

Supplementary Material

Fast Hydrogenation and Dehydrogenation of Pt/Pd Bimetal Decorated over Nano-Structured Ag Islands Grown on Alumina Substrates

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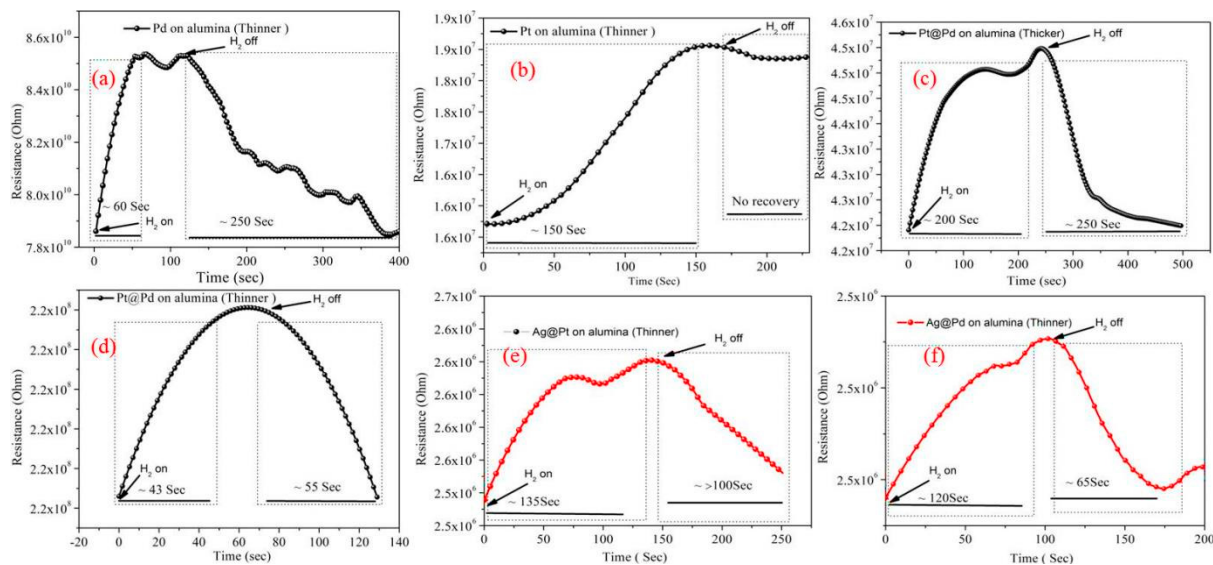


Figure S1. Response recovery characteristics of different catalytic materials at 10000 ppm hydrogen gas (120°C) (a) Pd (10 nm) on alumina (b) Pt (10 nm) on alumina (c) Pt@Pd on (40/40 nm) on alumina (d) Pt@Pd on (10/10 nm) on alumina (e) Ag@Pt (18 nm Ag annealed at 200°C with 10 nm Pt) on alumina (f) Ag@Pt (18 nm Ag annealed at 200°C with 10 nm Pd) on alumina.

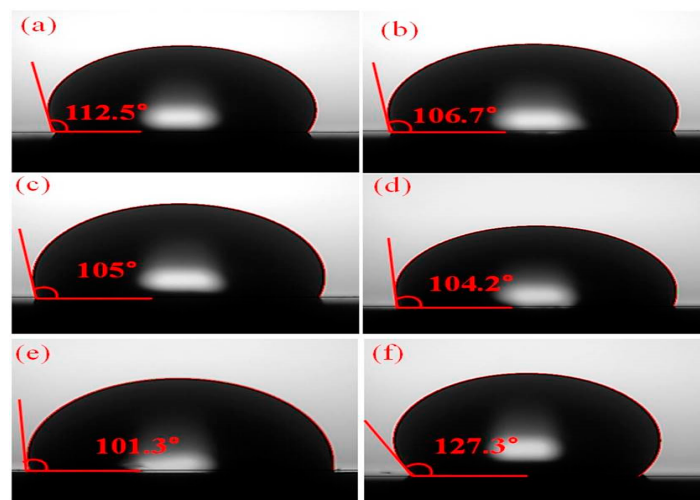


Figure S2. Water contact angle of Ag nanoislands (a) without annealing, (b) 200°C, (c) 300°C, (d) 350°C, (e) 400°C, (f) Pt/Pd @ Ag nanoislands.

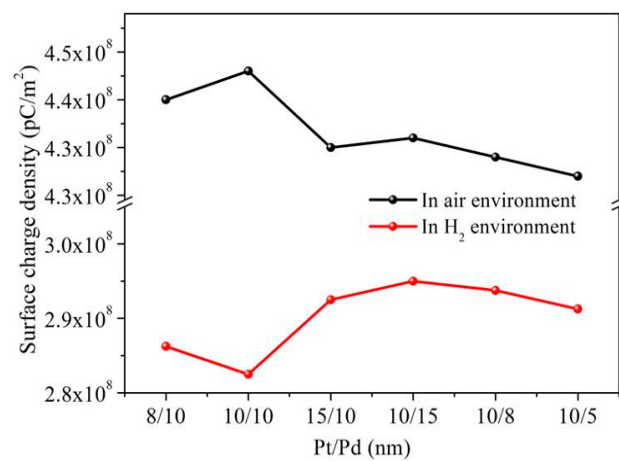


Figure S3. Bimetal size vs. surface charge density.

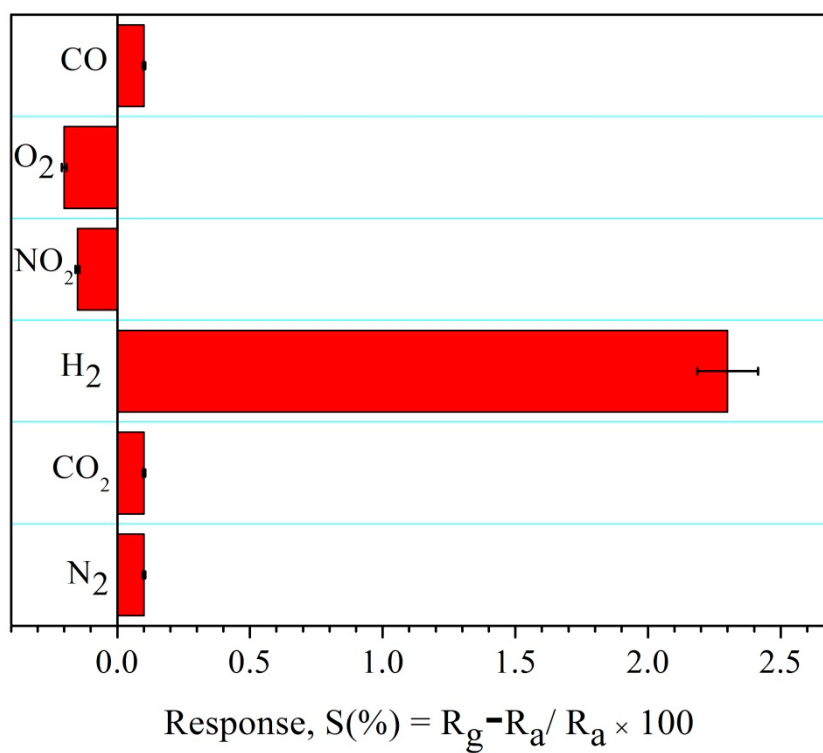


Figure S4. Selectivity