Supplementary information

Role of Surface Treatment and Coupling Agent for Adhesion between Stainless Steel (SUS) and Polyamide (PA) of Heterojunction Bilayer Composites

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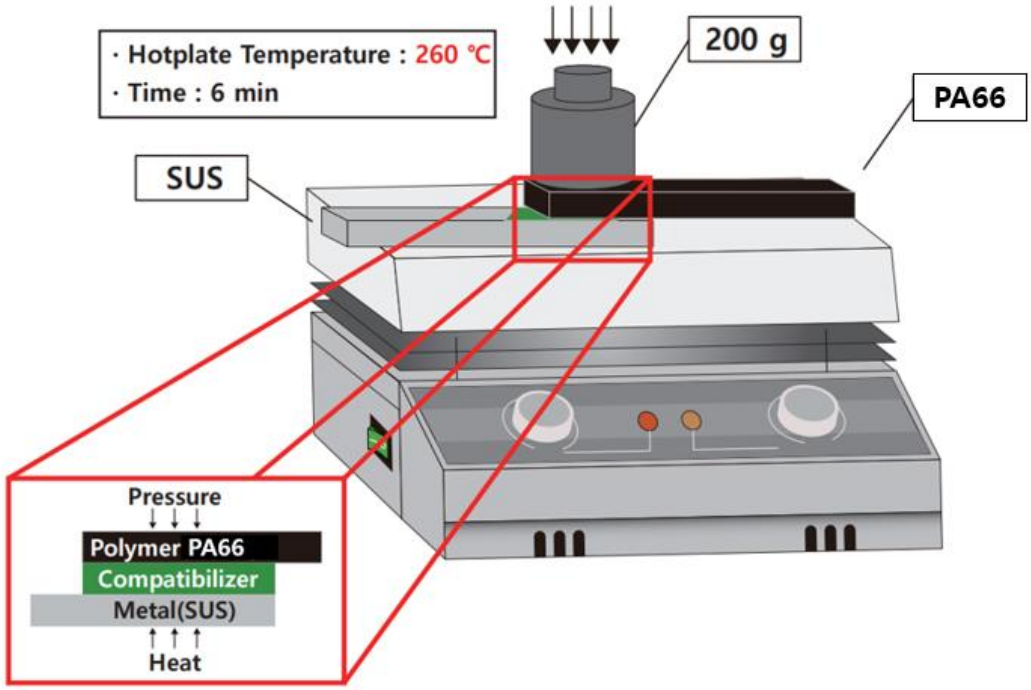

Figure S1. Fabrication of heterojunction bilayer composites for lap shear strength tests.

