**Rhodium-Catalyzed cis-Selective Hydrogenation of Fluoroarenes**

**Significance:** All-cis-polyfluorinated cycloalkanes exhibit attractive electronic properties due to their high dipole moments. However, multistep syntheses from diastereoselectively fluorinated precursors are generally required. The authors report a rhodium/cyclic (alkyl)(amino)(carbene) complex catalyzed cis-selective hydrogenation of fluorinated arenes to provide a variety of highly diastereoselectively fluorinated cycloalkanes.

**Comment:** To suppress the formation of hydrodefluorinated byproducts, the choice of a less-polar solvent such as hexane is important.