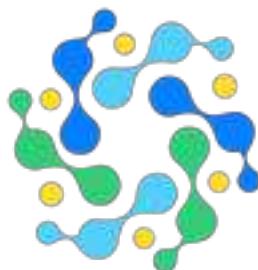




RÉSEAU FRANÇAIS DU FLUOR



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**Keywords :** Trifluoromethoxylation, Trifluoromethylthiolation, Trifluoromethylselenolation,  
Trifluoromethylation, Radiochemistry, Fluorine-18, PET imaging

**Principal Investigators :**  
Thierry Billard  
Fabien Toulgoat

### Fluorine Chemistry (Synthetic methodologies)

- ↳ development of new **Emerging Fluorinated Groups** by merging fluorine and heteroatoms
- ↳ Physico-chemical properties

### Radiochemistry (Synthetic methodologies)

- ↳  $^{18}\text{F}$
- ↳  $^{11}\text{C}$

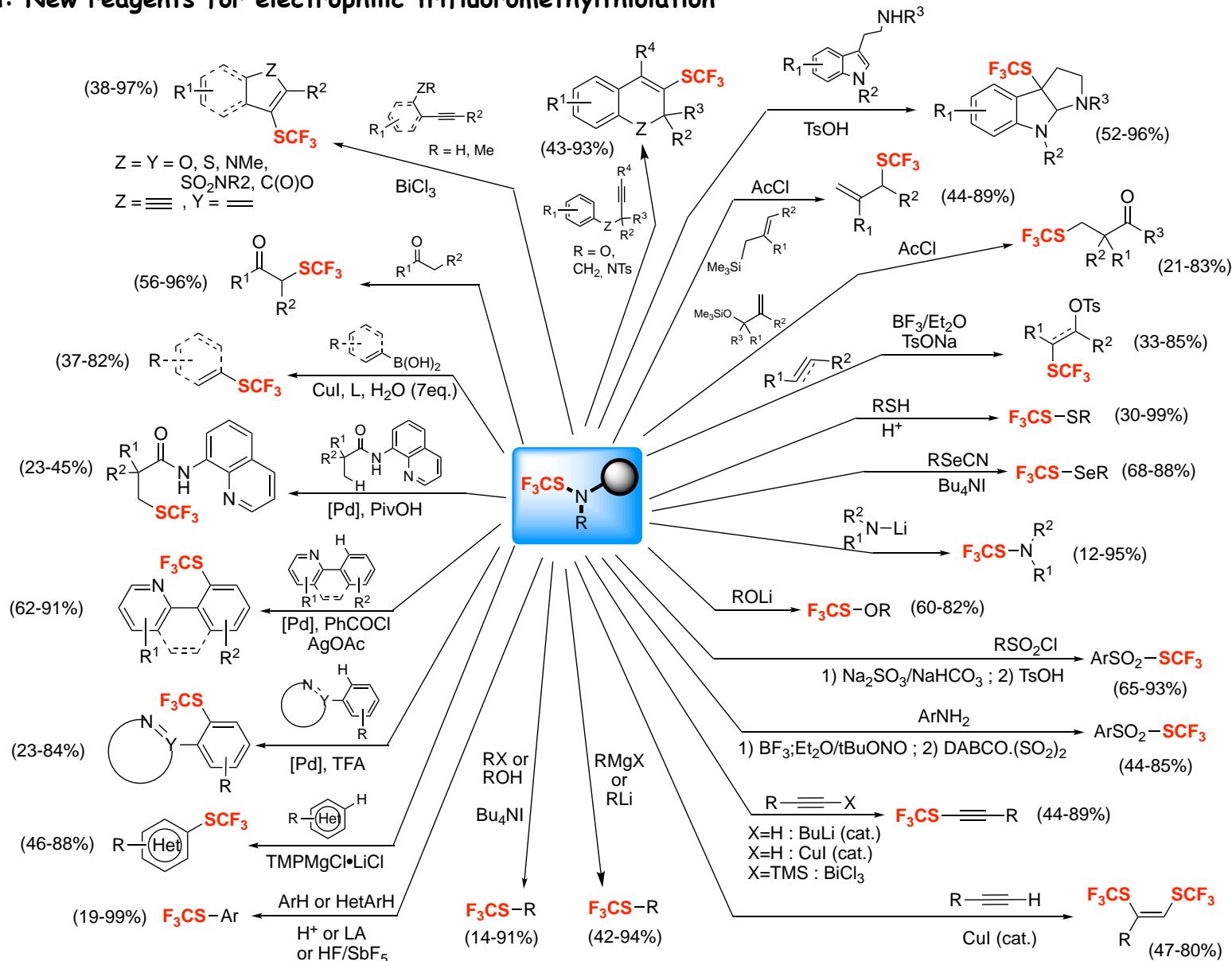
### Medical Imaging

- ↳ Medicinal chemistry
- ↳ Pharmacology
- ↳ PET imaging

The strategies developed in fluorine chemistry and Radiochemistry are applied during the syntheses of new PET radioligands.

