

Supplementary Materials: Effects of He and Ar Heat-Assisted Plasma Treatments on the Adhesion Properties of Polytetrafluoroethylene (PTFE)

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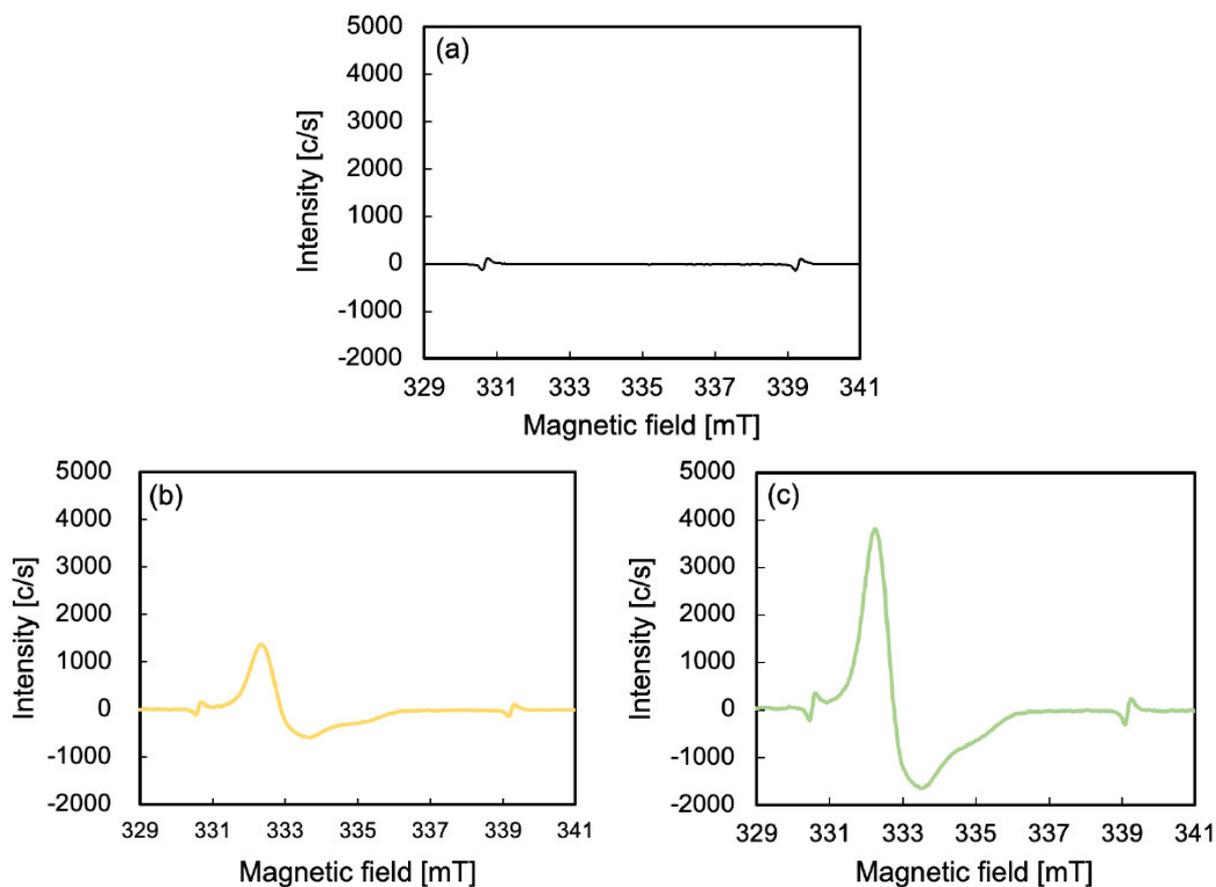


Figure S1. Electron spin resonance (ESR) spectra of the PTFE samples HAP-treated using He or Ar gas. (a) As-received PTFE, (b) He HAP-treated PTFE, and (c) Ar HAP-treated PTFE.

