One-Pot Synthesis of Au@SiO₂ Catalysts: A Click Chemistry Approach


Hydroamination of Alkynes Using Amphiphiles-Based Au@SiO₂

Significance: The porous Au@SiO₂ catalyst was prepared from a gold precursor and a TEOS solution in the presence of cinchonidine-based triazole amphiphiles. The hydroamination of alkynes was carried out with Au@SiO₂ to give the corresponding imine products 1a–n in up to 99% conversion.

Comment: The turnover number of Au@SiO₂ was 1604 for the formation of 1b. The catalyst was characterized by cryo-TEM, XPS, UV/Vis, zeta potential, and ICP-OES analyses.