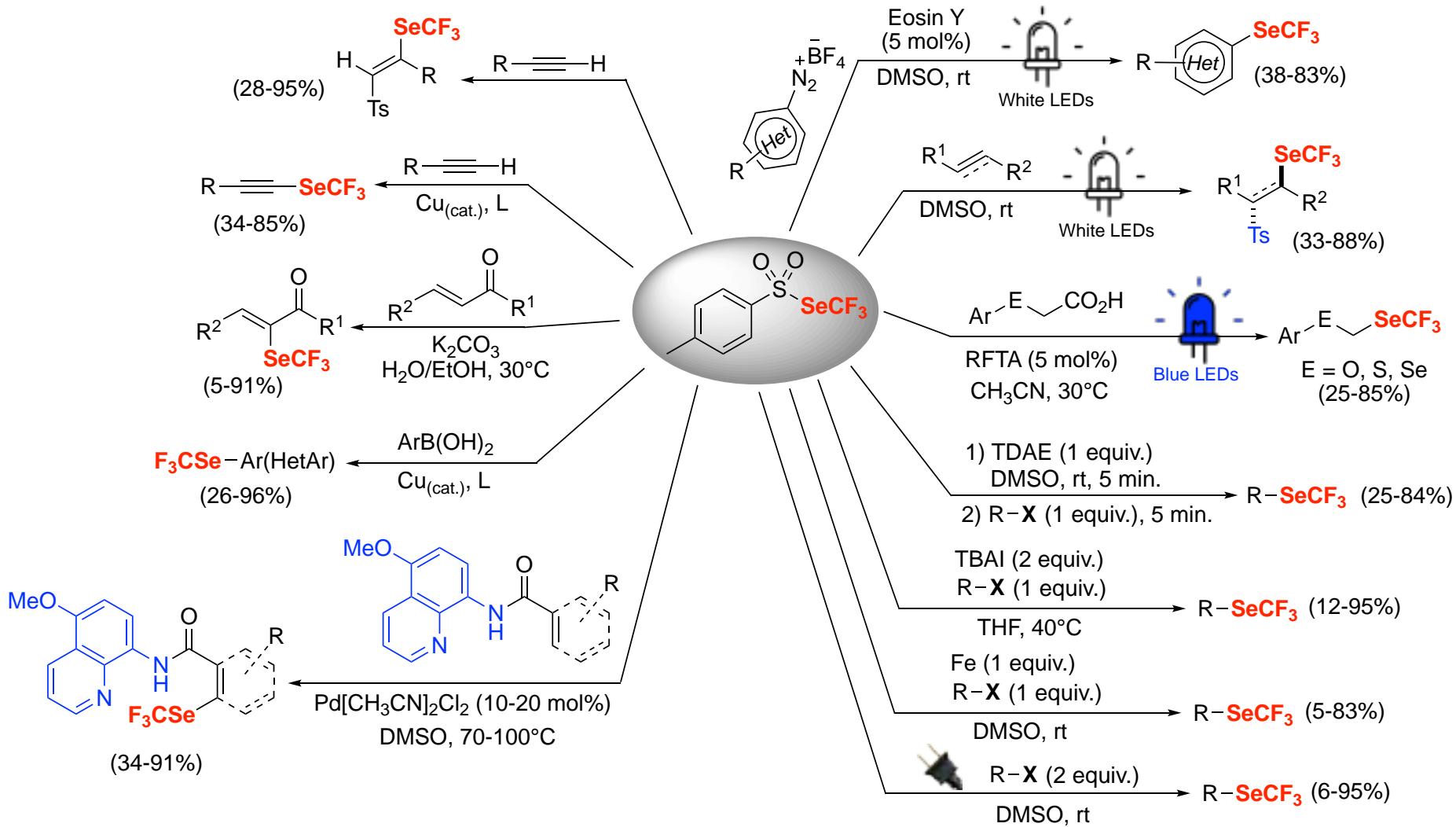
# Trifluoromethylthiolation

## Method: New reagents for electrophilic trifluoromethylthiolation



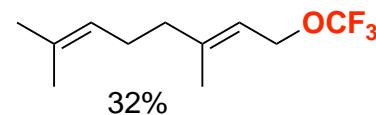
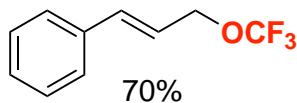
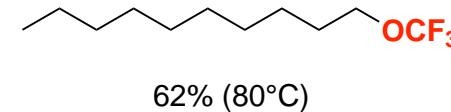
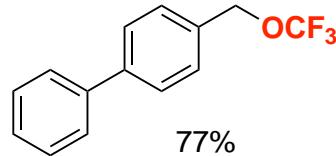
