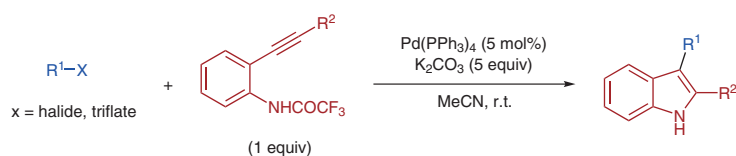


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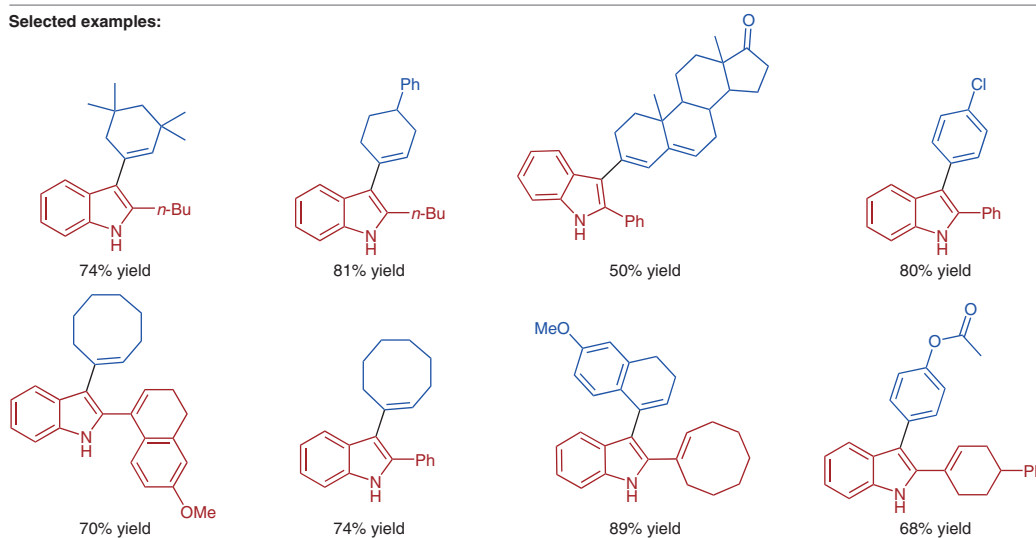
A Versatile Approach to 2,3-Disubstituted Indoles through the Palladium-Catalyzed Cyclisation of *o*-Alkynyltrifluoroacetanilides with Vinyl Triflates and Aryl Halides

*Tetrahedron Lett.* **1992**, 33, 3915–3918, DOI: 10.1016/s0040-4039(00)74818-0.

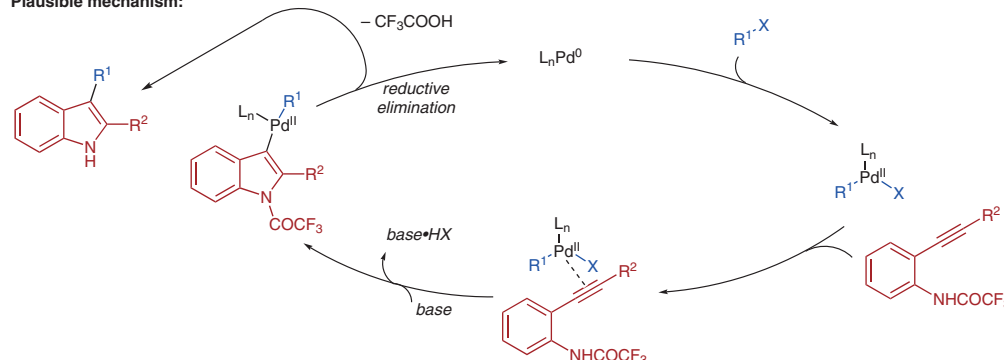
## Synthesis of 2,3-Disubstituted Indoles via Palladium-Catalyzed Cyclization of *ortho*-Alkynyl Anilines



Selected examples:



Plausible mechanism:



**Significance:** Indoles are structural motifs found in a wide variety of natural products and pharmaceutical agents. While other palladium-catalyzed indole syntheses had been primarily focused on the cyclization of compounds containing pre-installed substituents of the desired indole, Cacchi and co-workers demonstrated a modular synthesis of 2,3-disubstituted indoles using a variety of 2-alkynyl anilines and aryl halides or vinyl triflates, streamlining the synthesis of this class of compound.

**SYNFACTS Contributors:** Mark Lautens, Jonathan Bajohr  
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DOI: 10.1055/s-0042-1752608; Reg-No.: L09123SF

**Comment:** The authors note that other bases such as triethylamine performed poorly compared to potassium carbonate. Similarly, indole products were not observed when employing aniline derivatives with a free amino group or acetamido group, highlighting the importance for a stronger electron-withdrawing group to be present on the nitrogen atom.