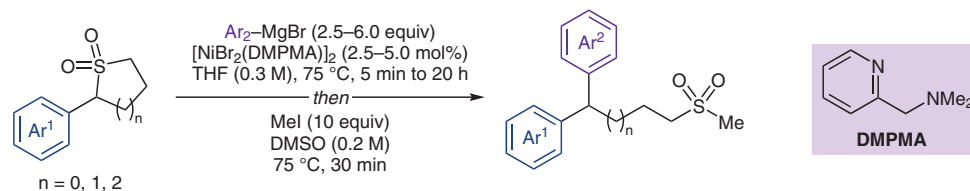


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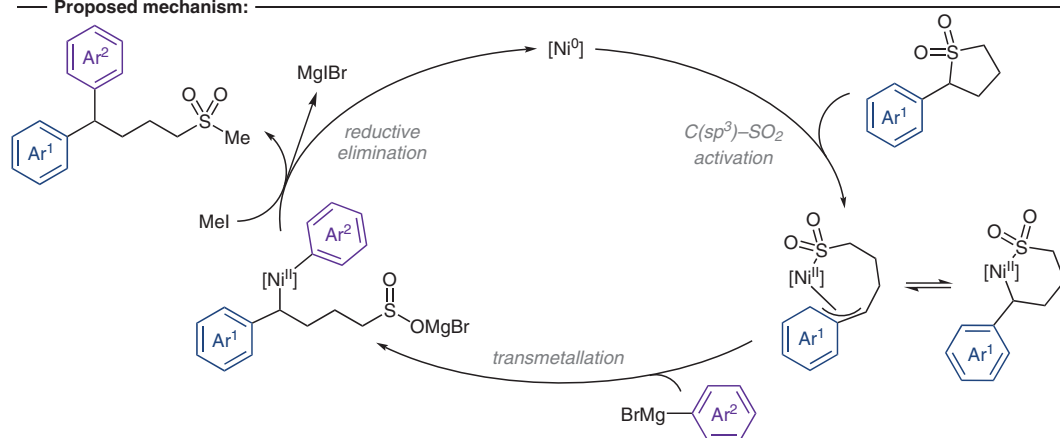
Enantiospecific Cross-Coupling of Cyclic Alkyl Sulfones

Nat. Chem. **2024**, *16*, 1445–1452, DOI: 10.1038/s41557-024-01594-x.

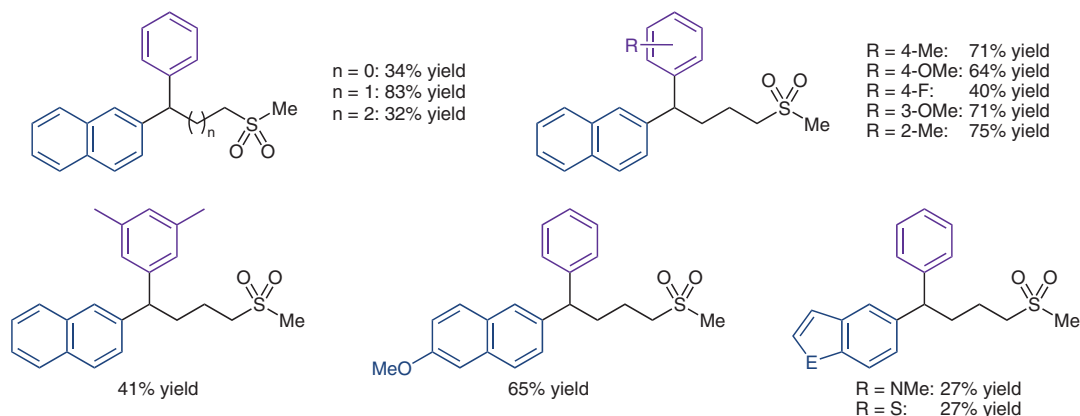
Nickel-Catalyzed Cross-Coupling of Cyclic Sulfones and Grignard Reagents



Proposed mechanism:



Selected examples:



Significance: Nickel-catalyzed ring-opening arylation of α -aryl cyclic sulfones with aryl Grignard reagents as nucleophiles is reported. The reaction can be carried out in an enantiospecific fashion by using enantioenriched sulfones (not shown).

Comment: Experimental studies and DFT calculations support the shown catalytic cycle. The use of a preformed nickel(II) catalyst was the key to minimize competing β -hydride elimination. The cross-coupled products were also treated with electrophiles other than MeI, affording various sulfone products in good yields (not shown).

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Synfacts 2024, 20(11), 1156 Published online: 16.10.2024

DOI: 10.1055/s-0043-1775167; Reg-No.: M13524SF