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Organometallic Hollow Spheres Bearing Bis(N-Heterocyclic Carbene)-Palladium Species: Catalytic Application in Three-Component Strecker Reactions
Angew. Chem. Int. Ed. 2010, 49, 7718-7722.

## Self-Supported NHC-Palladium Catalyst for the Strecker Synthesis

## Gategory

Polymer-Supported Synthesis

## Key words

organometallic hollow spheres

## Strecker reaction

ketones
palladium




$83 \%$ yield

86\% yield

Significance: The organometallic hollow sphere (OMHS) catalyst was prepared by self-supporting of $\mathrm{Pd}(\mathrm{OAc})_{2}$ and tetrahedral $\mathbf{1}$ having four imidazolium salts. The Strecker reaction of aryl methyl ketones $\mathbf{2}$ with OMHS gave the corresponding $\alpha$-aminonitriles 3 in 3-91\% yield.

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Comment: The average diameter of OMHS was $1.50 \pm 0.15 \mu \mathrm{~m}$. OMHS was reused twice without loss of catalytic activity. The catalyst was characterized with SEM, TEM, EDS, TGA, elementary analysis, and solid-phase ${ }^{13} \mathrm{C}$ NMR spectroscopy.


[^0]:    synfacts Contributors: Yasuhiro Uozumi, Yoichi M. A. Yamada
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