



# Regio- and Stereoselective Synthesis of Vicinal (*Z*)-Dihaloalkenyl Silanes through *in situ* generated BrCl

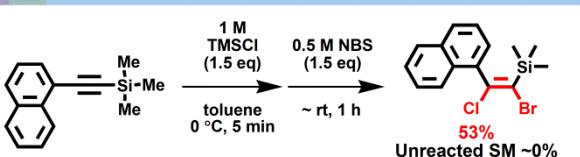
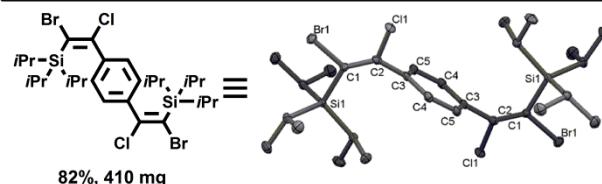
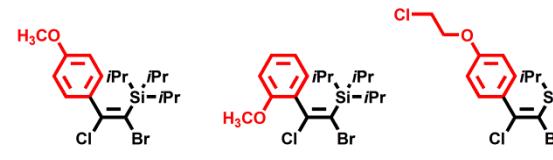
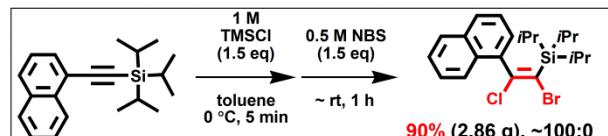


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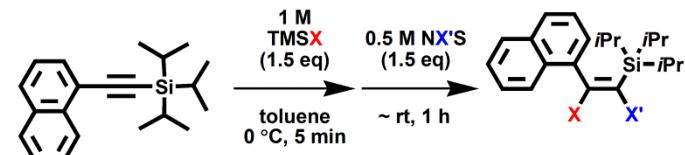
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## 1. Summary

- a) Yauchi, Y.; Ide, M.; Shiogai, R.; Chikugo, T.; Iwasawa, T. *Eur. J. Org. Chem.* 2015, 938-943.  
 b) Japanese Patent No. 2014-247030

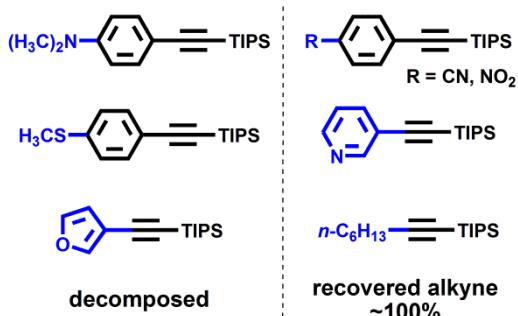


## 6. Halogen sources

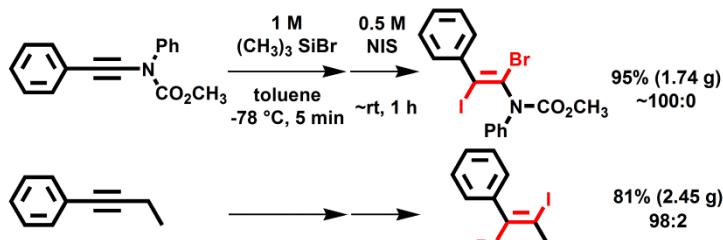


| X  | X' | Yield (%) | Recovered SM (%) | Product (X/X') |
|----|----|-----------|------------------|----------------|
| I  | I  | -         | ~100             | -              |
| I  | Br | 78        | 15               | BrBr           |
| I  | Cl | 26        | 73               | -              |
| Br | I  | 97        | 0                | BrBr           |
| Br | Br | 85        | 0                | BrBr           |
| Br | Cl | 71        | 0                | BrBr           |
| Cl | I  | 63        | 26               | -              |
| Cl | Br | 95        | 0                | CIBr           |
| Cl | Cl | 75        | 2                | CICl           |

## 2. Limitation

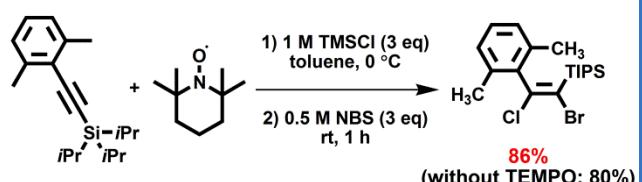


## 3. Background

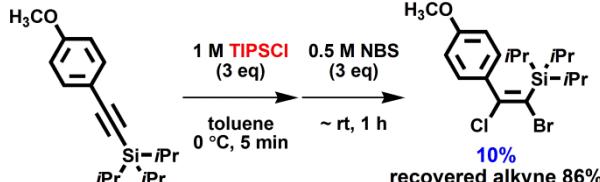


1. Ide, M.; Yauchi, Y.; Iwasawa, T. *Eur. J. Org. Chem.* 2014, 3262-3267.  
 2. Ide, M.; Yauchi, Y.; Shiogai, R.; Iwasawa, T. *Tetrahedron* 2014, 70, 8532-8538.

## 4. Radical process?



## 5. TIPS-Cl doesn't work



## 7. *in situ* BrCl

