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# Palladium Catalyst Supported on Boron-Doped Porous Carbon for Efficient Dehydrogenation of Formic Acid

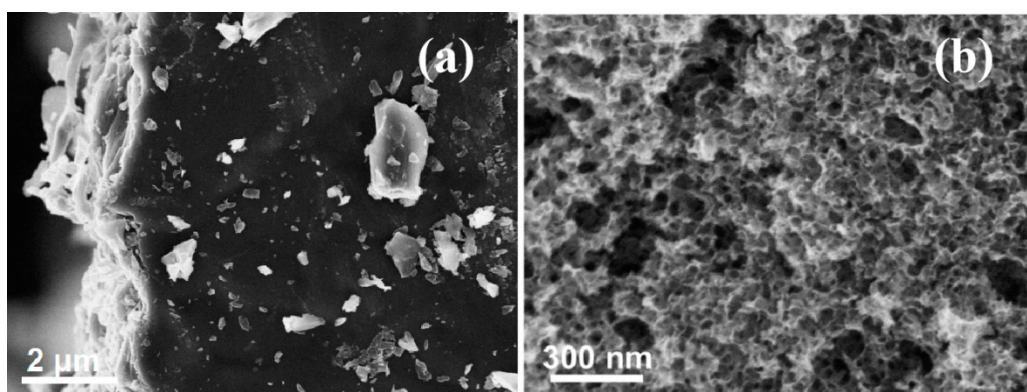
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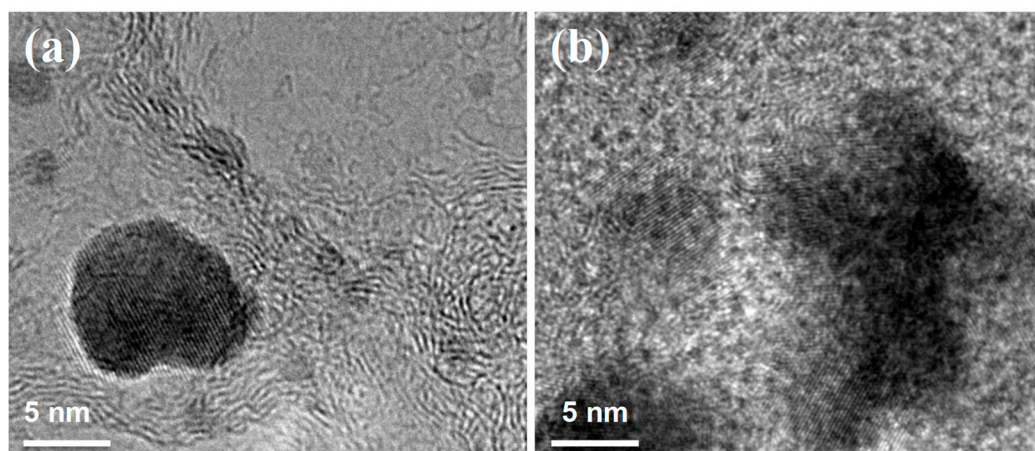
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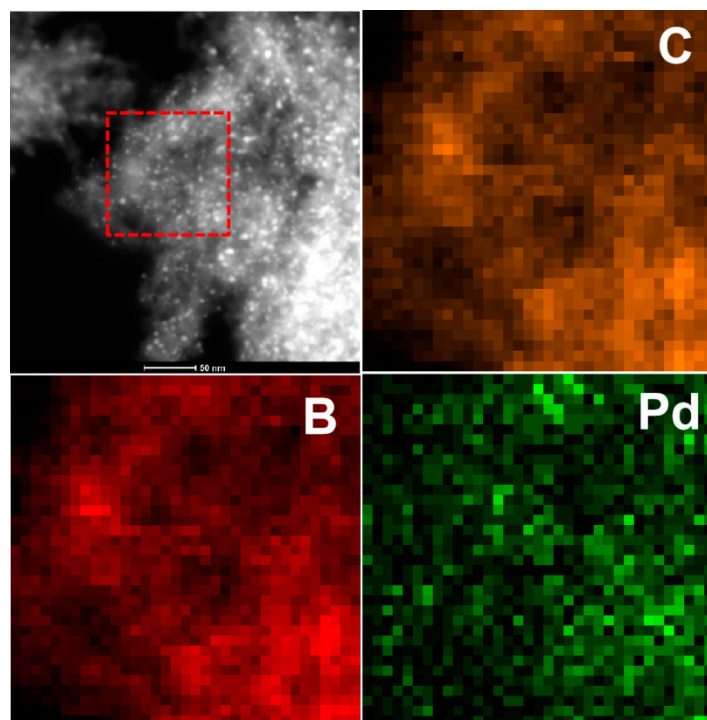
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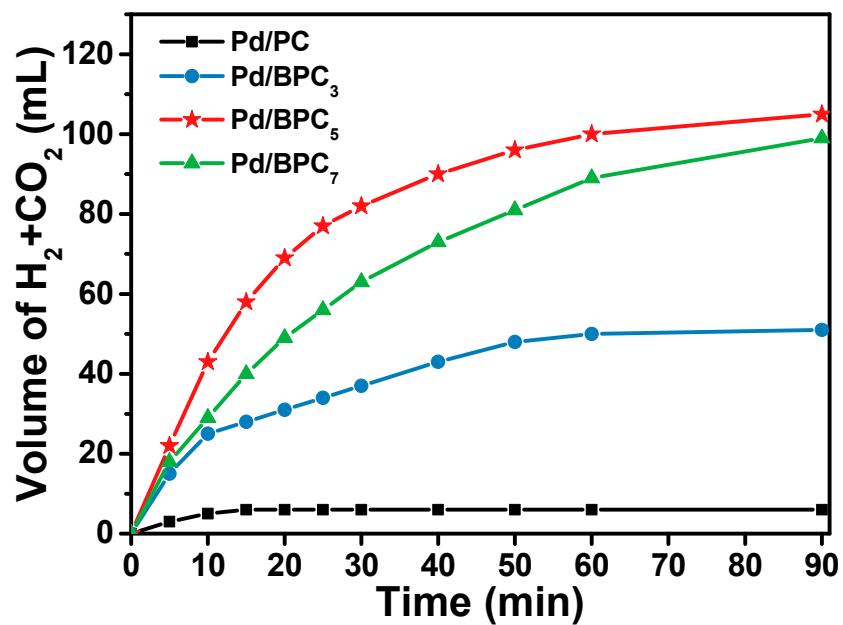
**Figure S1.** SEM images of petroleum asphalt (a) and PC (b).



