Electronic Supporting Information

Boronate microparticle-supported nano-palladium and nano-gold catalysts for chemoselective hydrogenation of cinnamaldehyde in environmentally preferable solvent

Seika Fujiwara,[a] Naoto Takanashi,[a] Ryuhei Nishiyabu[a] and Yuji Kubo*[ab]

[a]*Department of Applied Chemistry, Graduate School of Urban Environmental Sciences, Tokyo Metropolitan University*

[b]*Research Center for Gold Chemistry, Tokyo Metropolitan University*

*Corresponding Author: Yuji Kubo, yujik@tmu.ac.jp

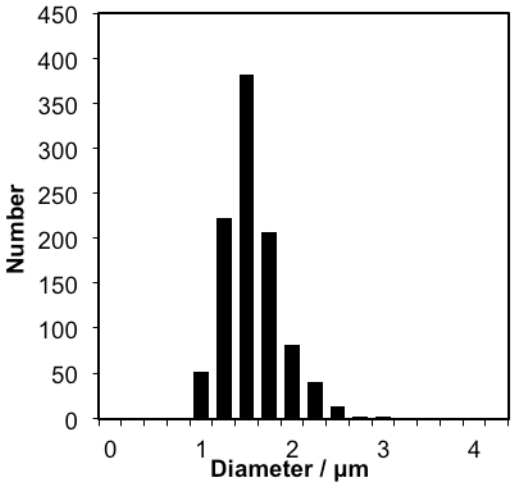

Fig. S1 The size distribution of boronate microparticles **BP**.

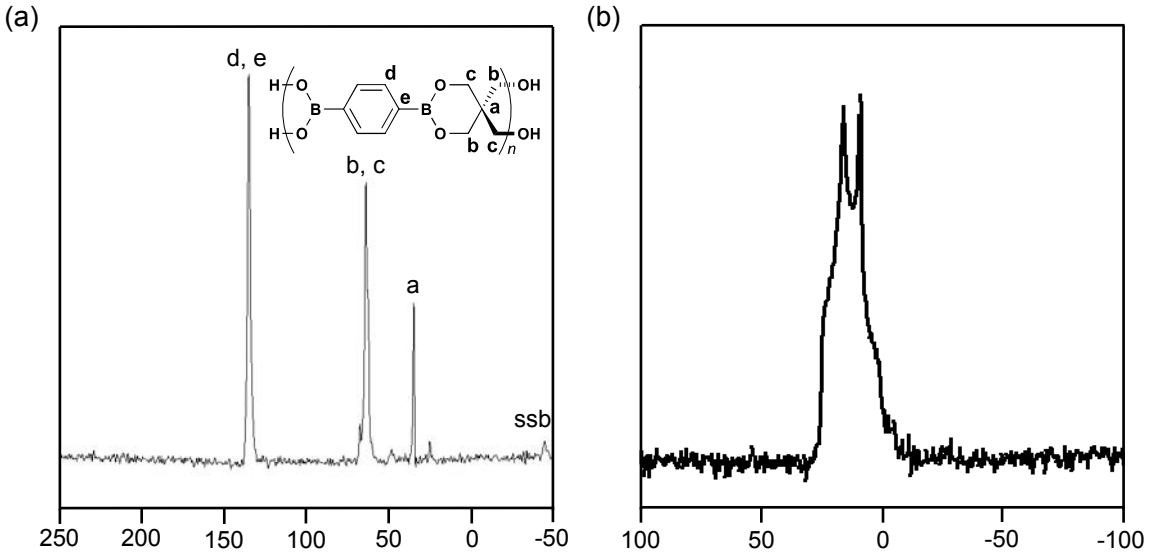

Fig. S2 (a) ^{13}C-CP-MAS and (b) ^{11}B-DD-MAS spectrum of **BP**.

