Supplementary Material

Effect of polymer substrate on adhesion of electroless plating in irradiation-based direct immobilization of Pd catalyst

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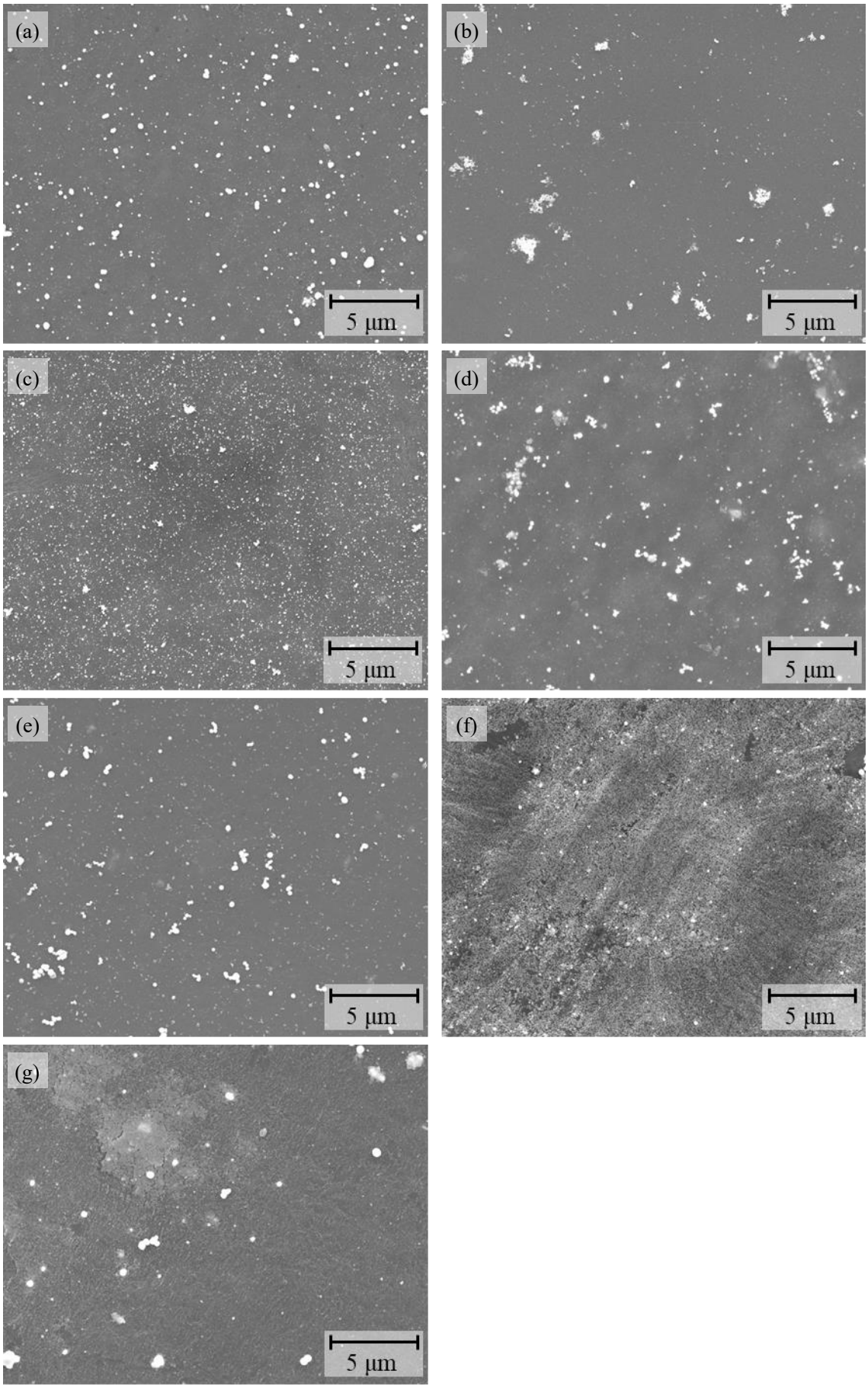

Figure S1. Low-magnification SEM images of Pd/substrates: (a) Pd/ABS, (b) Pd/AS, (c) Pd/PS, (d) Pd/PPS, Pd/PVC, Pd/PP, and (g) Pd/PE.

Pd nanoparticles were immobilized on PPS substrates using the method described in Section 2.1, with an aqueous solution of $Pd(NO_3)_2$ (1 mM) containing 10 vol% 2-propanol as the precursor solution. The obtained samples were denoted Pd/PPS 10vol%. Figure S2 shows exterior images of the samples after the electroless plating step without the acceleration step.

