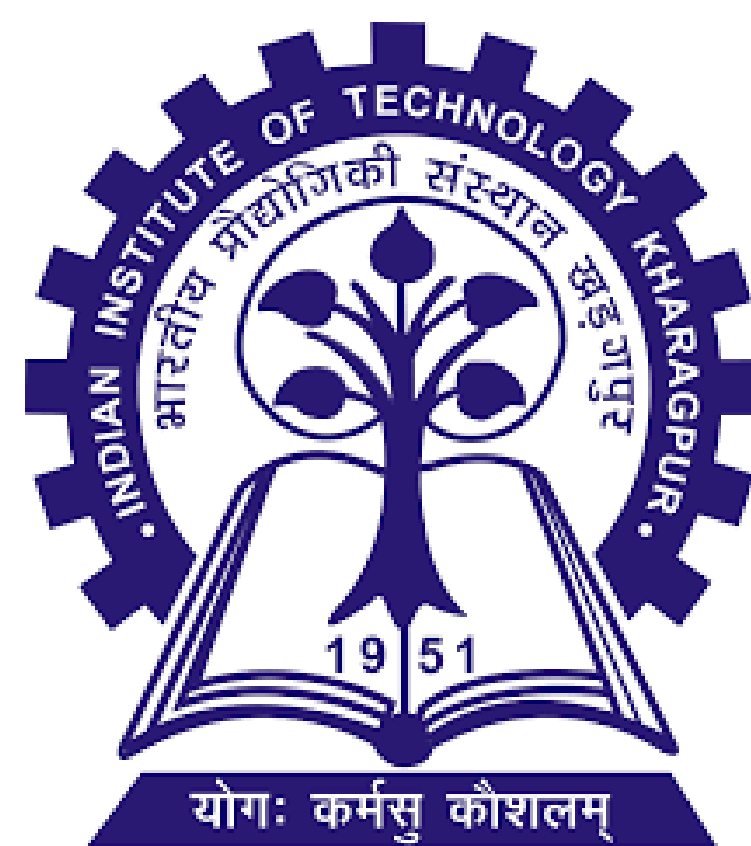




Mechanistic Dichotomy in Solvent Dependent Access to *E* vs *Z*-allylic Amines via Decarboxylative Vinylation of Amino Acids