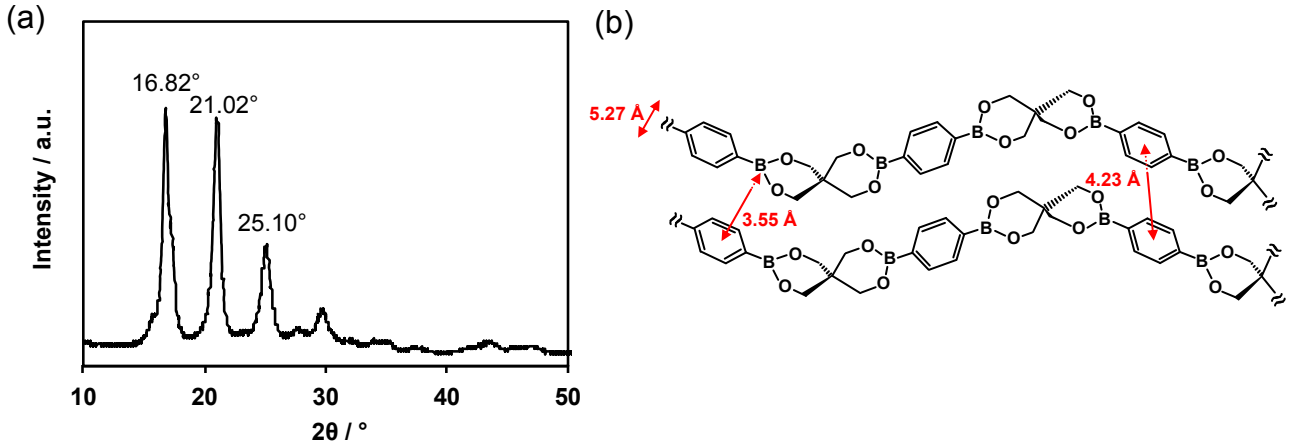

Fig. S3 a) PXRD pattern of **BP**. b) A proposed nanostructure of **BP**.

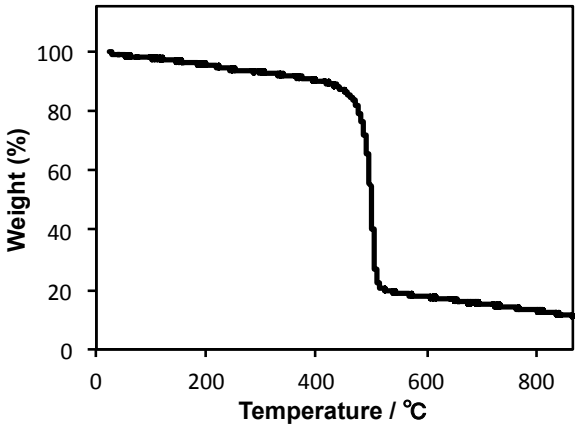

Fig. S4 Thermogravigram (TG) curve of **BP**. The graph shows the loss of mass as a function of temperature.

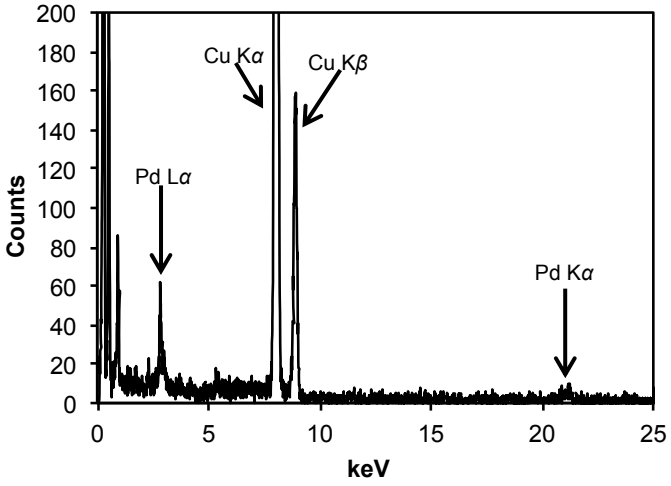

Fig. S5 EDX spectrum of **Pd/BP**.

