

Full Papers

硅胶负载的铜(II)催化有机硼酸和咪唑的Ar-N偶联反应

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摘要 本文报道了有机无机杂化材料固载的铜(II)催化有机硼酸和咪唑的Ar-N偶联。在3-(2-氨基乙基)丙基功能化的硅胶固载的铜(II)催化下, 有机硼酸和咪唑于甲醇中的Ar-N偶联生成高产率相应的偶联产物。而且硅胶负载的铜(II)催化剂经简单过滤, 可循环使用5次不降低活性。

关键词 [Ar-N偶联](#), [有机硼酸](#), [咪唑](#), [有机-无机杂化材料](#), [固载的铜\(II\)催化剂](#), [多相催化](#)

分类号

Silica-supported Copper(II) Catalyzed Coupling of Arylboronic Acids with Imidazoles

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Abstract Immobilized copper(II) in organic-inorganic hybrid materials catalyzed Ar-N coupling of arylboronic acids with imidazoles has been developed. Arylboronic acids reacted with imidazoles smoothly in the presence of a 3-(2-aminoethylamino)propyl functionalized silica gel immobilized copper(II) catalyst (10 mol%) in methanol without any additives and bases. The reactions generated the corresponding cross-coupling products in good yields. Furthermore, silica-supported copper can be recovered and recycled by a simple filtration procedure and used for five consecutive trials without decreases in activity.

Key words [Ar-N coupling](#) [arylboronic acid](#) [imidazole](#) [organic-inorganic hybrid material](#) [immobilization](#) [copper\(II\)](#) [heterogeneous catalyst](#)

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