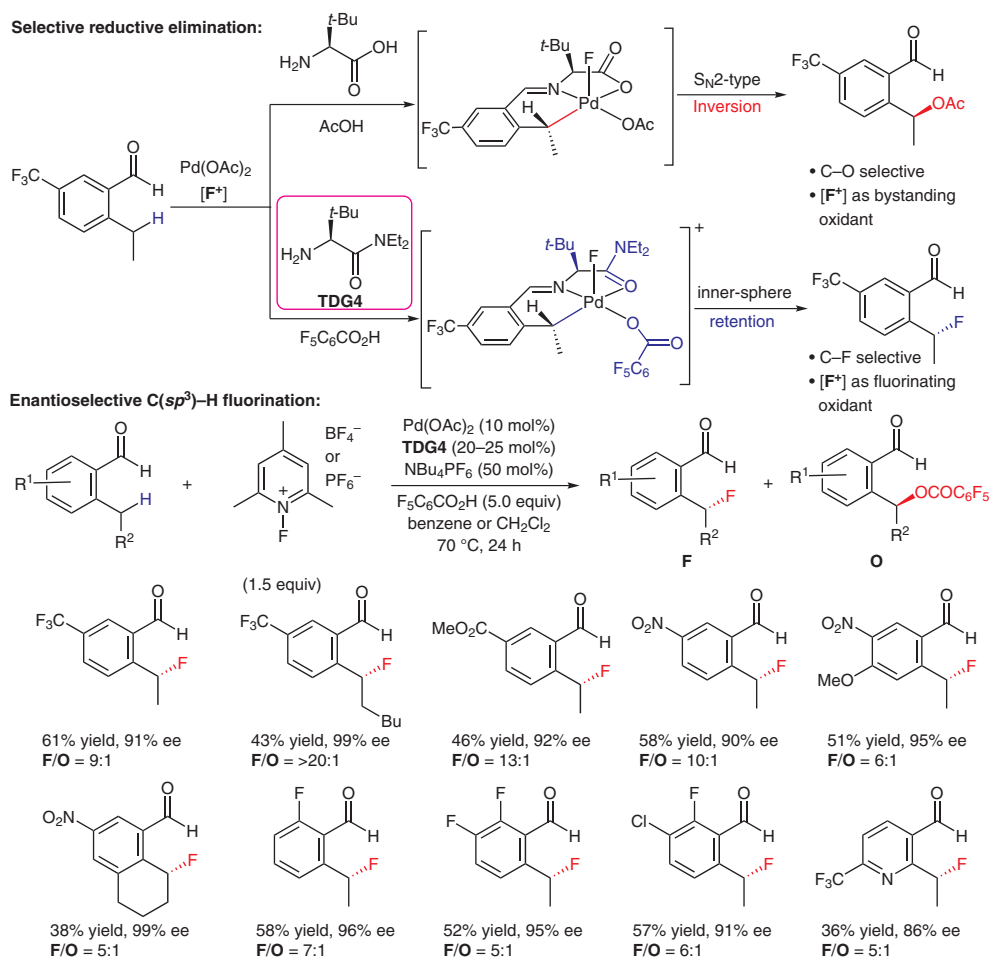


H. PARK, P. VERMA, K. HONG, J.-Q. YU\* (THE SCRIPPS RESEARCH INSTITUTE, LA JOLLA, USA)

Controlling Pd(IV) Reductive Elimination Pathways Enables Pd(II)-Catalysed Enantioselective C(sp<sup>3</sup>)-H Fluorination

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## Palladium-Catalyzed Enantioselective C(sp<sup>3</sup>)-H Fluorination



**Significance:** The presence of a C–F bond uniquely affects the physical and biological characteristics of molecules. The authors have developed a new direct method for synthesizing chiral organofluorines by palladium-catalyzed C(sp<sup>3</sup>)-H fluorination. Appropriate choice of a chiral transient directing group is key to the selective formation of the desired C(sp<sup>3</sup>)-F bond rather than the undesired C(sp<sup>3</sup>)-O bond.

**Comment:** Several mechanistic studies indicated that the desired C(sp<sup>3</sup>)-H fluorination proceeds by an inner-sphere pathway, whereas the undesired C(sp<sup>3</sup>)-O formation occurs through an S<sub>N</sub>2-type mechanism.

**SYNFACTS Contributors:** Hisashi Yamamoto, Takahiro Sawano  
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