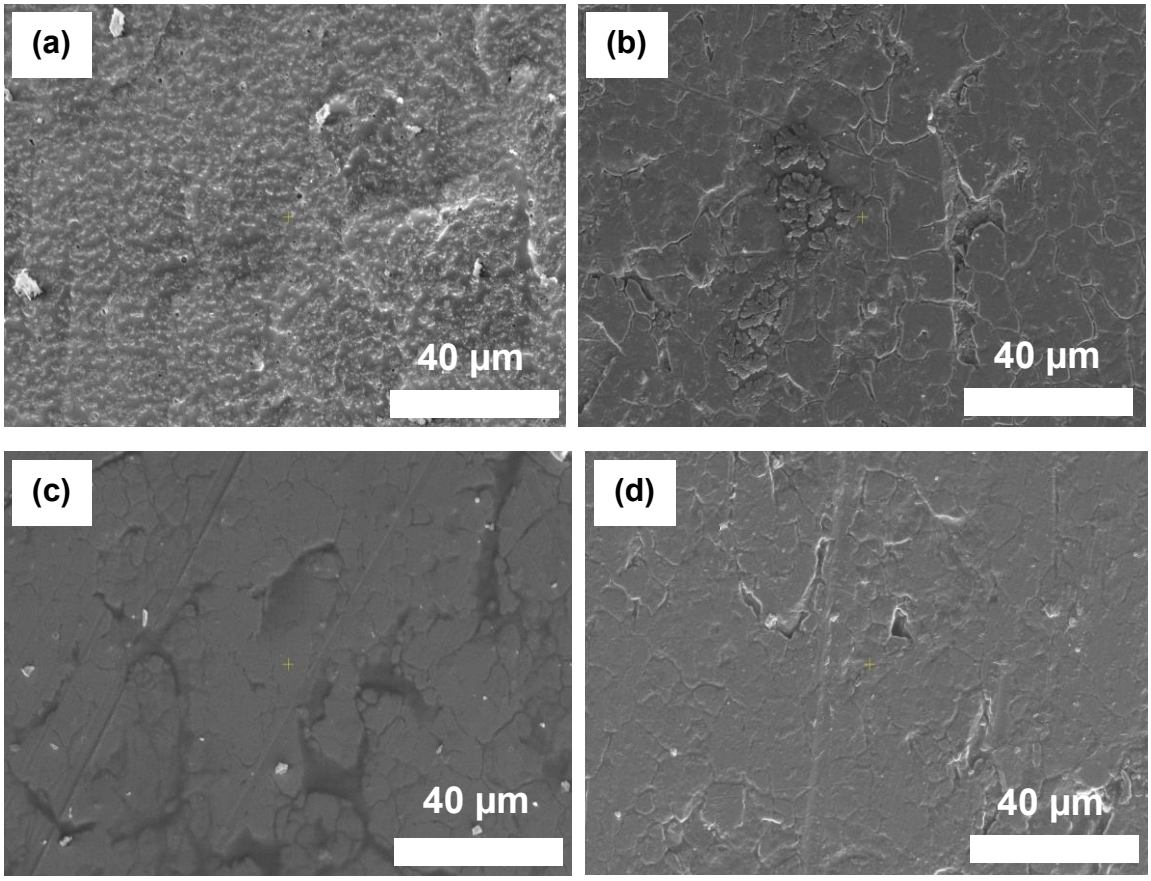

Figure S2. SEM images of untreated SUS surfaces with different silane coupling agents (×2,500): (a) A1S, (b) ES, (c) A2S, and (d) VS.

