

Room Temperature, Copper-catalyzed Amination of Naphthyridinyl-bromides with Aqueous Ammonia

Cyrus A. Anderson, Mary A. Zeller, Phillip G. Taylor, and Steven C. Zimmerman

Room temperature, copper-catalyzed amination of amido-bromo-[1,8]-naphthyridines is disclosed. Use of cuprous oxide, ethylene glycol, glyme, and aqueous ammonia under ambient temperature and pressure affords amination products in 50 – 88% yield. Naphthyridinyl-bromides are in turn prepared in 50 – 70% yield via treatment of amido-naphthyridones with phosphorus tribromide. The mild amination conditions allow for efficient synthesis of various functional, non-symmetric diamido-naphthyridines for use in supramolecular chemistry.