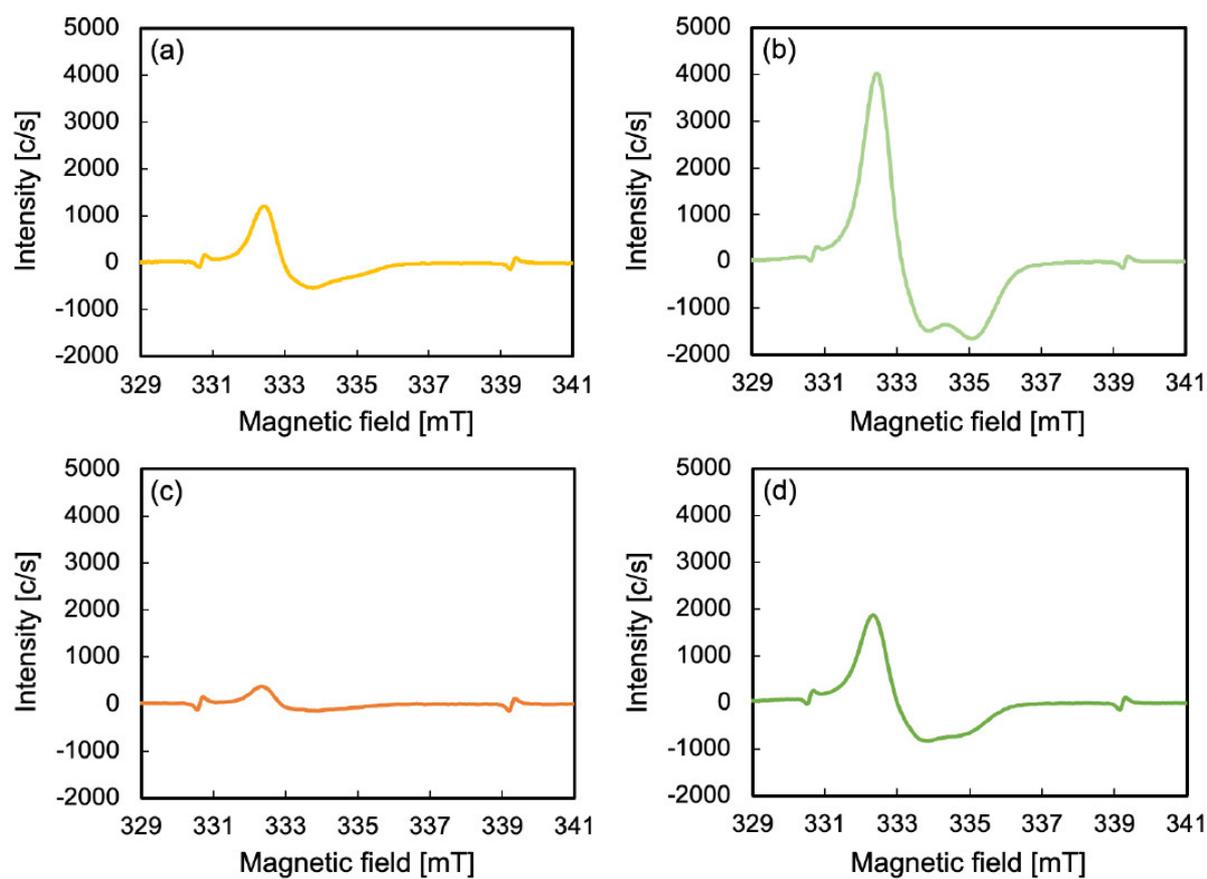


Figure 2. Electron spin resonance (ESR) spectra of the PTFE samples plasma-treated using He or Ar gas without or with the MgF₂ substrate and without using a heater. (a) He plasma-treated PTFE without an MgF₂ substrate, (b) Ar plasma-treated PTFE without an MgF₂ substrate, (c) He plasma-treated PTFE with an MgF₂ substrate, and (d) Ar plasma-treated PTFE with an MgF₂ substrate.