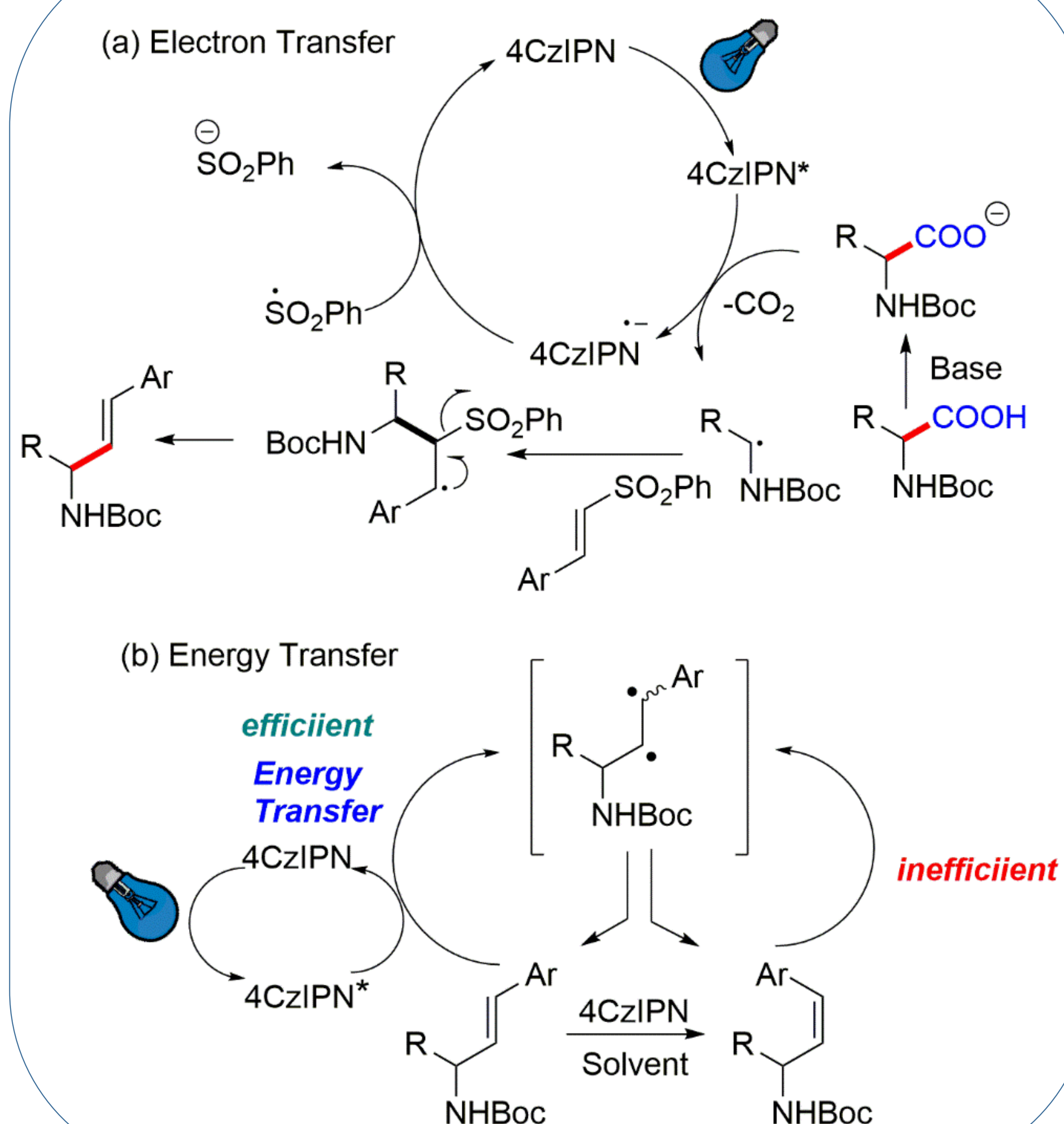
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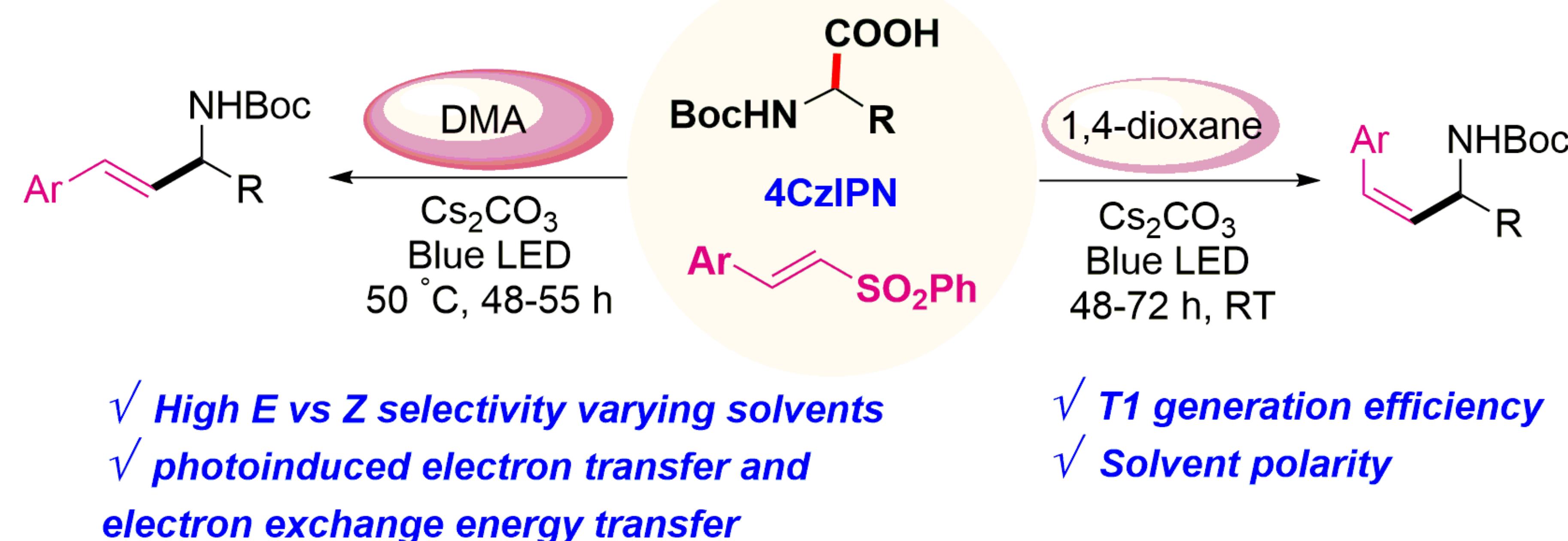
Plausible reaction mechanism



