CLICKABLE FLUORESCENT PROBES FOR BIOLOGICAL APPLICATION

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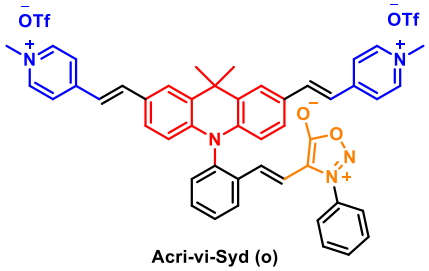
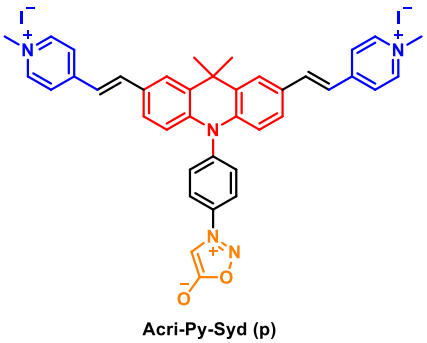
Fluorogenic probes are a powerful tool in bioimaging and diagnostics due to their ability to emit fluorescence upon interaction with specific biomolecules or environmental changes.
Recently, sydnones, a class of mesoionic compounds, have emerged as promising scaffolds for designing such probes. Sydnones, five-membered ring with a mesoionic structure, characterized by a unique electronic distribution that allows for diverse chemical reactivity and tunable photophysical properties[1]. These characteristics make sydnones ideal candidates for the development of probes hat exhibit "turn-on" fluorescence upon specific biochemical triggers, such as changes in the local microenvironment or interactions with specific biomolecules[2, 3].
The application of sydnones in fluorogenic probe design represents a significant innovation, combining chemical versatility with superior performance characteristics. Future research will likely focus on expanding the repertoire of sydnone derivatives and exploring their applications in more complex biological settings.





Reference(s)

[1] Porte, K., Riomet, M., Figliola, C., Audisio, D. & Taran, F. Click and Bio-Orthogonal Reactions with Mesoionic Compounds. *Chem Rev* (2021).

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