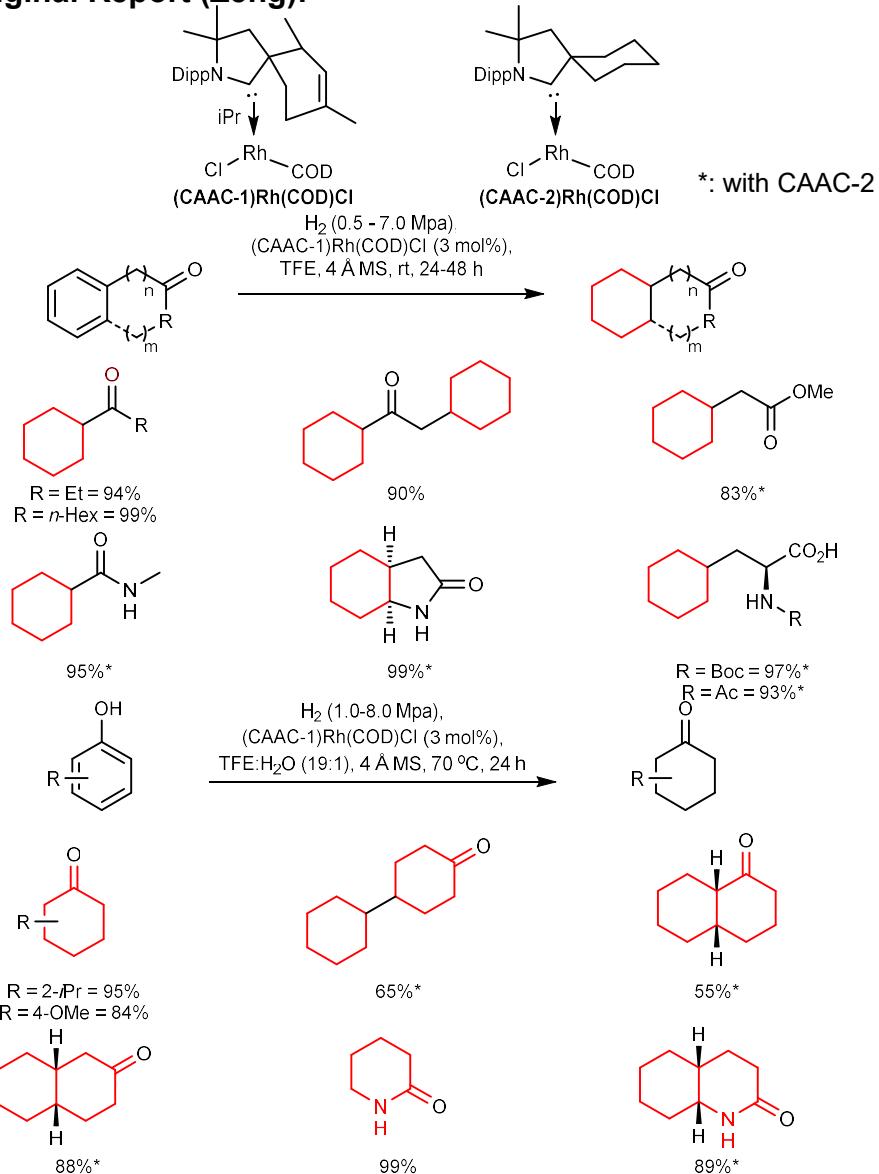
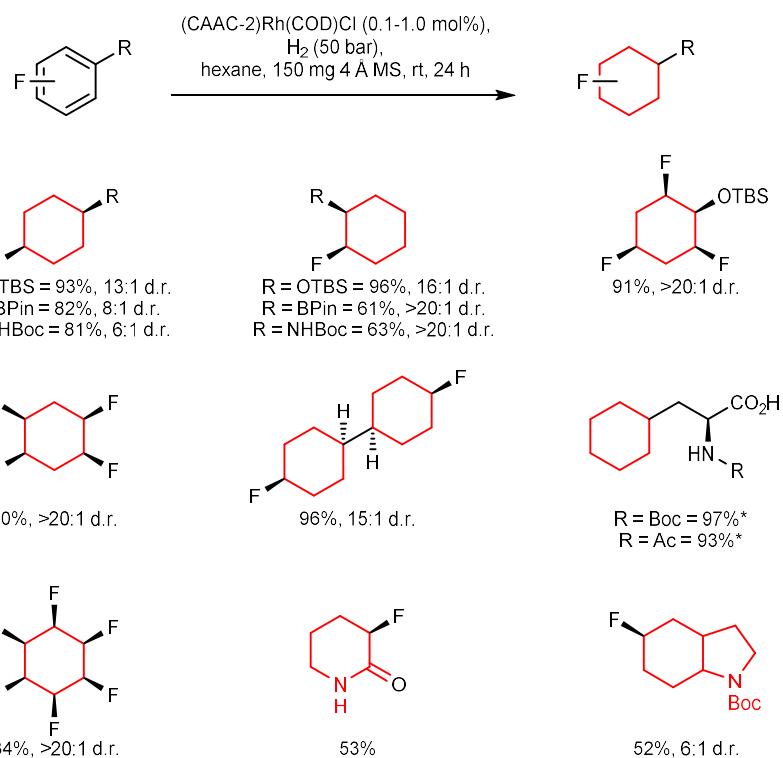