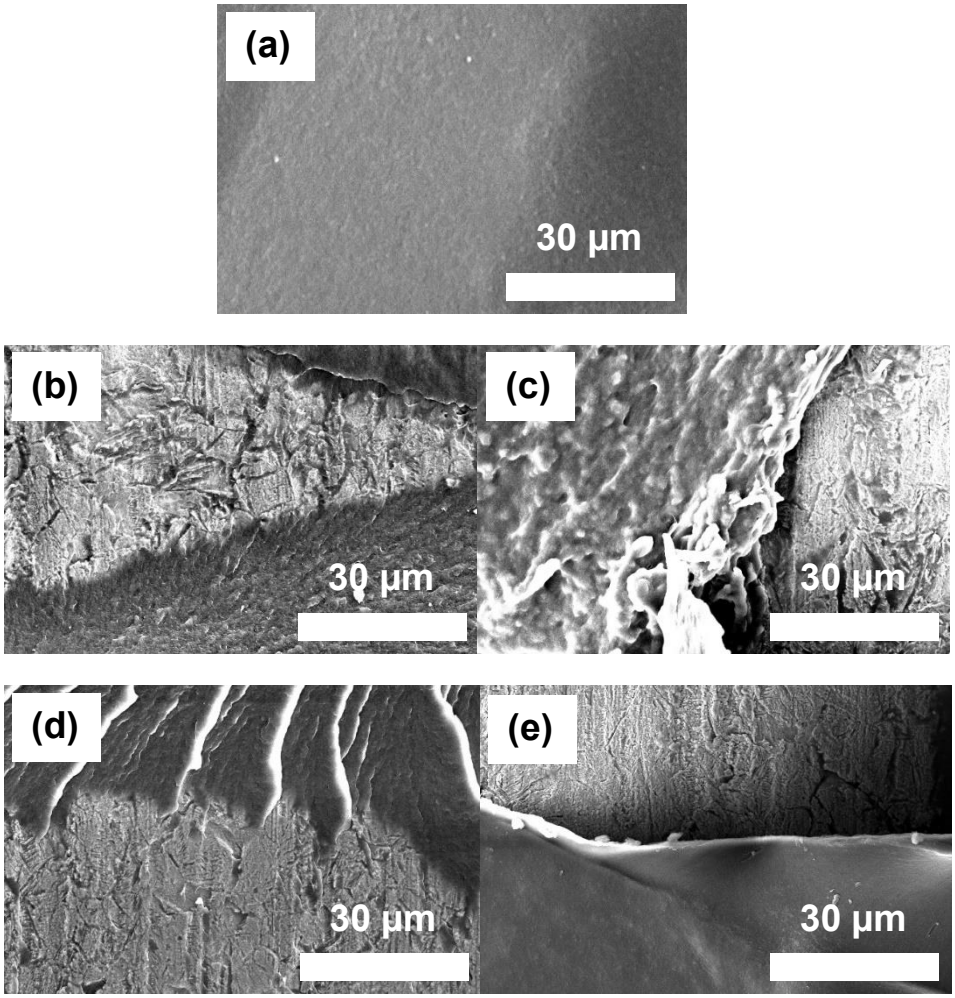

Figure S3. SEM images of fracture-surface SUS with different silane coupling agents (×2,500) after lap shear tests: (a) C+E+F-treated SUS without coupling agent, (b–e) C+E+F-treated SUS with coupling agent: (b) with A1S, (c) ES, (d) VS, and (e) A2S.

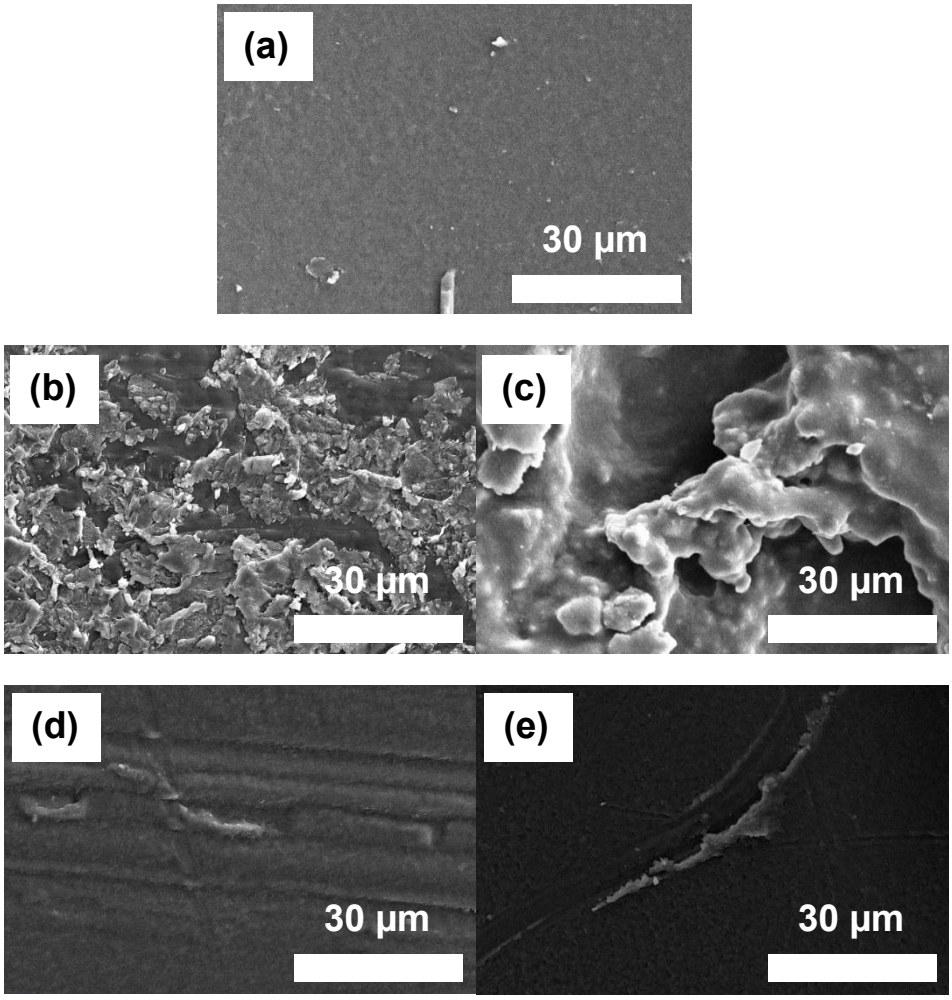

Figure S4. SEM images of fractured PA66 surfaces with different silane coupling agents (×2,500) after lap shear tests: (a) C+E+F-treated SUS without coupling agent, (b–e) C+E+F-treated SUS with coupling agent: (b) with A1S, (c) ES, (d) VS, and (e) A2S.