Reference

[1] Manna, S.; Kakumachi, S.; Das, K. K.; Tsuchiya, Y.; Adachi, C.; Panda, S. *Chem. Sci.* **2022**, *13*, 9678-9684.

Our Strategy



Quenching study

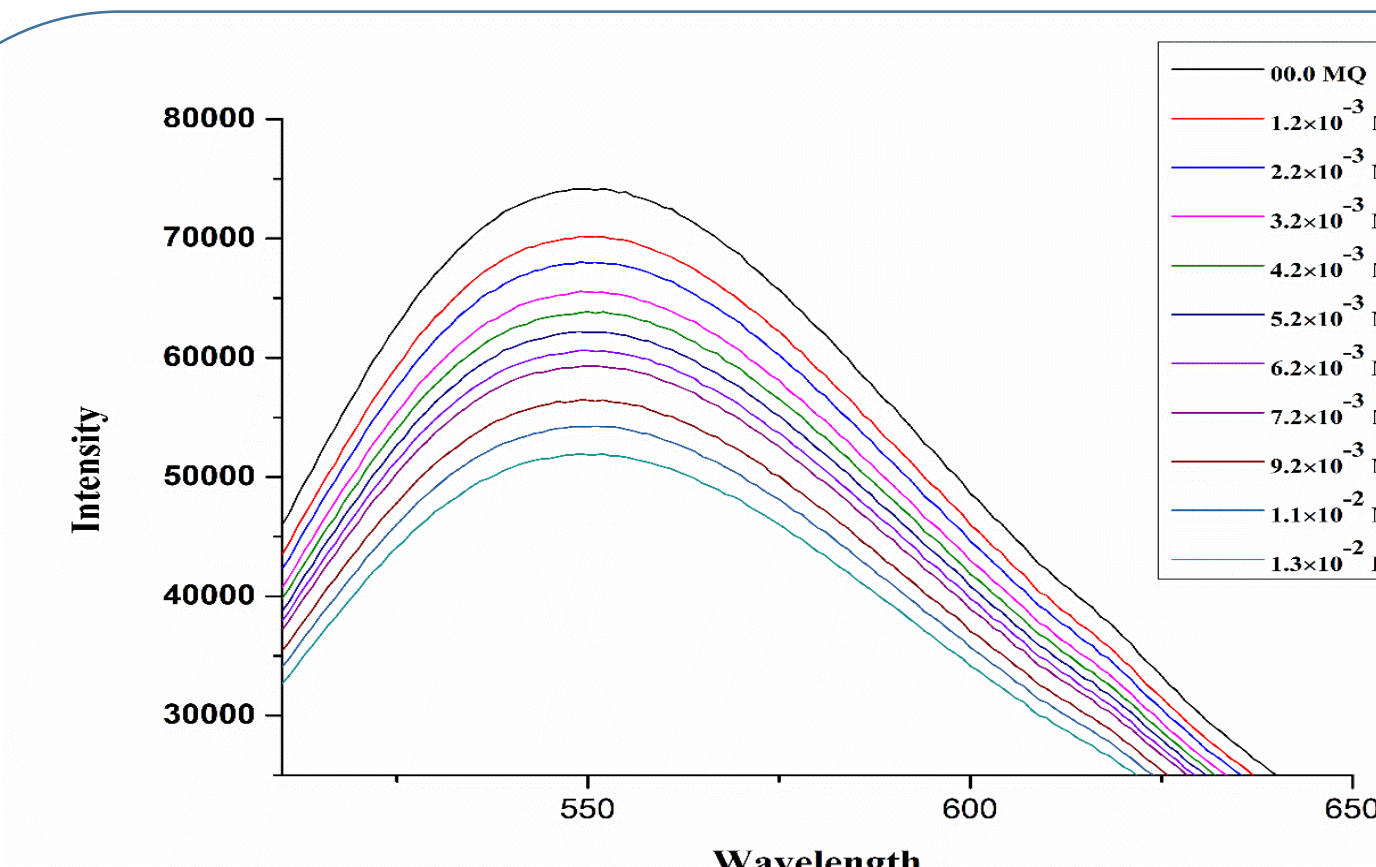


Figure 1: Fluorescence quenching of excited 4CzIPN* with *N* Boc Proline carboxylate anion (0.5 M) in DMF (excitation wavelength: 365 nm).