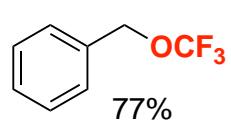
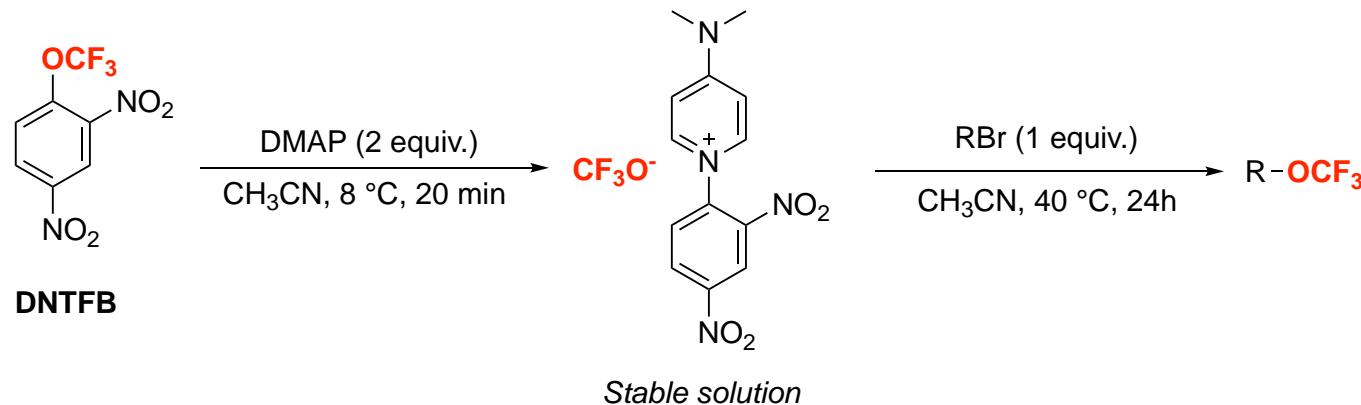
# Trifluoromethylselenolation

## Method: New reagents for electrophilic trifluoromethylselenolation



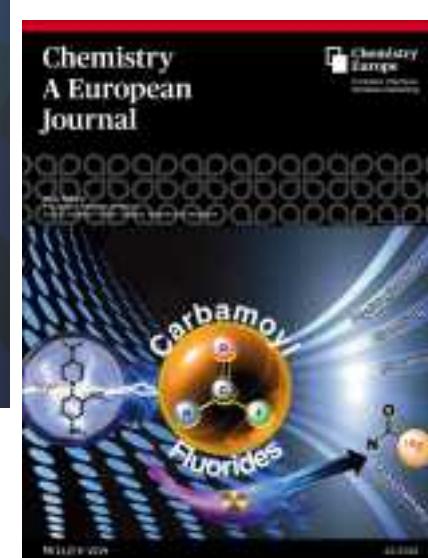
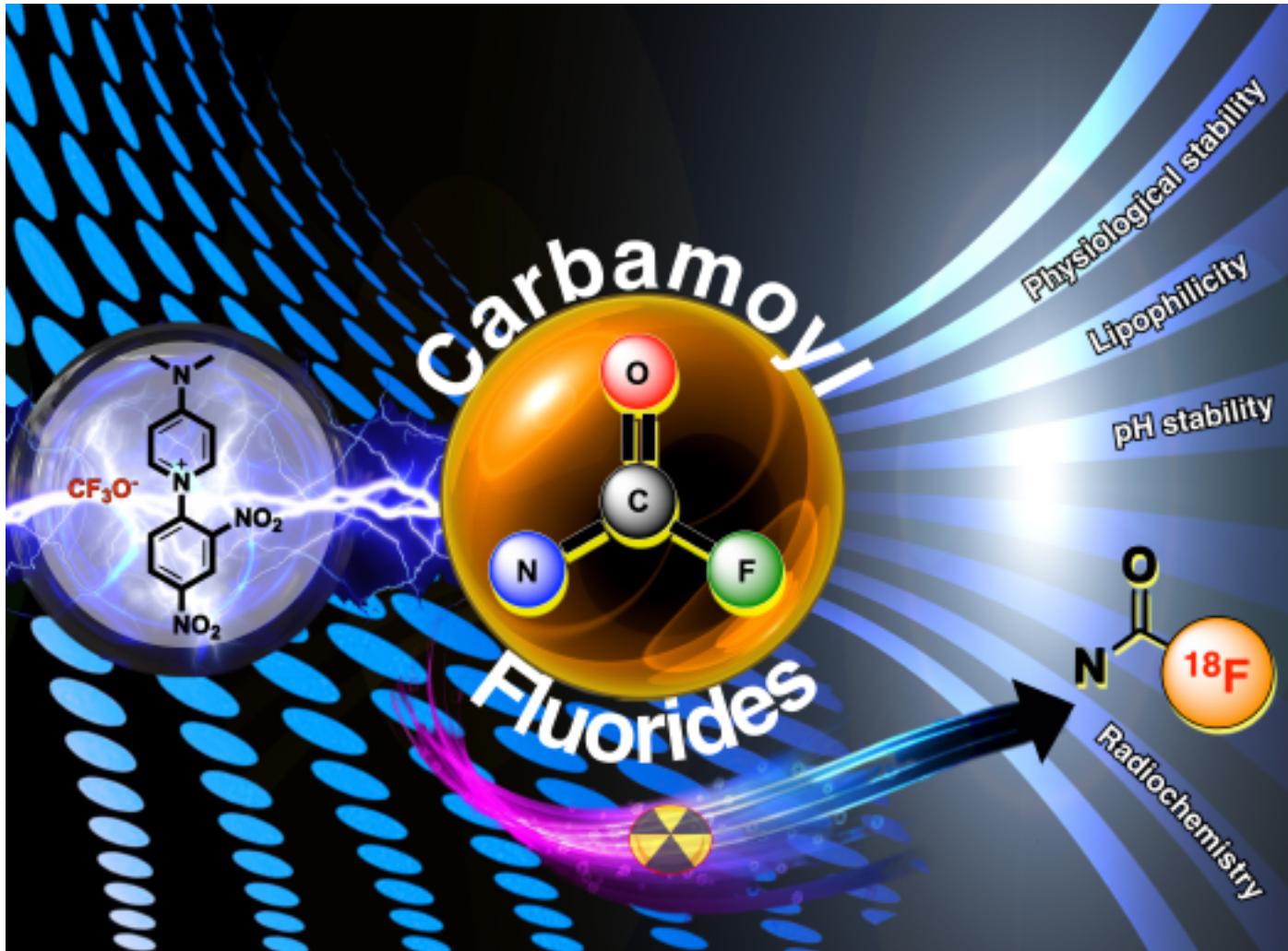
## Trifluoromethylation

