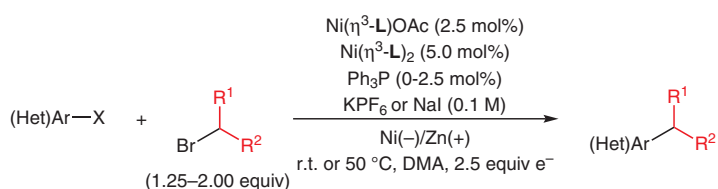
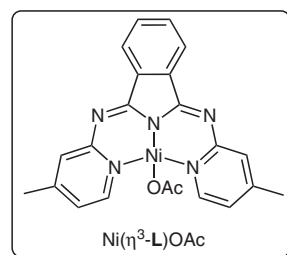


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 General C(sp<sup>2</sup>)-C(sp<sup>3</sup>) Cross-Electrophile Coupling Reactions Enabled by Overcharge Protection of Homogeneous Electrocatalysts  
*J. Am. Chem. Soc.* **2020**, *142*, 5884–5893.

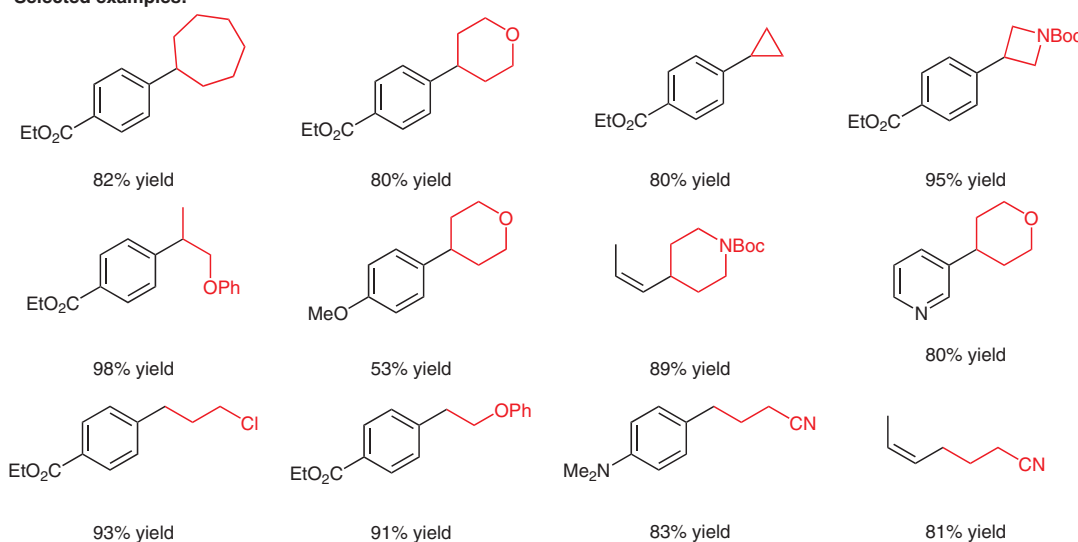
## Nickel-Catalyzed Cross-Electrophile Coupling using Electrochemistry



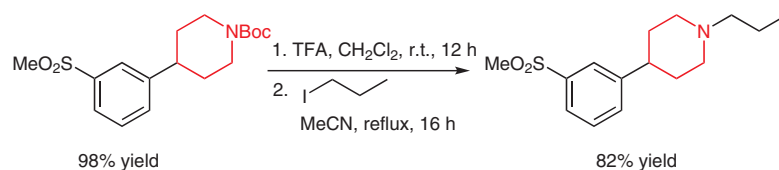
R<sup>1</sup> = H, various alkyl moieties  
 R<sup>2</sup> = various alkyl moieties  
 Hal = Cl, Br



### Selected examples:



### Synthesis of pridopidine:



**Significance:** The authors describe a general nickel-catalyzed cross-electrophile coupling of functionalized alkenyl, aryl, and heteroaryl halides with various primary and secondary bromides using electrochemistry. The alkylated products were obtained in high yields.

**Comment:** Key for high coupling yields was the use of the electron shuttle reagent Ni(η<sup>3</sup>-L)<sub>2</sub>, which efficiently prevents over-reduction and thus decomposition of the unsaturated halides. Significantly, this enables an easy scale up by performing the reaction at high currents on a 75 mmol scale.

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