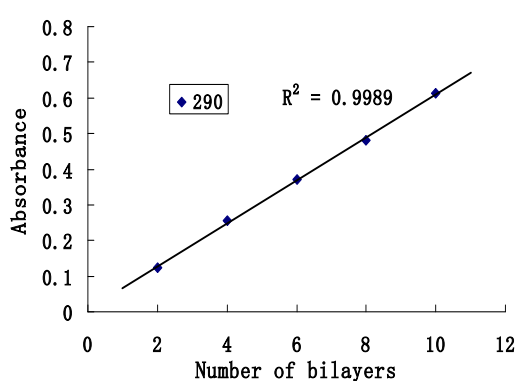


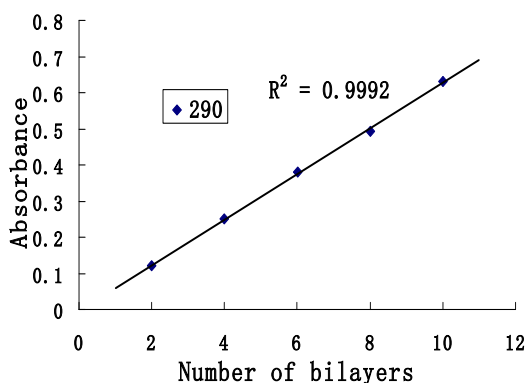
Palladium nanoparticles *in situ* generated in metal-organic films for catalytic applications

Shuiying Gao, Minna Cao, Weijin Li and Rong Cao*

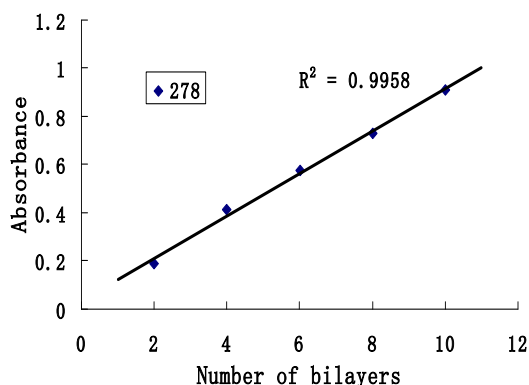
State Key Laboratory of Structural Chemistry, Fujian Institute of Research on the
Structure of Matter, the Chinese Academy of Sciences, Fuzhou 350002, China



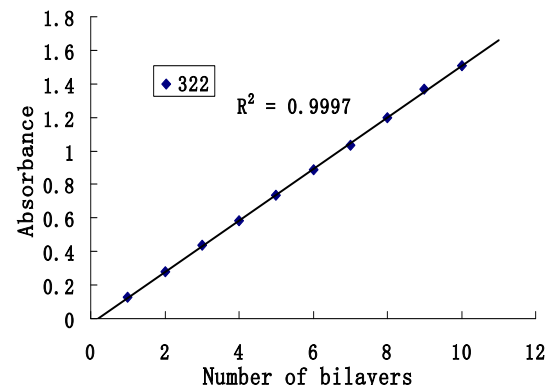
(a)



(b)

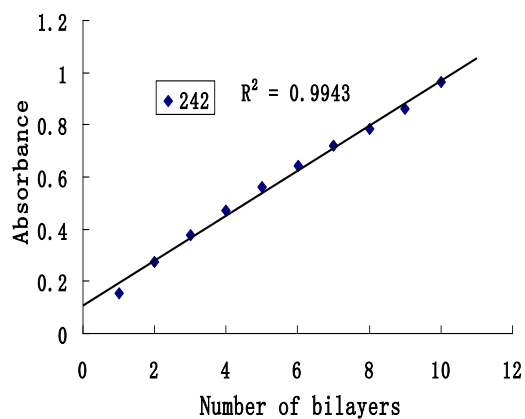


(c)

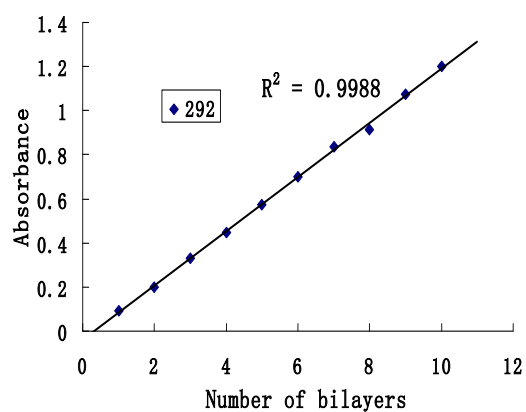


(d)