Rh/CAAC-Catalyzed Dearomative Hydrogenation

Original Report (Zeng):

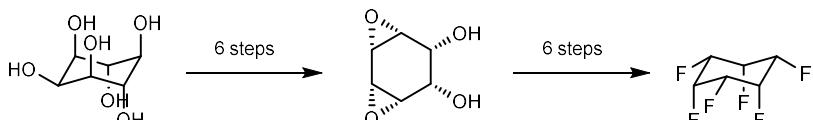


Hydrogenation of Fluoroarenes (Glorius):



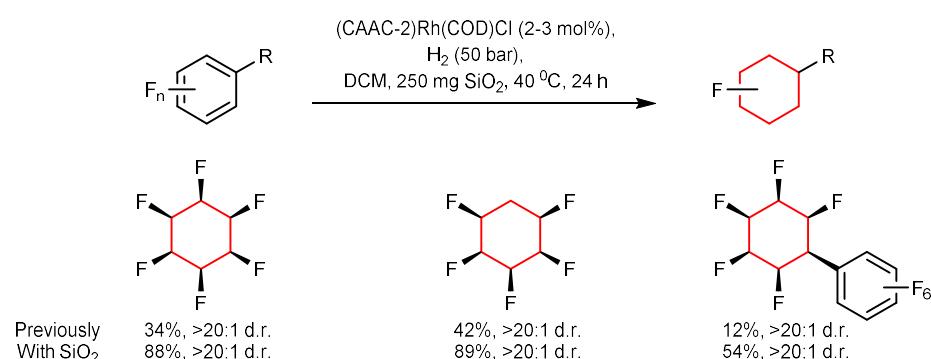
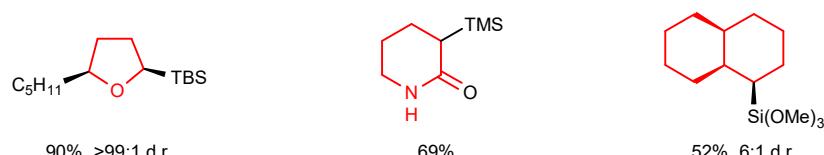
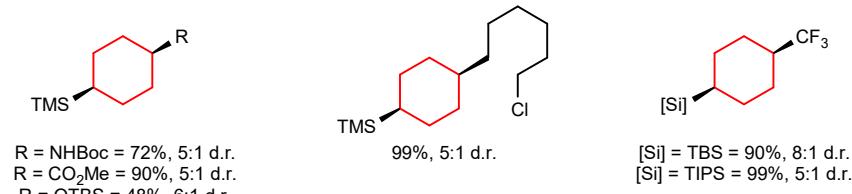
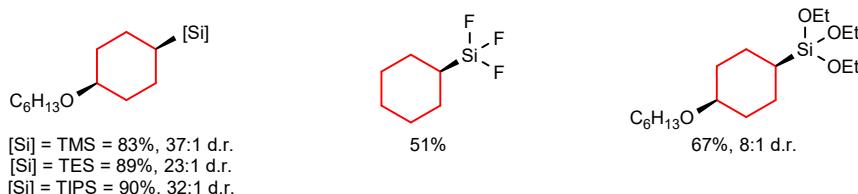
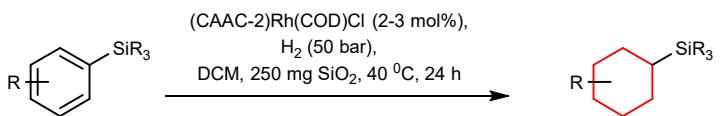
Science 2017, 357, 908. DOI: 10.1126/science.aa0270

