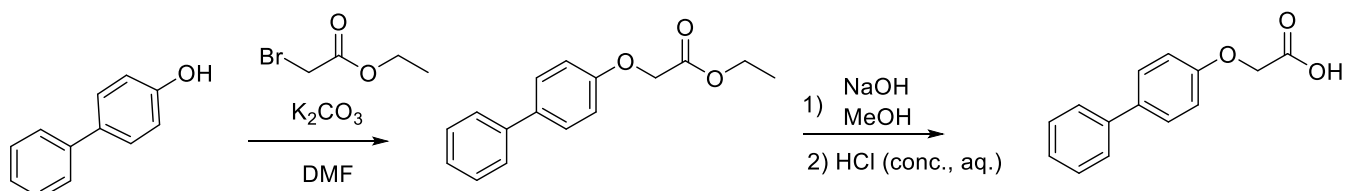


Photoredox Project Implementation and Setup Notes:

Fluorination Substrate Synthesis:



Procedure can be found in the Supplemental Information for *J. Am. Chem. Soc.* 2014, 136, 6, 2637–2641.

Photoredox Reaction Setup:

The photoredox reaction simply require the bright blue LED's at around 452 nm wavelength (the catalyst absorption wavelength) is directed onto the reaction flask/vial (example of light sources that have been used with success in our hands are Kessil PR160L 456 nm and the EvoluChem 450 nm LED's). This needs to be done safely with a light shield in place.

While not required to carry out the experiment, we produced a homemade photoreactor box, which consists of an aluminum housing lined with mirrors directed towards a sample vial holder. The box also has an attached box fan to facilitate air flow and keep the reaction temperature increase from the illumination in the enclosed space to a minimum. Similar devices can be purchased, although they are relatively expensive. One can also simply mount the lamp with a lamp pointed close to and directly at the reaction vial. **A light shield should always be used** for safety.



This box is convenient if used and also does some amount of shielding of the bright light, however a light shield is also required for safety whether you are using a lightbox or not. This can be as simple as a large piece of cardboard or cardboard box propped up in the fume hood to block the light. One can also make their own blue-light blocking shield from readily available materials:

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Trifold plexiglass barrier

(https://www.amazon.com/gp/product/B09M3RN44F/ref=ppx_yo_dt_b_asin_title_o09_s01?ie=UTF8&psc=1)

with two added light-absorbing films:

A UV-protective film

(https://www.amazon.com/gp/product/B09M3RN44F/ref=ppx_yo_dt_b_asin_title_o09_s01?ie=UTF8&psc=1)

and Yellow tint film

(https://www.amazon.com/gp/product/B072FJ9PYF/ref=ppx_yo_dt_b_asin_title_o09_s03?ie=UTF8&psc=1)