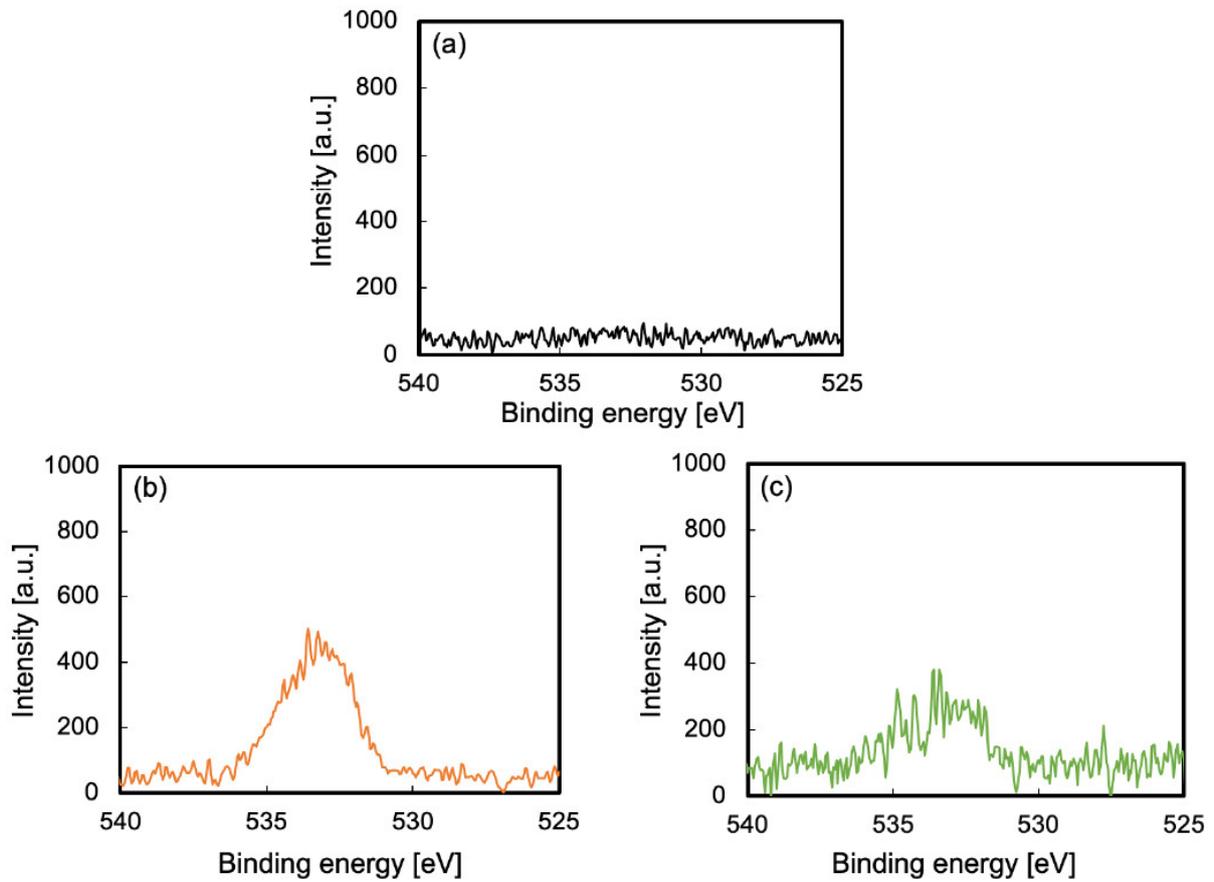


Figure 3. O1s-XPS spectra of the PTFE samples HAP-treated using He or Ar gas. (a) As-received PTFE, (b) He HAP-treated PTFE, and (c) Ar HAP-treated PTFE.

