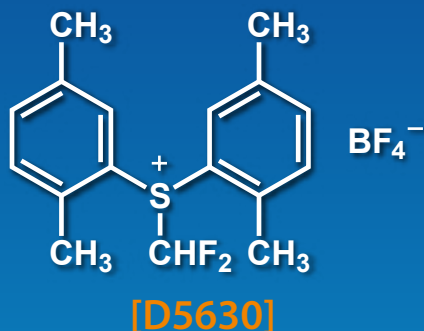


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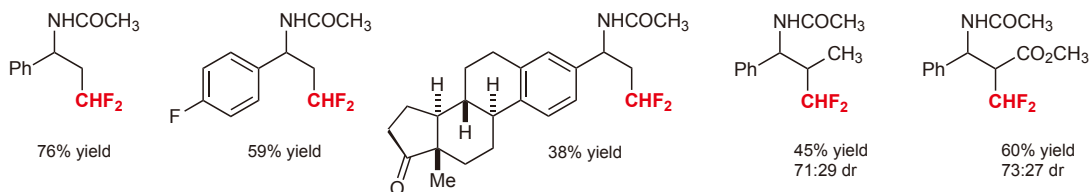
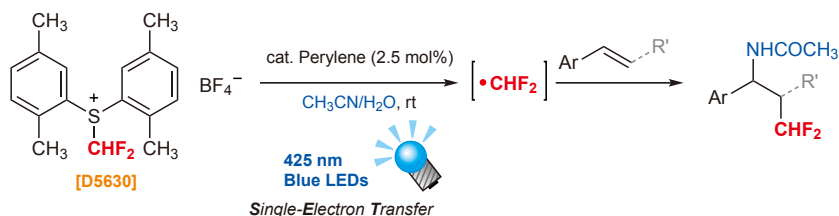
Sulfonium Salt for Photo-catalytic Difluoromethylation



Advantages

- Bench-stable and easy-to-handle solid
- Generates a difluoromethyl radical species in the presence of photo-catalyst

Applications



Procedure

A Schlenk tube is charged with an acetonitrile (5.0 mL) solution of an aromatic alkene (0.250 mmol), **D5630** (190 mg, 0.500 mmol), perylene (3.2 mg, 0.0127 mmol) and water (4.5 mg, 0.250 mmol) under a nitrogen atmosphere. The mixture is degassed by freeze-pump-thaw cycles. The Schlenk tube is placed at 2–3 cm away from blue LED lamps ($\lambda = 425 \pm 15$ nm) in a water bath. The mixture is stirred for 6–12 h at room temperature under visible light irradiation. After the reaction, water (15 mL) is added and resulting suspension is extracted with dichloromethane (15 mL \times 3). The combined organic layer is dried over sodium sulfate, and concentrated under reduced pressure. The purification by column-chromatography and reprecipitation affords the desired product.

N. Noto, T. Koike, M. Akita, *Chem. Sci.* **2017**, *8*, 6375.

(Difluoromethyl)bis(2,5-dimethylphenyl)sulfonium Tetrafluoroborate 1g / 5g [D5630]

This product was commercialized by the instruction of Prof. Munetaka Akita and Assist. Prof. Takashi Koike, and is licensed by Tokyo Institute of Technology and AGC Inc. (Unexamined Publication Number JP2018-135274A)

Related Product

Perylene

5g / 25g [P0078]

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