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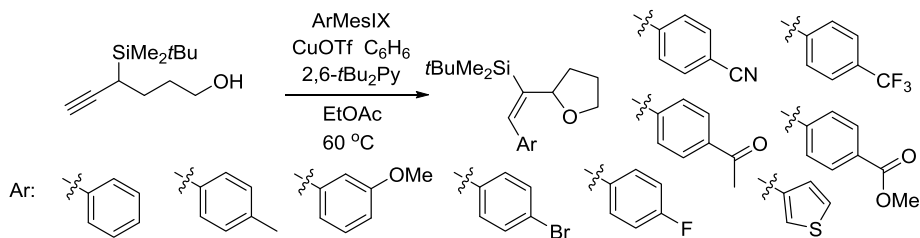
Abstract Book

Copper-Catalyzed Arylation of Propargyl Silanes with Consequent Internal Cyclization

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Recently we have published synthesis methods for propargyl silane 1,3-difunctionalization with concomitant silyl shift.¹ The concept involves propargylsilane activation with an electrophile, followed by a 1,2-silyl shift. This creates an electrophilic carbon center that can react with a nucleophile. This work presents a formal carbon electrophile to activate the propargylsilane. In this case aryl cuprate, generated from diaryliodonane, activates the propargylsilane, which undergoes a 1,2-silyl shift. This generates a carbenium ion or its equivalent, which is trapped by the alcohol. Aromatic groups with electron donating and electron withdrawing substituents and some heteroaromatic groups can be used.



Acknowledgements

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References

- (a) Beļauņieks, R.; Puriņš, M.; Līpiņa, R. A.; Mishnev, A.; Turks, M. *Org. Lett.* **2023**, *25*, 4627.
(b) Kronkalne, R.; Beļauņieks, R.; Ubaidullajevs, A.; Mishnev, A.; Turks, M. *J. Org. Chem.* **2023**, *88*, 13857.