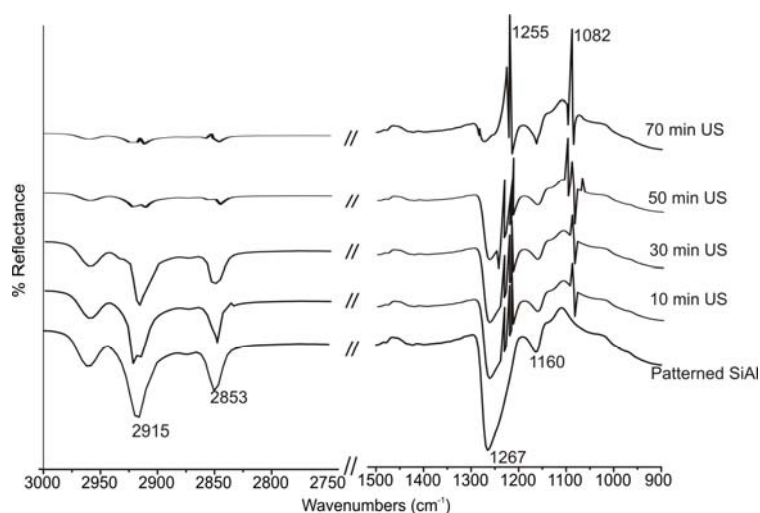


Figure S2 IRRA spectra of the patterned Si wafer coated with 40 nm Al at different time of sonication at 330 K. All spectra were shifted along the transmittance axis for clarity but measured with the same sensitivity.

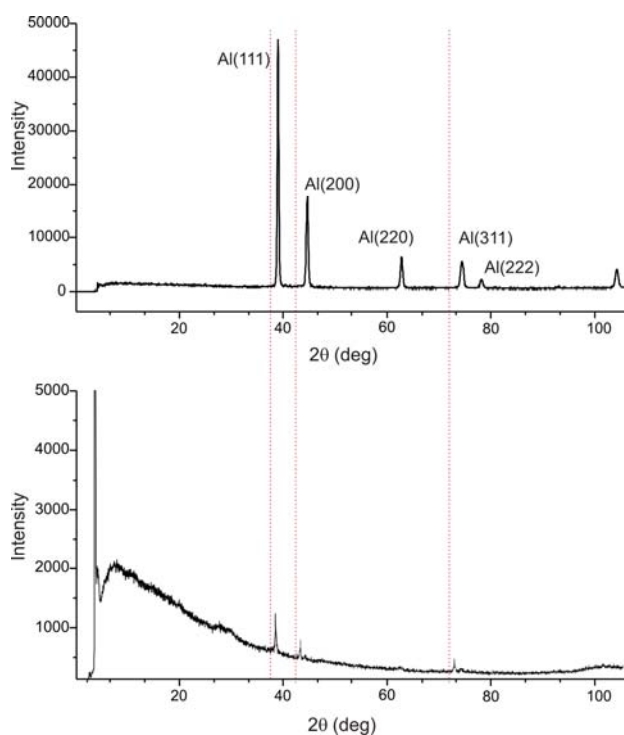


Figure S3 XRD of the initial patterned Si wafer coated with 40 nm of Al layer (bottom) and after 70 min of sonication (top).

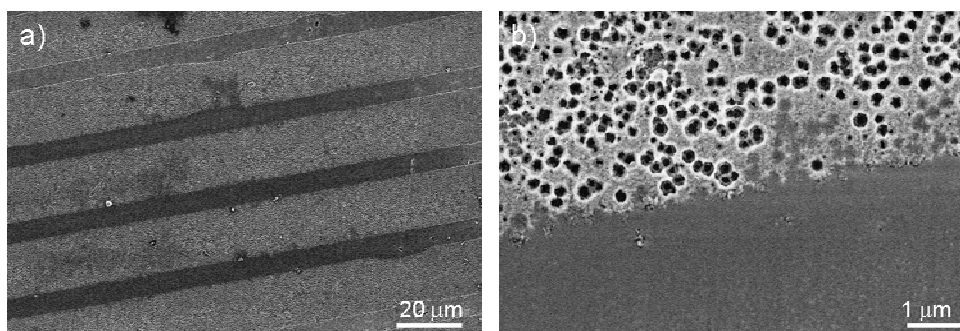


Figure S4 a, b) - SEM images of the patterned Al sample covered with 100 nm of Al after 10 min of sonication.