Method: New reagents for electrophilic trifluoromethylation



## Carbamoyl fluoride

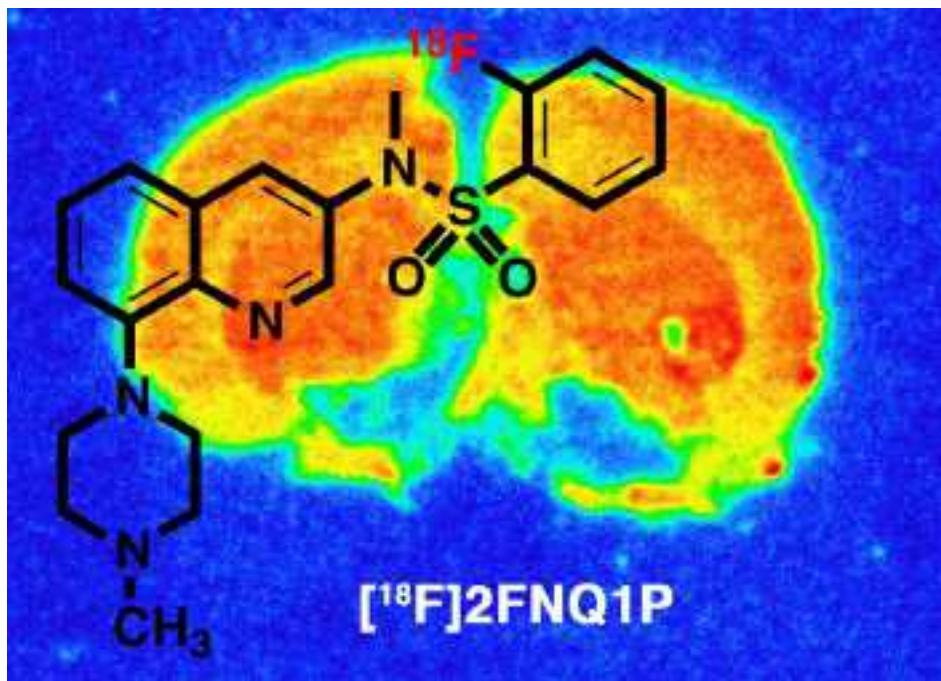
Method: Synthesis, properties and radiolabeling of carbamoyl fluorides



## PET imaging

Method: Development of new radiotracers for PET imaging

First fluorinated radioligands  
of 5-HT<sub>6</sub> receptor



First fluorinated radioligands  
of 5-HT<sub>7</sub> receptor