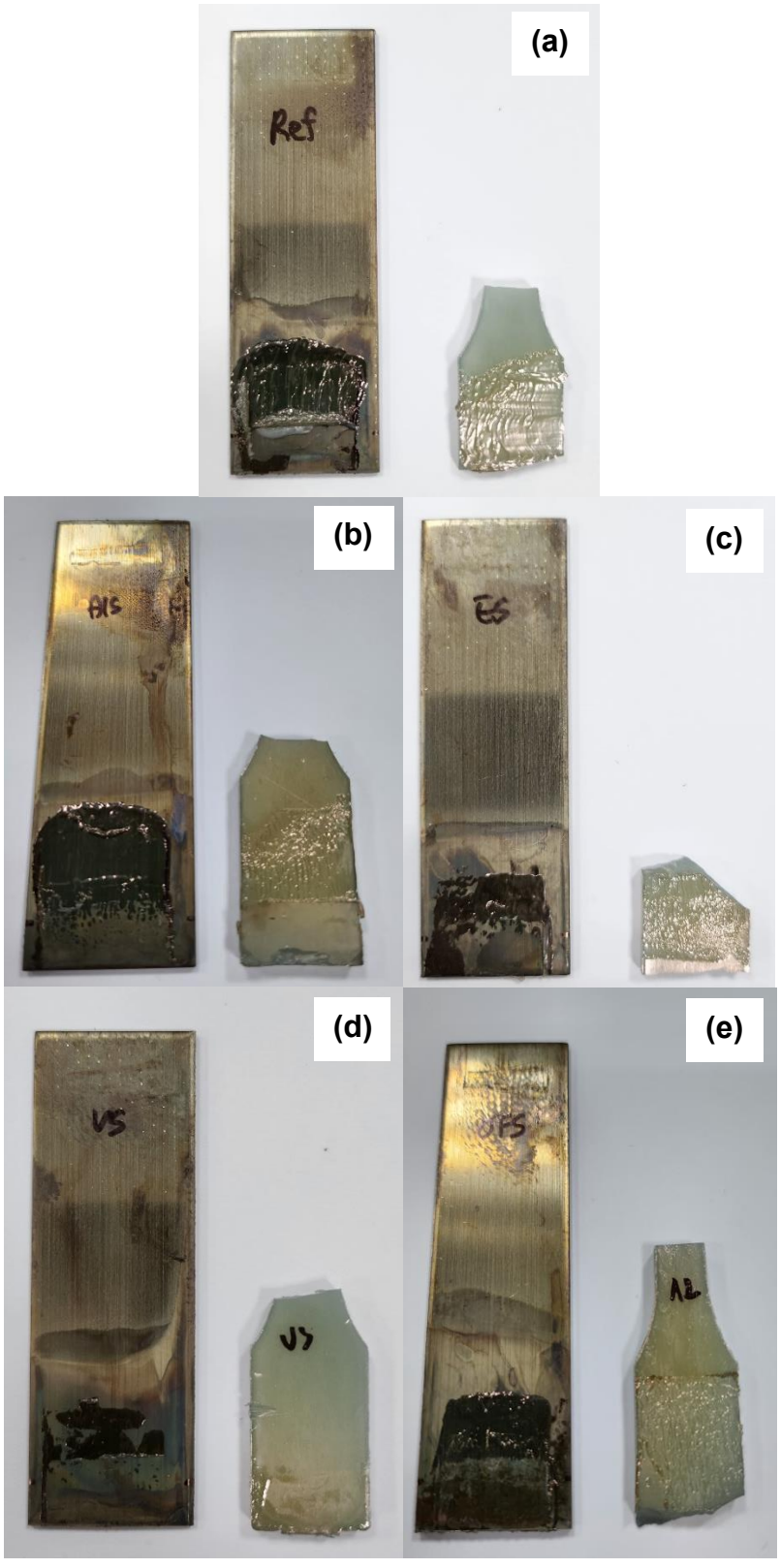

Figure S5. SEM images of fractured SUS and PA66 surfaces with different silane coupling agents: (a) C+E+F-treated SUS without coupling agent, (b–e) C+E+F-treated SUS with coupling agent: (b) with A1S, (c) ES, (d) VS, and (e) A2S. Left and right images indicate SUS and PA66, respectively, after lap shear tests.