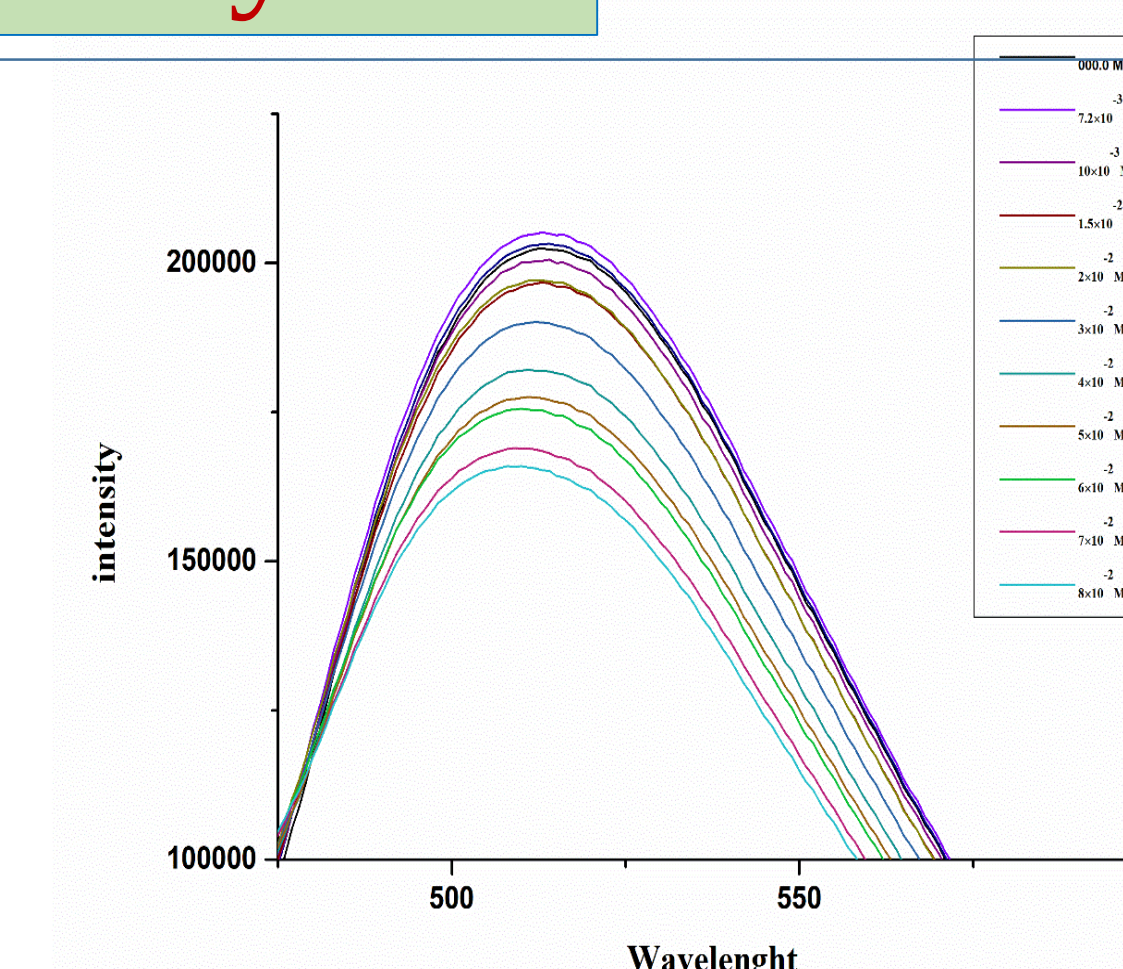