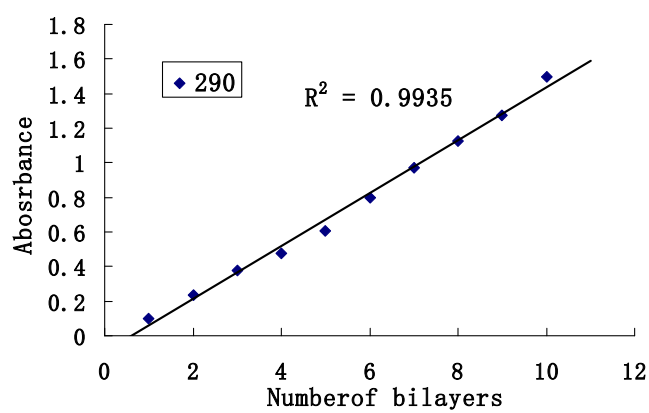
● To whom correspondence should be addressed.



(e)



(f)



(g)

Fig. S1 Increase in the absorbance at characteristic peaks as a function of the number of bilayers. (a) (Pd/bpe)_n, (b) (Pd/bpp)_n, (c) (Pd/bpy)_n, (d) (Pd/dpe)_n, (e) (Pd/tpt)_n, (f) (Pd/tpy)_n, (g) (Pd/bitpy)_n.

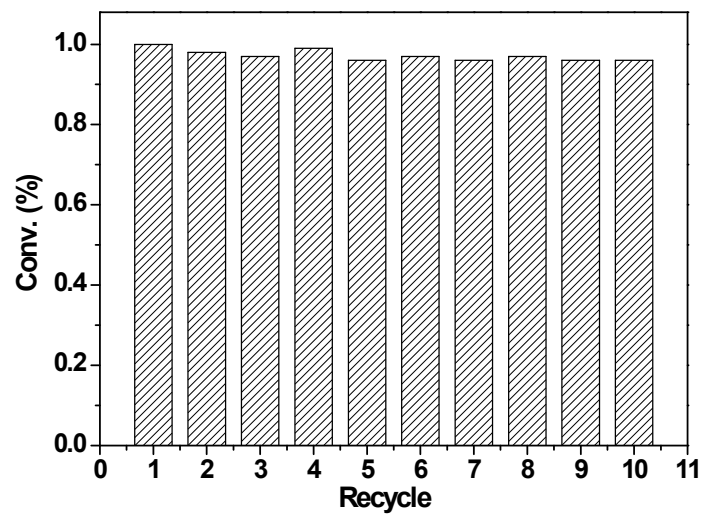
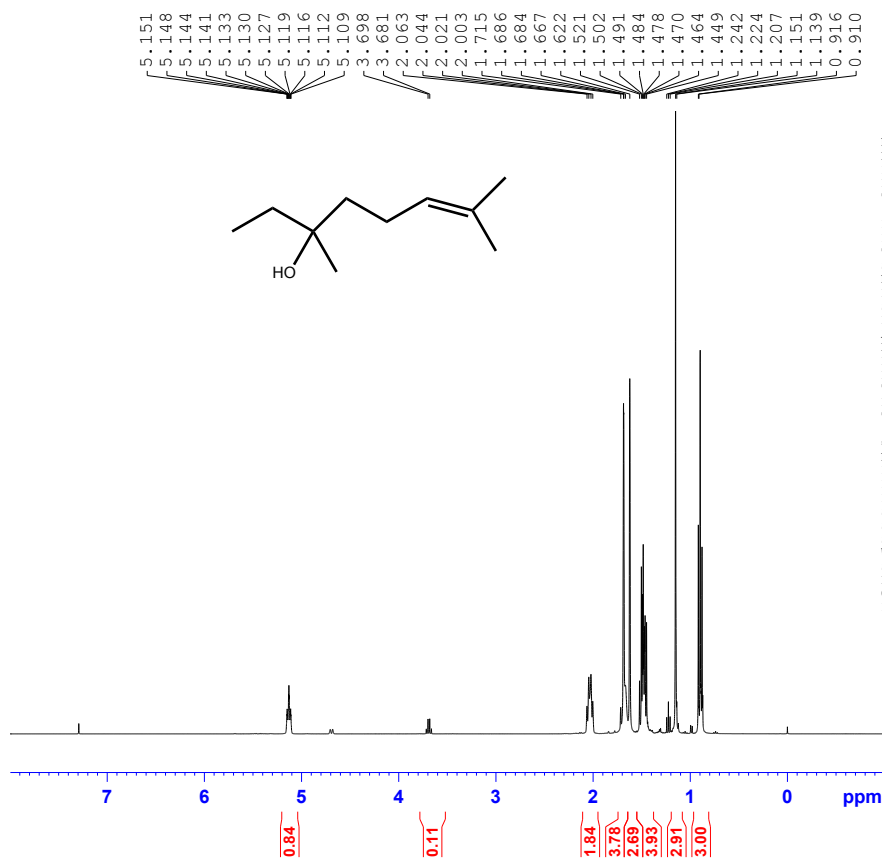