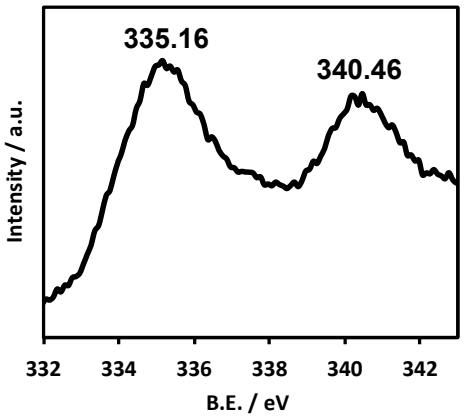

Fig. S6 Pd 3d XPS spectrum of **Pd/BP**.

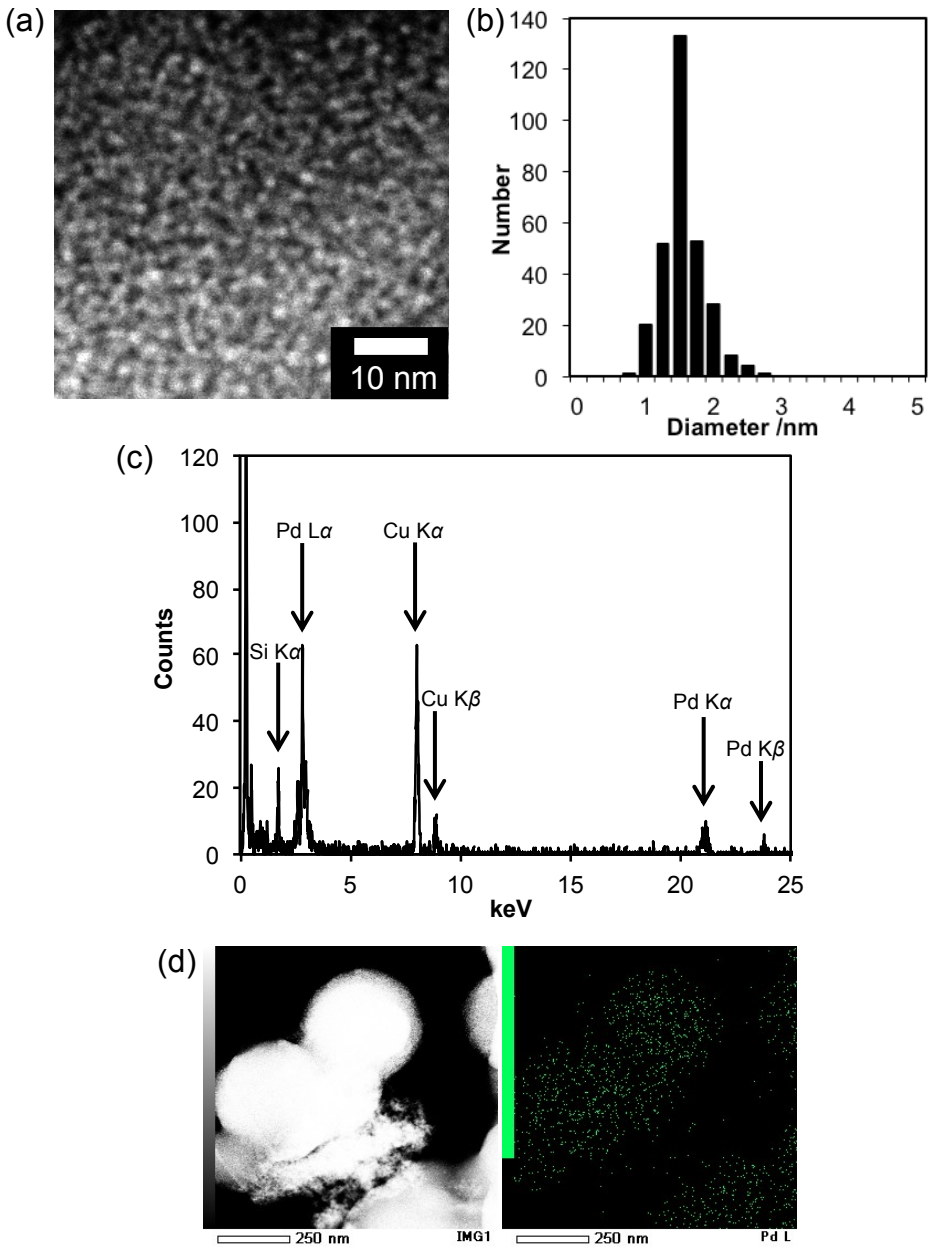

Fig. S7 (a) High-angle annular dark-field scanning TEM (HAADF-STEM) image of **Pd/SiO_2**. (b) The size distribution of Pd NPs deposited on SiO_2 support materials. (c) EDX spectrum and (d) EDX Pd-mapping of **Pd/SiO_2**.