Previously accessed:

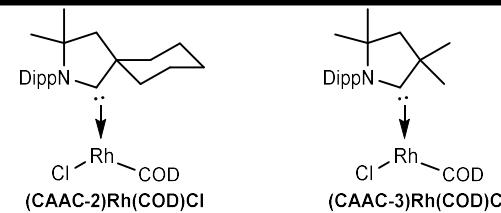


Nat. Chem. 2015, 7, 483. https://doi.org/10.1038/nchem.2232

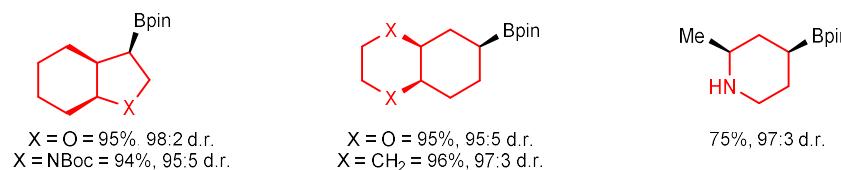
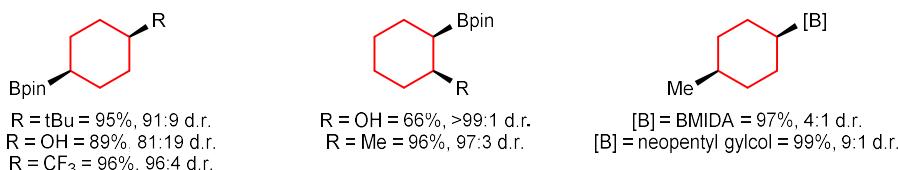
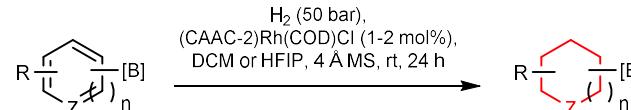
Hydrogenation of Silylarenes (Glorius):



Angew. Chem. Int. Ed. 2018, 57, 8297. <https://doi.org/10.1002/anie.201804124>

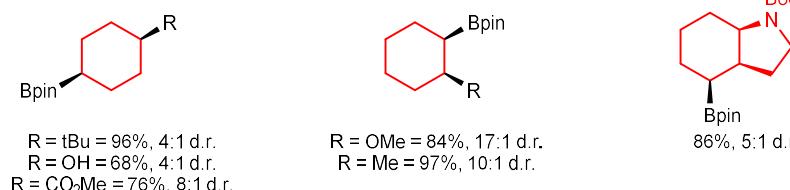
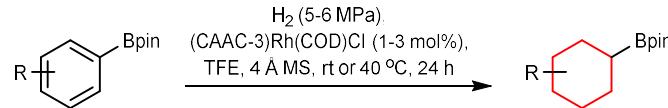


Hydrogenation of Borylated arenes (Glorius):



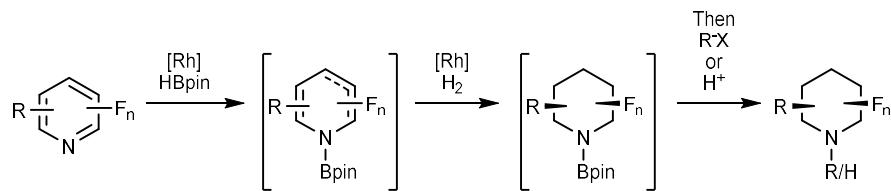
Angew. Chem. Int. Ed. 2019, 58, 6549. <https://doi.org/10.1002/anie.201810714>

Hydrogenation of Borylated arenes (Zeng):