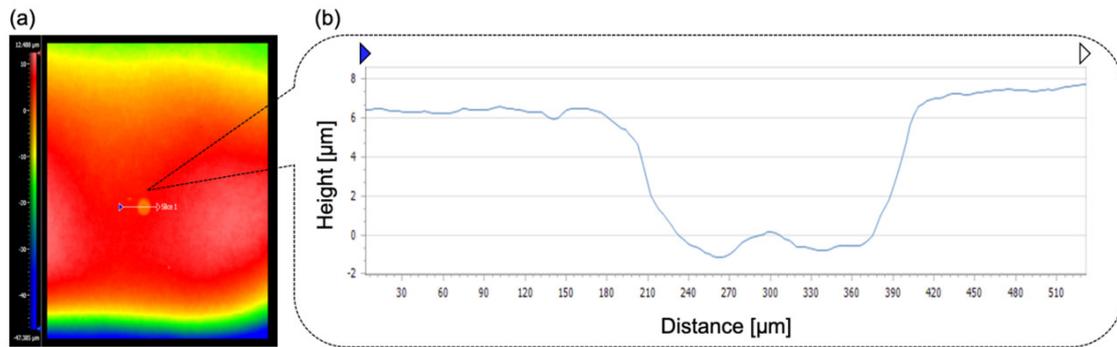


Figure S4. Gas cluster ion beam (GCIB) sputtering depth observed using a scanning white-light interferometer (SWLI) (a) SWLI image of the front view and (b) cross-sectional view around the GCIB sputtering hall.

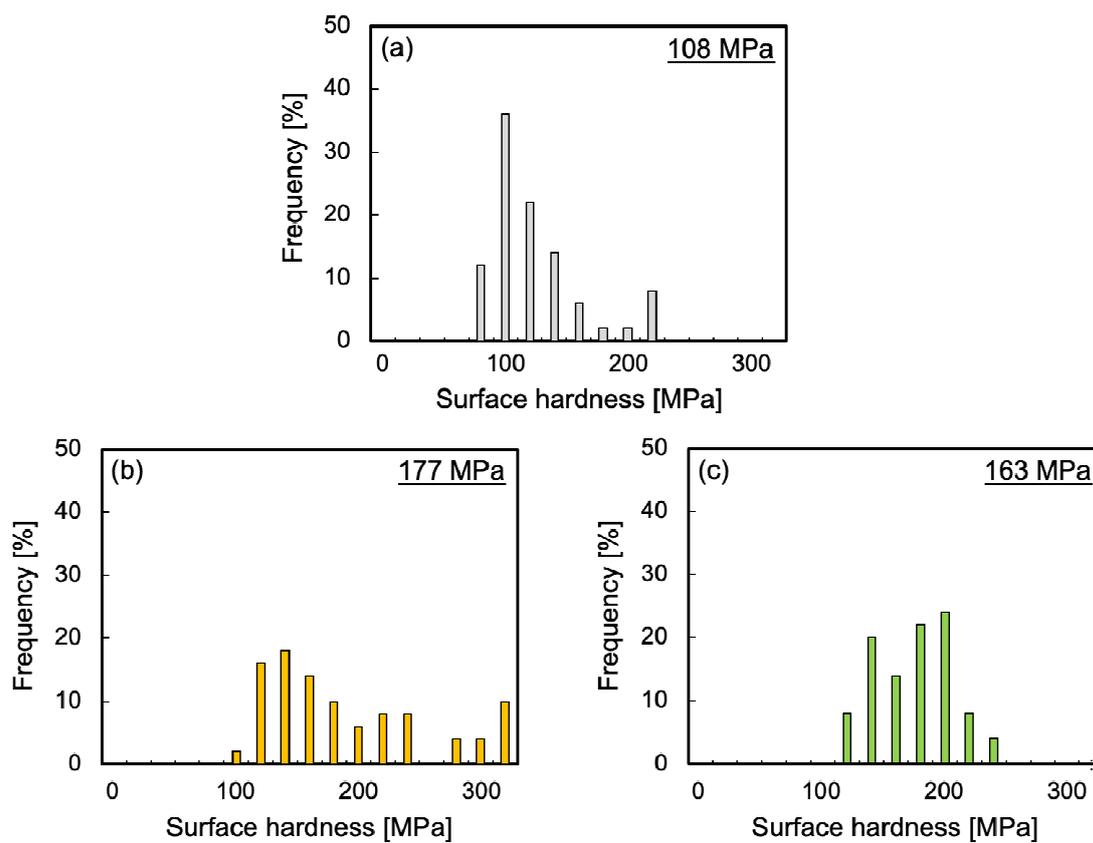


Figure S5. Surface hardness histograms of the PTFE samples plasma-treated using He or Ar gas with heating. (a) As-received PTFE, (b) He heat-assisted-plasma (HAP)-treated PTFE, and (c) Ar HAP-treated PTFE.