Scope and Limitations of a Novel Bifunctional Catalyst for Alkene Isomerization

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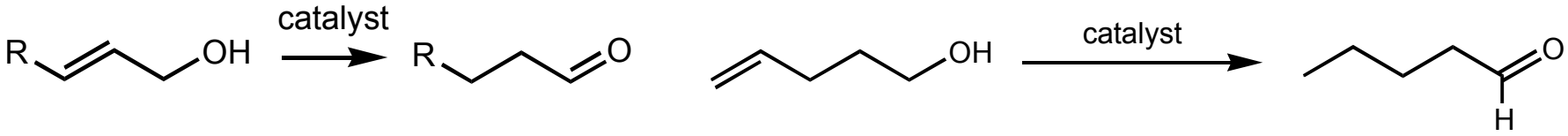
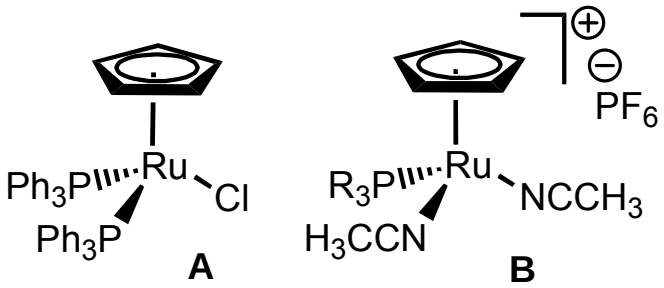


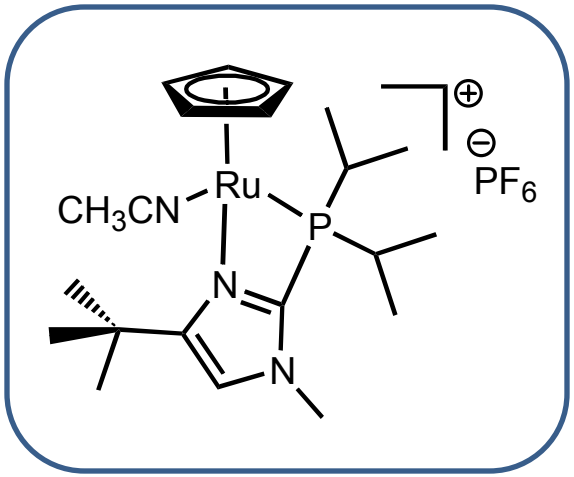
Allylic alcohol isomerization



R = Me, Cy, Ph

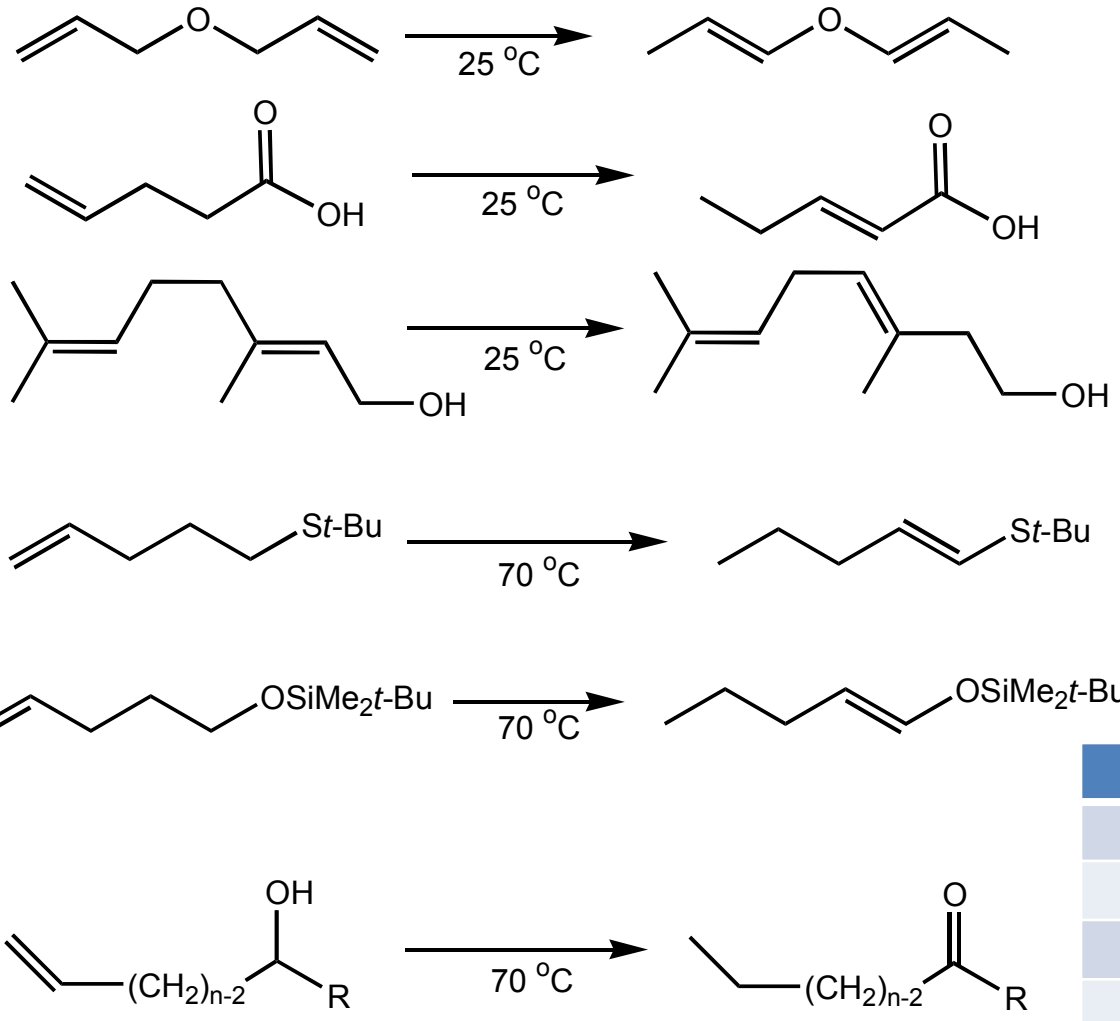
Uma, Crevisy, and Gree *Chem. Rev.* **2003**, *103*, 27
Trost and Kulawiec *J. Am. Chem. Soc.* **1993**, *115*, 2027
Slugovc et al. *Organometallics* **1999**, *18*, 4230

More expanded scope of alkene isomerization



J. Am. Chem. Soc. **2007,** ASAP and unpublished work

Extensive Isomerization of Alkenes



2 mol%	40 Min	96%

5 mol%	30 Min	76%
5 mol%	8 h	86%

2 mol%	4 d	61%

Cat	Time	% Yield
5 mol%	22 h	71
10 mol%	4 h	68

5 mol%	4 h	90%

N =	R =	Cat	Time	%
4	H	2 mol%	1 h	95
3	Me	2 mol%	1 h	97
9	H	5 mol%	4 h	84
9	Me	5 mol%	4 h	97
20	Me	20 mol%	3.6 d	91[a]
30	Me	30 mol%	3 d	81[a]

[a] Isolated yield

Wha ing?

each com
made usi
catalyst i

F_6

ratio
th imidazole to
vithout imidazole)

340 to 1

10,800 to 1

Acknowledgements

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$$$$$$
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