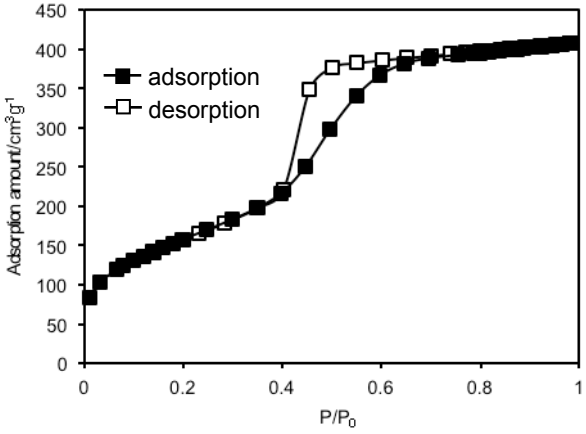

Fig. S8 N_2 adsorption-desorption isotherms of **Pd/SiO$_2$**.

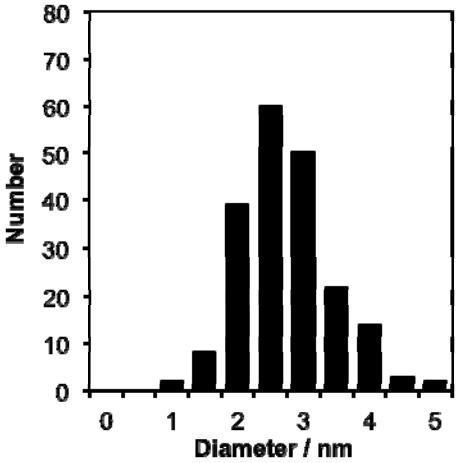

Fig. S9 The size distribution of Au NPs on the surface of **BP**.

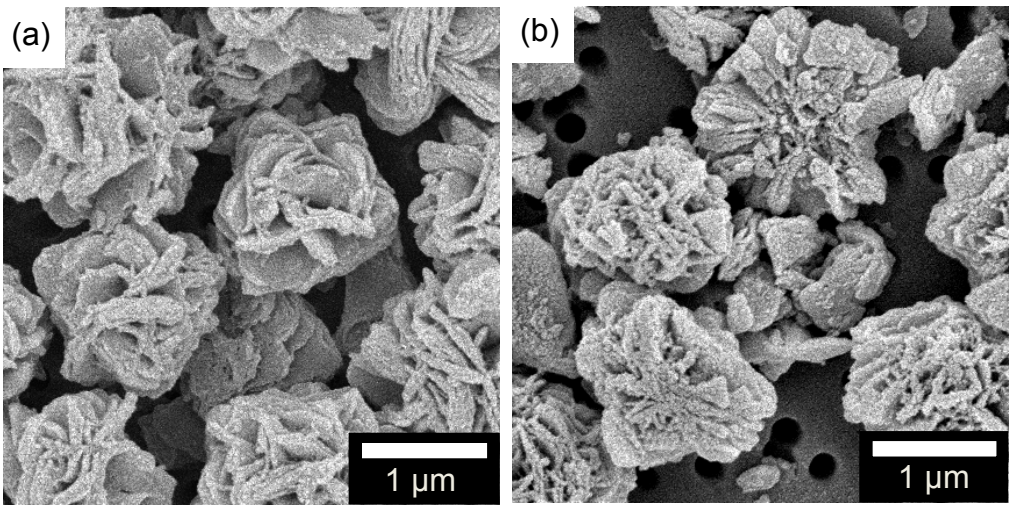

Fig. S10 FE-SEM images of (a) as-prepared **Pd/BP** and (b) **Pd/BP** after five successive reaction runs.