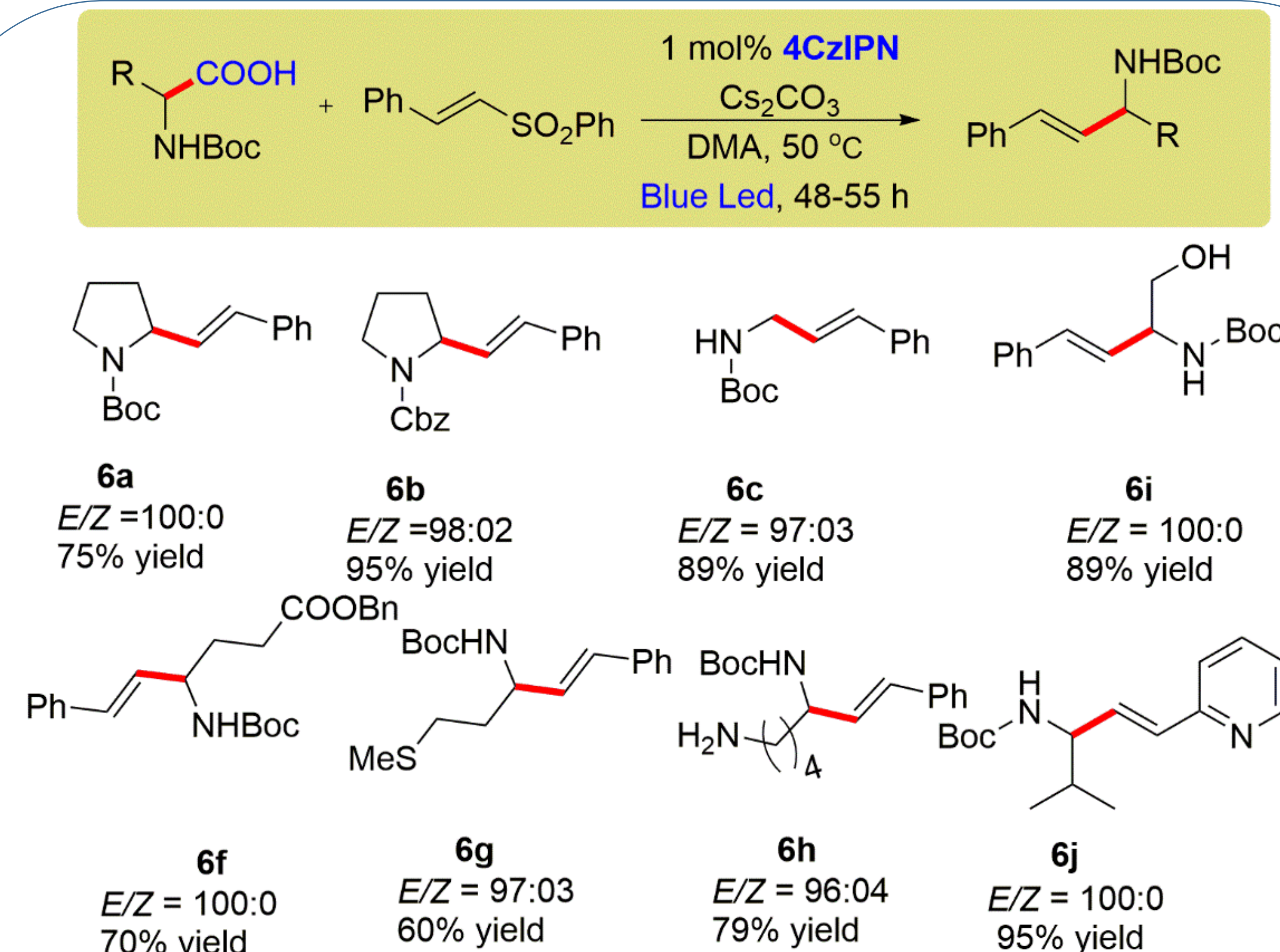


