Appendix

Copper Mediated Transformations of Alkyl Boronic Esters

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1 Preparation of Boronic Esters

![Chemical structures and spectra of boronic esters.](image-url)
2 Preparation of Carbamates
3 Amination of Boronic Esters
4  C-O and C-S Coupling
5 Preparation of Thioureas

![Chemical Structure]
6 Exploring the Mechanism of Amination

MeO

377

MeO

377
7 Cu Catalysed Oxidation of Boronic Esters

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