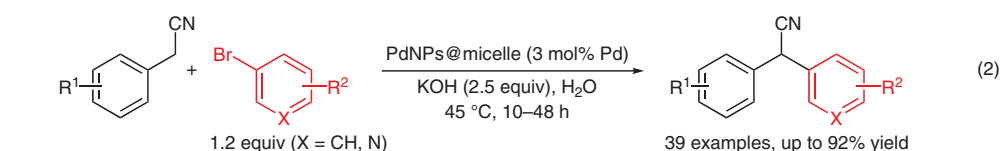
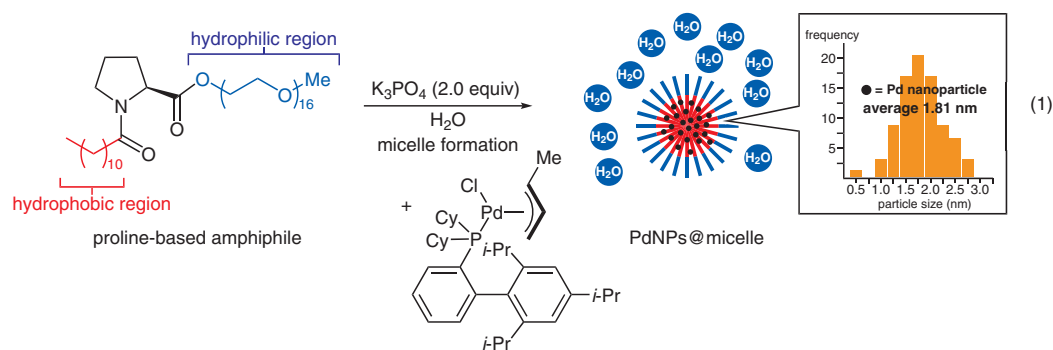


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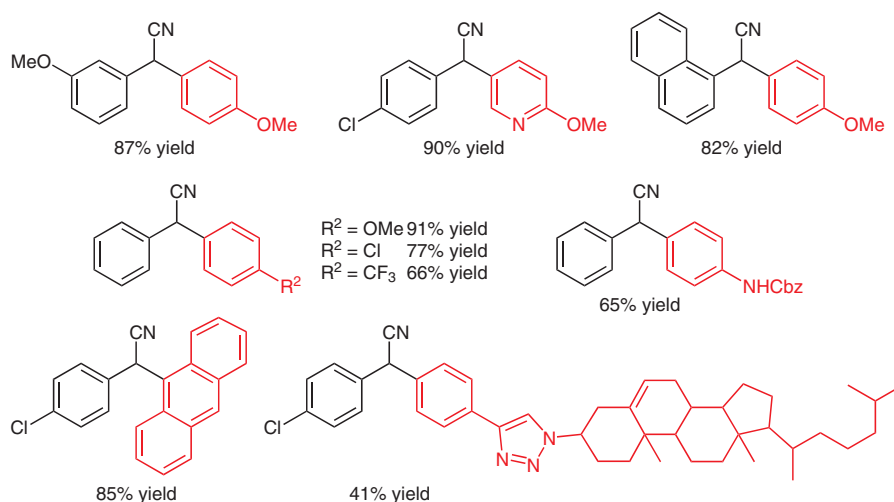
Scalable α -Arylation of Nitriles in Aqueous Micelles Using Ultrasmall Pd Nanoparticles: Surprising Formation of Carbanions in Water

ACS Catal. 2020, 10, 6816–6821.

α -Arylation of Nitriles Catalyzed by Palladium Nanoparticles in Proline-Based Micelles



Selected results:



Significance: Palladium nanoparticles in micelles of a proline-based amphiphile (PdNPs@micelles), generated in situ (eq. 1), promoted the α -arylation of arylacetonitriles with aryl bromides to give the corresponding α -arylated products in up to 92% yield (eq. 2).

Comment: The PdNPs were characterized by means of ^{31}P NMR, HRTEM, and EDAX analyses. A heterogeneous and amphiphilic vesicular Pd catalyst has been previously reported (see, for example: G. Hamasaka, T. Muto, Y. Uozumi *Angew. Chem. Int. Ed.* 2011, 50, 4876).

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