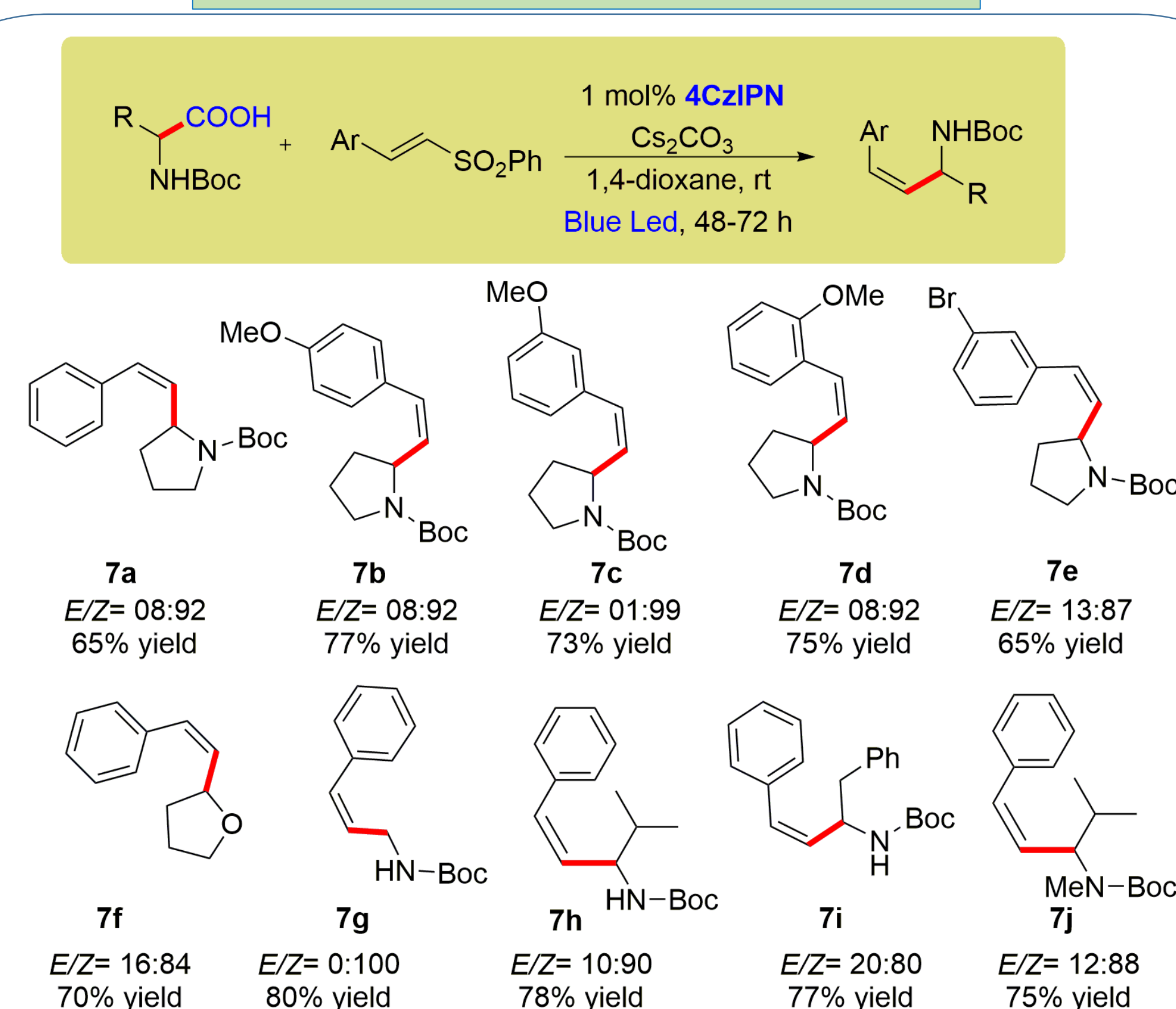
Figure 2: Fluorescence quenching of excited 4CzIPN* with *N* Boc Proline carboxylate anion (0.5 M) in 1,4-dioxane (excitation wavelength: 365 nm).

