Palladium-Catalyzed Cross-Coupling of Triorganoindium Reagents

Significance: The authors demonstrate that triorganoindium reagents react selectively with N-benzyl-2,4,5-triiodoimidazole under palladium catalysis to give the corresponding C-2-arylated coupling products in good yields. These products can further be used in a subsequent double cross-coupling to afford trisubstituted imidazoles in good yields.

Comment: This methodology was further applied to the synthesis of neurodazine, a biologically active compound which is able to specifically induce neurogenesis of non-pluripotent myoblasts and the cells derived from mature human skeletal muscle.

Selected examples:

- 83% yield
- 78% yield
- 83% yield
- 98% yield
- 90% yield