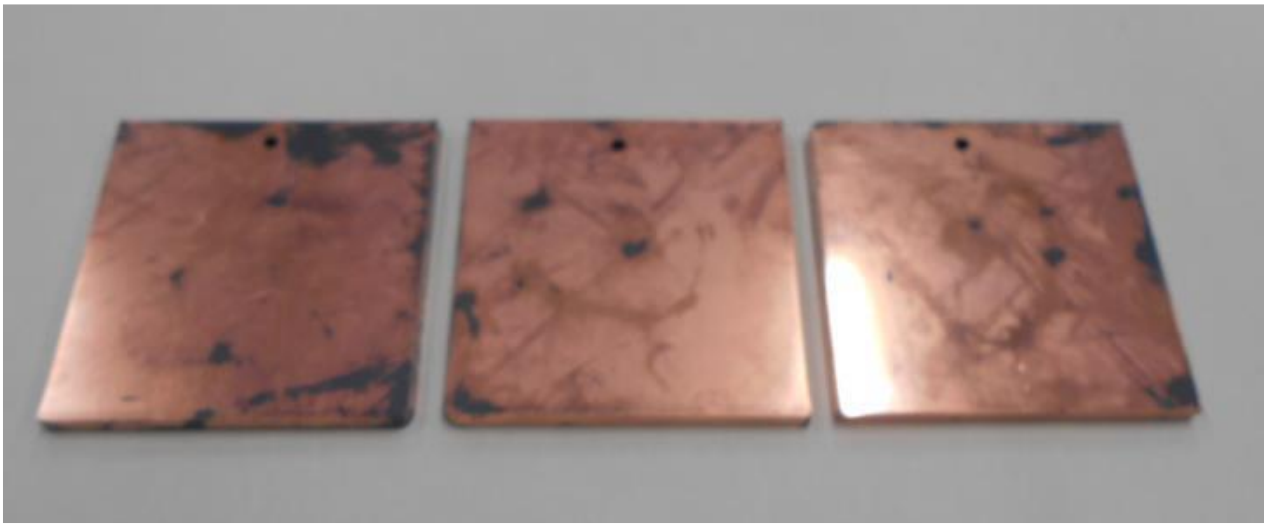

Figure S2. Exterior picture of Pd/PPS 10 vol% after electroless Cu plating without the acceleration step.

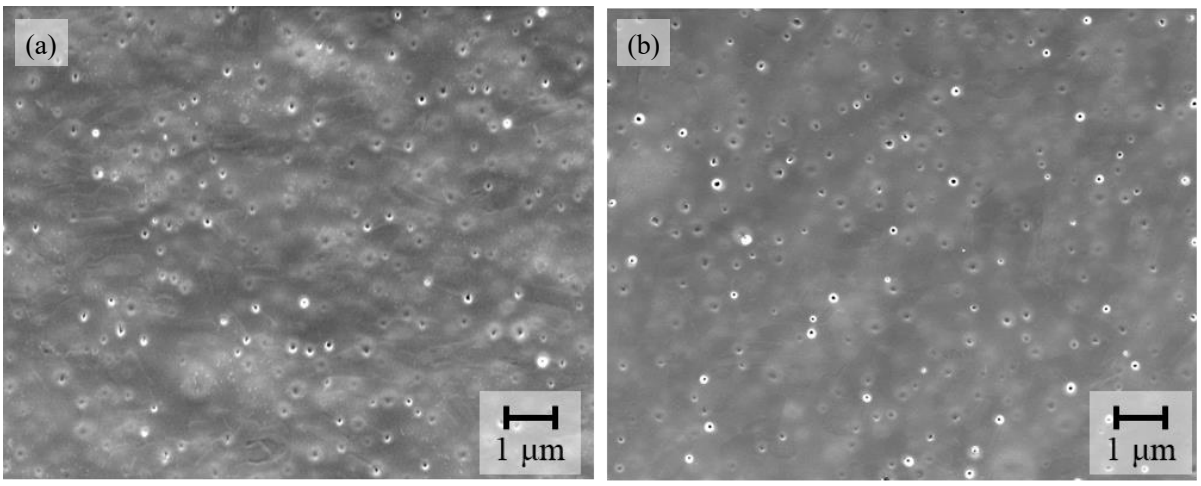

Figure S3. SEM images of the ABS substrate surface: (a) before irradiation and (b) after irradiation.

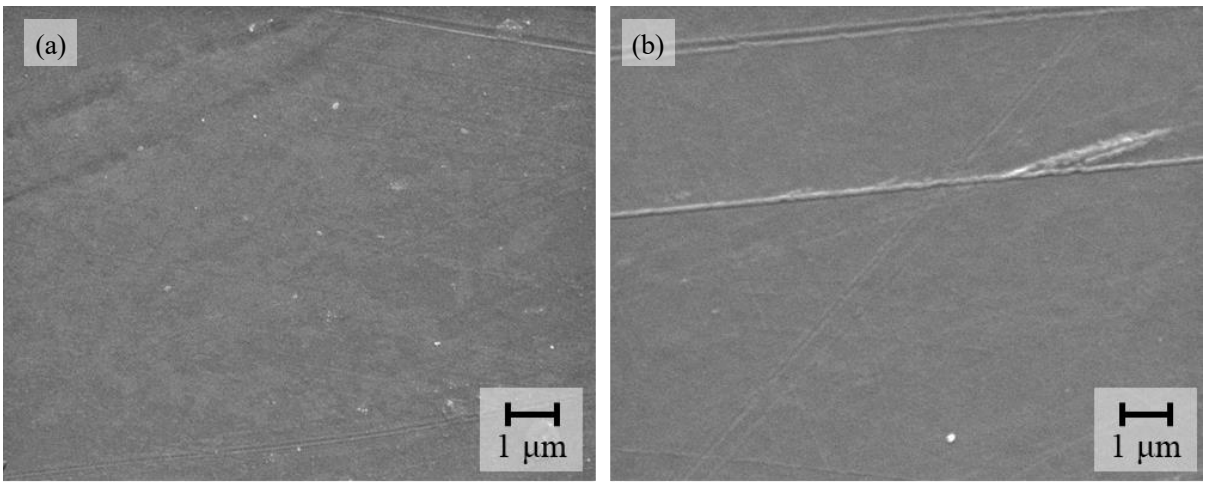

Figure S4. SEM images of AS substrate surface: (a) before irradiation, and (b) after irradiation.