E-allylic amine



Vinyl sulfone (1 equiv), amino acids (2 equiv), Cs₂CO₃ (2 equiv) 4-CzIPN (1 mol%) at 50 °C;

Z-allylic amine



Vinyl sulfone (1 equiv), Boc-amino acids (2 equiv), Cs₂CO₃ (2 equiv) 4-CzIPN (1mol%) at RT in 1,4-dioxane

Stern-volmer plot

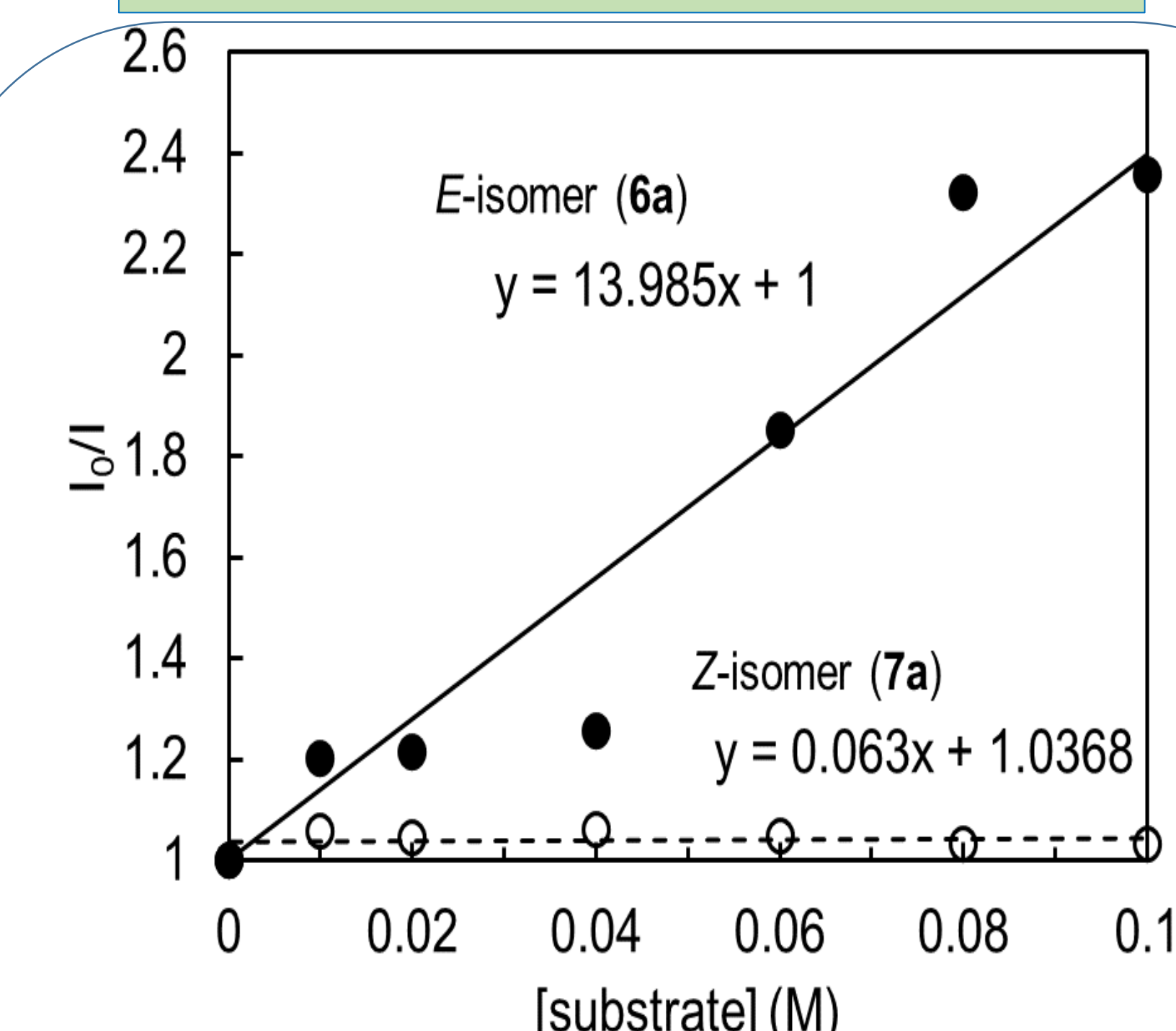


Figure 3. Stern-Volmer Plot of 4CzIPN emission quenching with various substrates of **6a** and **7a** in 1,4-dioxane, [4CzIPN] = 1.0×10^{-5} M, λ_{ex} = 365 nm, λ_{em} = 510 nm