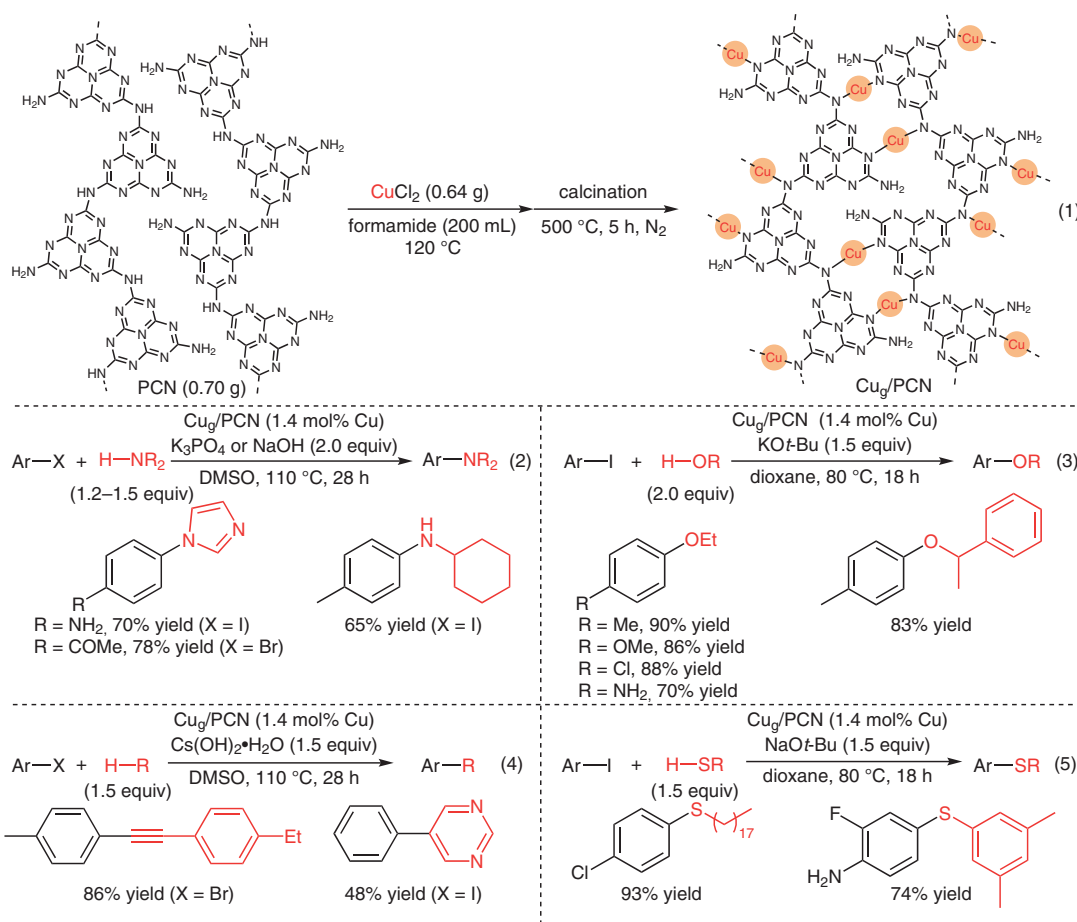


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Geminal-Atom Catalysis for Cross-Coupling

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Cross-Coupling Reactions Catalyzed by Regularly Spaced Copper Atom Pairs on Polymeric Carbon Nitride



Significance: A heterogeneous copper catalyst supported on polymeric carbon nitride (Cu_9/PCN) catalyzed cross-coupling reactions of aryl halides with amines, alcohols, alkynes, arenes, or thiols, resulting in the formation of the corresponding C–N, C–O, C–C or C–S coupled products (eqs. 2–5).

Comment: Cu_9/PCN was prepared according to equation 1. Cu_9/PCN contains regularly spaced copper atom pairs, with a Cu–Cu distance of approximately 4 Å.

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