

Solvent-free and aerobic oxidation of benzyl alcohol catalyzed by Pd supported on carbon nitride /CeO₂ composites

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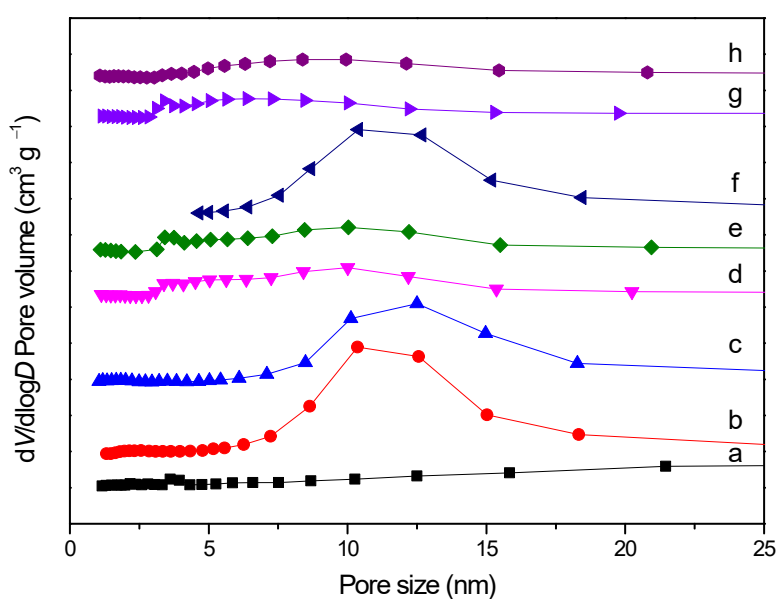


Fig. S1 Pore size distribution eg-C₃N₄ (a), CeO₂ (b), CN-1.0/CeO₂ (c), 1Pd/CN-1.0/CeO₂ (d), 2Pd/CN-1.0/CeO₂ (e), 3Pd/CN-1.0/CeO₂ (f), 4Pd/CN-1.0/CeO₂ (g), and 3Pd/CN-1.0/CeO₂-R (h)

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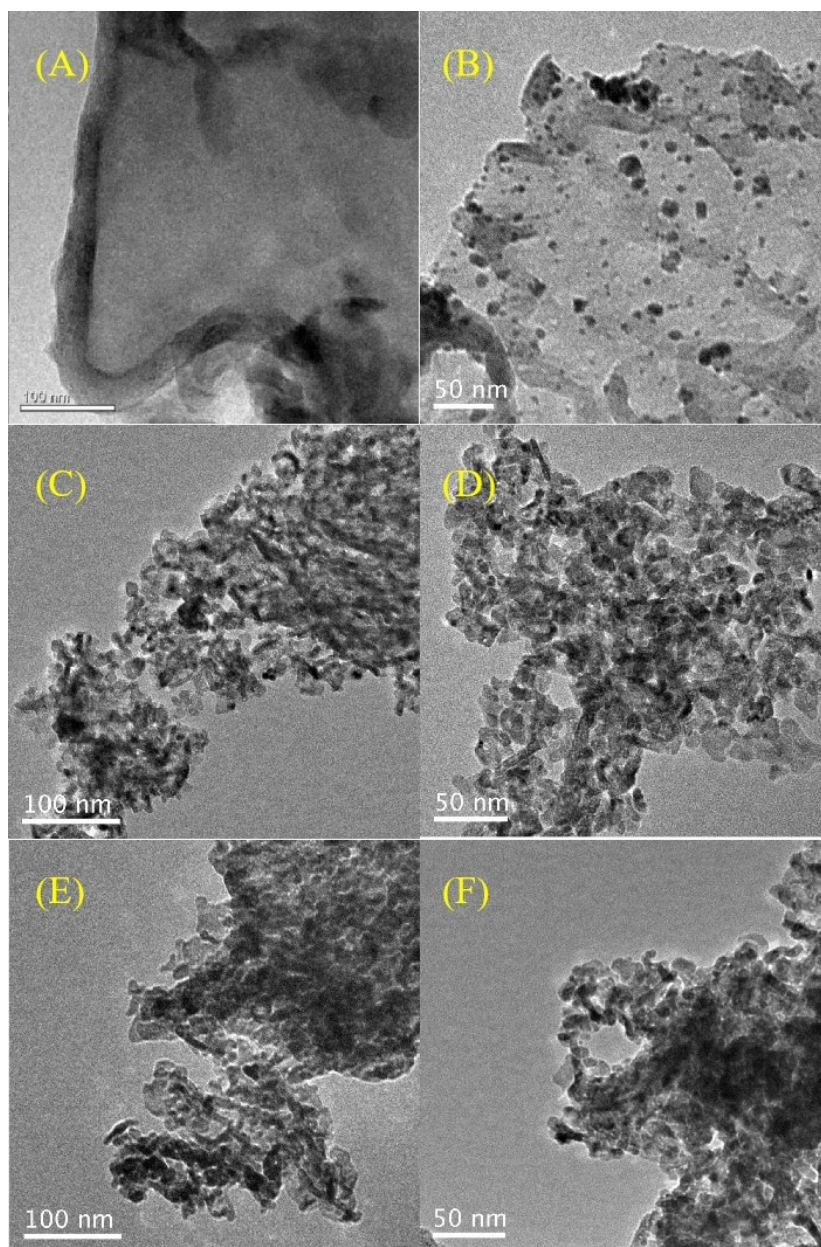


Fig. S2 TEM images of eg-C₃N₄ (A), CeO₂ (B), CN-1.0/CeO₂ (C), 3Pd/eg-C₃N₄ (D), 3Pd/CeO₂ (E), and 3Pd/CN-1.0/CeO₂ (F) materials.