Fig. S2 Effect of recycle times on the styrene hydrogenation by (Pd/bpy)₁₀ films

Table S1 Pd content of different bilayer films

bilayer number (n)	2	4	6	8	10
Pd/bpy (mol)	8.1×10^{-8}	1.6×10^{-7}	2.3×10^{-7}	3.2×10^{-7}	4.2×10^{-7}
Pd/dpe (mol)	7.8×10^{-8}	1.5×10^{-7}	2.4×10^{-7}	3.2×10^{-7}	4.4×10^{-7}
Pd/tpy (mol)	1.0×10^{-7}	2.0×10^{-7}	3.1×10^{-7}	4.2×10^{-7}	5.3×10^{-7}
Pd/bitpy (mol)	1.1×10^{-7}	2.2×10^{-7}	3.4×10^{-7}	4.6×10^{-7}	5.8×10^{-7}

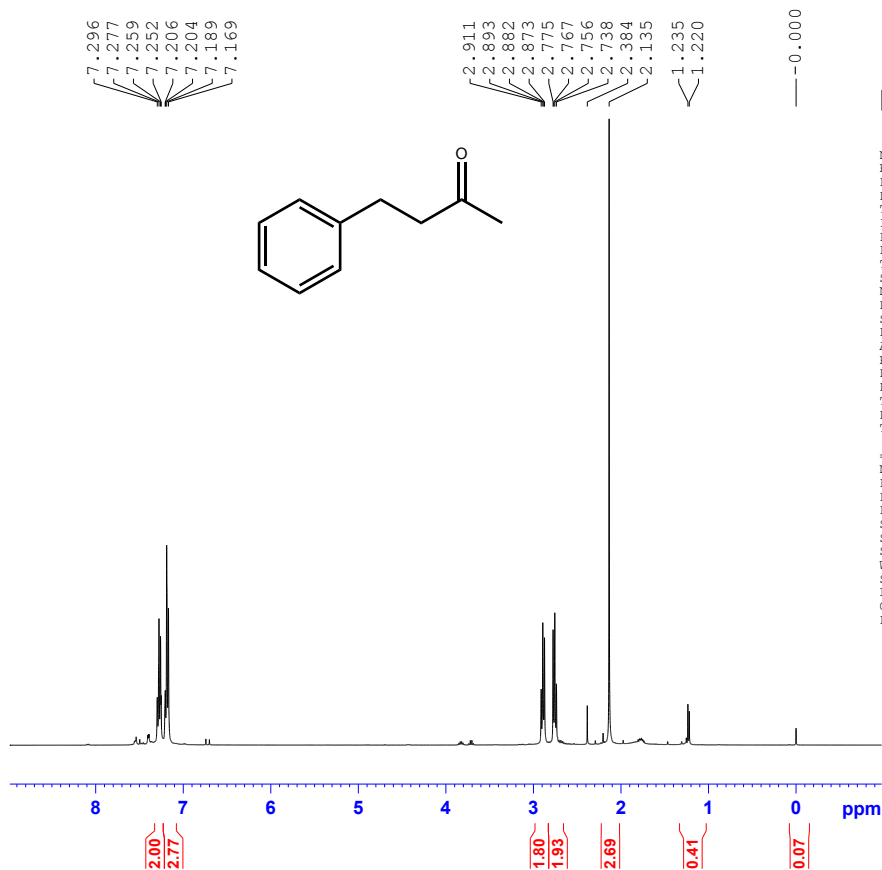
¹H NMR spectra of the products



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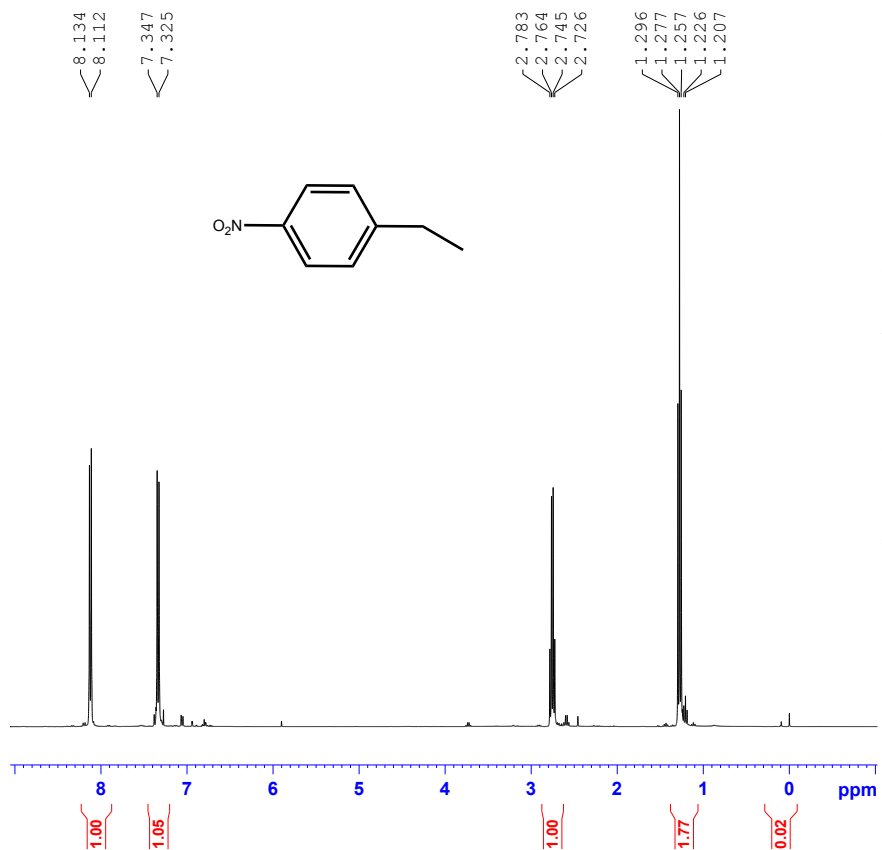
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PROCNO    1
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DS         2
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FIDRES     0.125483 Hz
AQ         3.9846387 sec
RG         28.5
DW         60.800 usec
DE         6.50 usec
TE         298.1 K
D1         1.00000000 sec
TD0        1