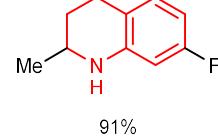
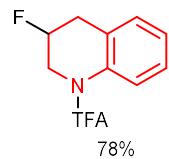
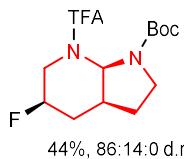
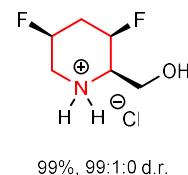
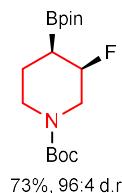
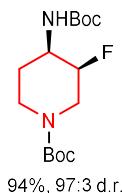
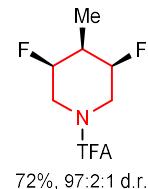
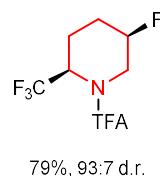
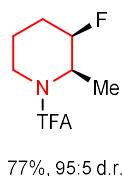
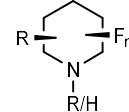


Angew. Chem. Int. Ed. 2019, 58, 6554. <https://doi.org/10.1002/anie.201811210>

Hydrogenation of Fluoropyridines (Glorius):

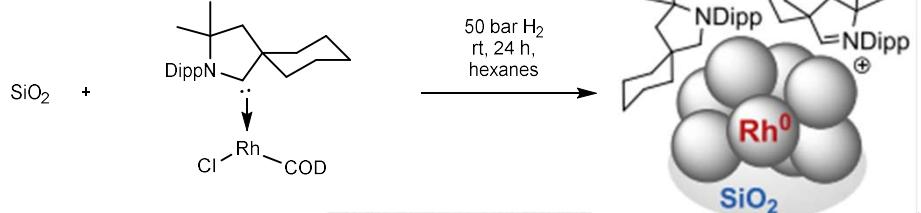


H_2 (50 bar), HBpin (2-4 eq.),
(CAAC-2)Rh(COD)Cl (0.5-2.0 mol%),
THF, 4 Å MS, 25-40 °C, 24 h;
then TFAA or H^+ or $(Boc)_2O$

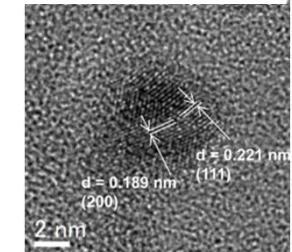
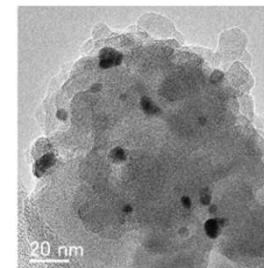


Nat. Chem. 2019, 11, 264. <https://doi.org/10.1038/s41557-018-0197-2>

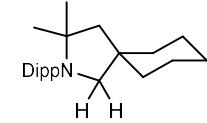
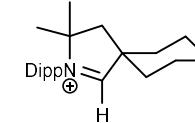
Mechanistic Studies:



Active catalyst is heterogeneous in nature:

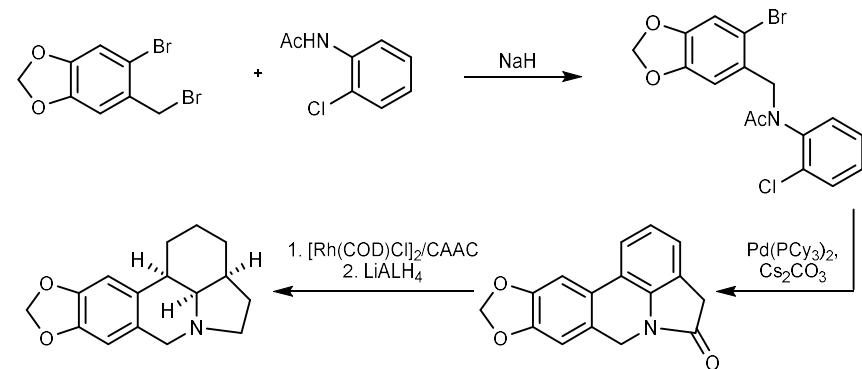


Reactivity modulators:



ACS Catal. 2020, 10, 6309. <https://doi.org/10.1021/acscatal.0c01074>

Examples in Synthesis:



Org. Lett. 2018, 20, 772. <https://doi.org/10.1021/acs.orglett.7b03909>