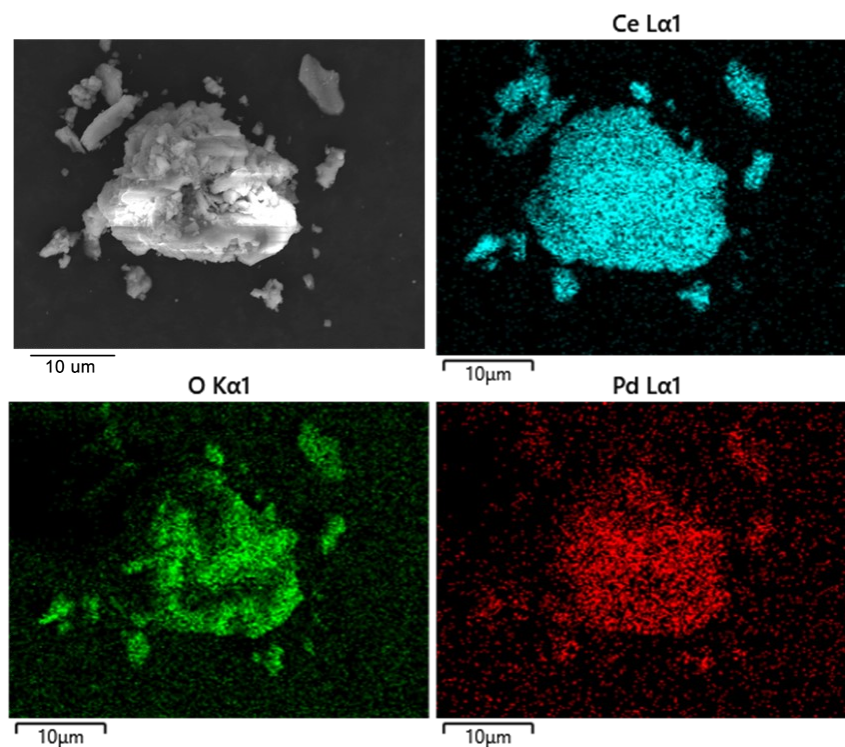


Fig. S3 SEM and EDX-mapping images of 3Pd/CeO₂.

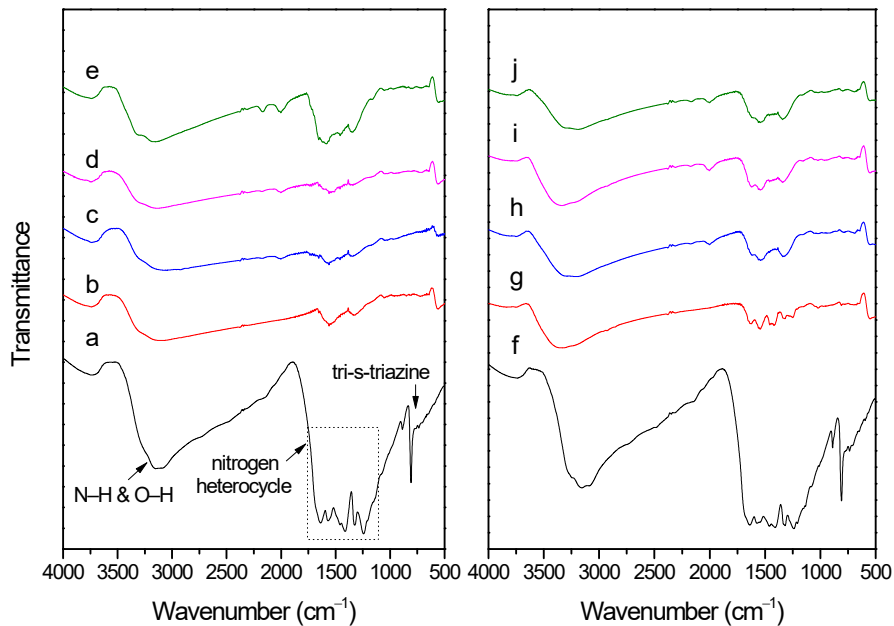


Fig. S4 FT-IR spectra of eg-C₃N₄ (a), CeO₂ (b), CN-0.8/CeO₂ (c), CN-1.0/CeO₂ (d), CN-1.2/CeO₂ (e), 3Pd/eg-C₃N₄ (f), 3Pd/CeO₂ (g), 3Pd/CN-0.8/CeO₂ (h), 3Pd/CN-1.0/CeO₂ (i), and 3Pd/CN-1.2/CeO₂ (j) materials.

Table S1 Attribution of Ce cations of Ce 3d spectra.

Peak No.	B.E. (eV)	Signal	Ce cation
0	879.3	ν_0	Ce ³⁺
1	881.9	ν	Ce ⁴⁺
2	884.3	ν'	Ce ³⁺
3	888.5	ν''	Ce ⁴⁺
4	897.9	ν'''	Ce ⁴⁺
5	900.6	u	Ce ⁴⁺
6	902.8	u'	Ce ³⁺
7	907.1	u''	Ce ⁴⁺
8	896.2	u_0	Ce ³⁺
9	916.3	u'''	Ce ⁴⁺