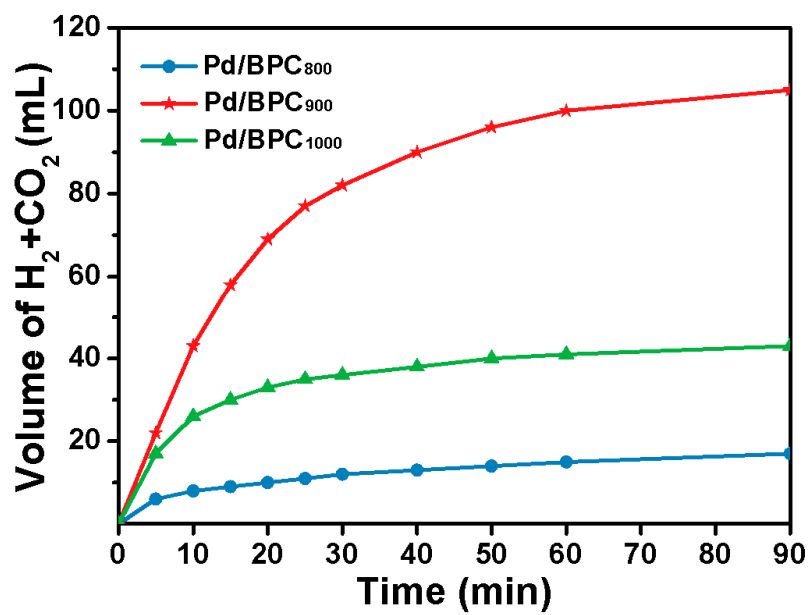
**Figure S2.** HRTEM images of (a) Pd/BPC and (b) Pd/PC.



**Figure S3.** TEM image of Pd/BPC and corresponding EDS mapping for the C, B, and Pd elements.



**Figure S4.** The catalytic performance of Pd/BPC<sub>r</sub> (r=3, 5, 7) catalysts for dehydrogenation of formic acid.

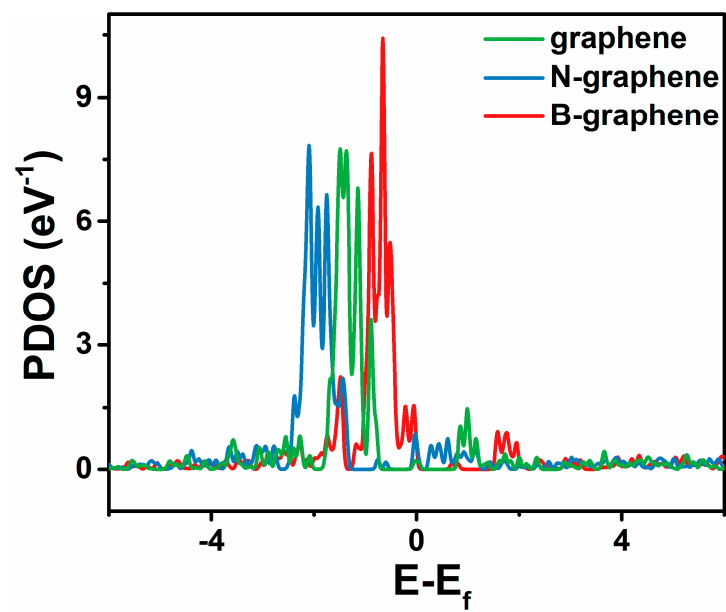


**Figure S5.** The catalytic performance of Pd/BPC<sub>T</sub> (T=800, 900, 1000 °C) for dehydrogenation of formic acid.

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**Table S1.** The catalytic performance of Pd/BPC<sub>t</sub> (t=0, 20, 40, 60, 80 °C) for dehydrogenation of formic acid.

Entry	Catalyst	Reduction temperature (°C)	V <sub>gas</sub> (mL)
1	Pd/BPC	0	8
2	Pd/BPC	20	18
3	Pd/BPC	40	36
4	Pd/BPC	60	105
5	Pd/BPC	80	73



**Figure S6.** The partial DOS of (a) graphene, (b) N-graphene, and (c) B-graphene.