Stable Fluorinating Reagent with Ease of Handling (Hara Reagent)

IF$_5$ - Pyridine - HF (P2140), which was first reported by Hara et al., is a novel fluorinating reagent. Pentafluoroiodide (IF$_5$) is a strong fluorinating liquid agent, but it is unstable in air and decomposes, generating HF. P2140 is a crystalline solid with air stability and non-hygroscopicity which makes it easier to handle, and can be used as an alternative reagent to IF$_5$. P2140 can be applied to various fluorination reactions of sulfides as follows. In addition, P2140 iodofluorinates alkenes with stereo- and regioselectivity.

**Advantages**
- Easy-to-Handle Crystalline Solid
- Widely Applicable to Various Fluorinations of Sulfides

**Applications**

Fluorination of the α-Position of a Sulfide and Desulfurizing-Difluorination

IF$_5$ - Pyridine - HF (P2140) reactions:
- **IF$_5$-Pyridine-HF (P2140)**, which was first reported by Hara et al., is a novel fluorinating reagent. Pentafluoroiodide (IF$_5$) is a strong fluorinating liquid agent, but it is unstable in air and decomposes, generating HF. P2140 is a crystalline solid with air stability and non-hygroscopicity which makes it easier to handle, and can be used as an alternative reagent to IF$_5$. P2140 can be applied to various fluorination reactions of sulfides as follows. In addition, P2140 iodofluorinates alkenes with stereo- and regioselectivity.

Reference
Stable Fluorinating Reagent with Ease of Handling (Hara Reagent)

Other Applications

Desulfurizing-Fluorination of Methylthiomethyl Ethers and Esters

Desulfurizing-Fluorination of Methylthiomethyl Ethers and Esters

Conversion of Dithiocarbonates to OCF₂SCH₃ or OCF₃

Conversion of Dithiocarbonates to OCF₂SCH₃ or OCF₃

Synthesis of Glycosyl Fluorides from (Phenylthio)glycosides

Synthesis of Glycosyl Fluorides from (Phenylthio)glycosides

Iodofluorination of Alkenes

Iodofluorination of Alkenes

References
4) M. Kunigami, S. Hara, Carbohydr. Res. 2015, 417, 78. DOI: https://doi.org/10.1016/j.carres.2015.08.005

IF₅-Pyridine-HF (= Hara Reagent) 1g / 5g [P2140]

This reagent was merchandised under the tie-up with DAIKIN INDUSTRIES, LTD.

For further information please refer to our website at www.TCIchemicals.com.