===== CHANNEL f1 =====
NUC1       1H
P1         13.00 usec
PL1        0.00 dB
PL1W       10.57504177 W
SFO1       400.1324710 MHz
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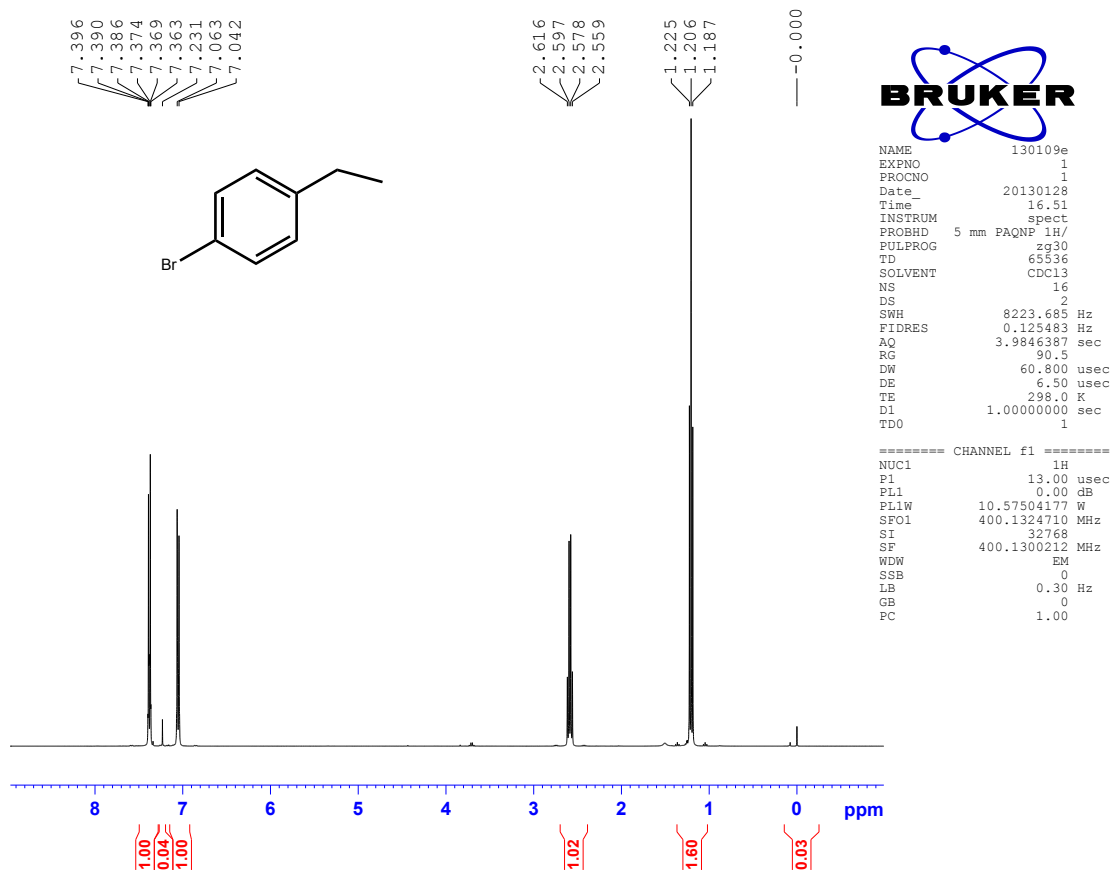
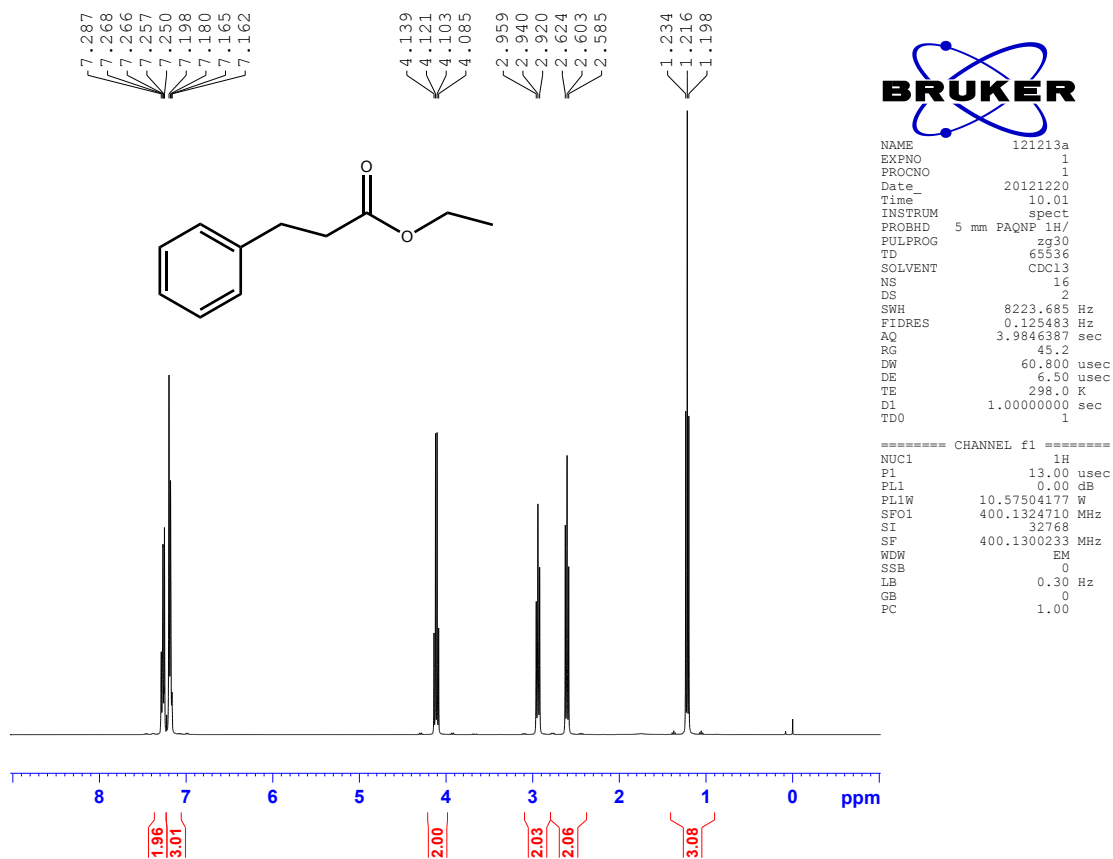
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DE 6.50 usec
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D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
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PL1W 10.57504177 W
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SFO1 400.1324710 MHz
SI 32768
SF 400.1300040 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



GC-MS traces of catalysis reactions

