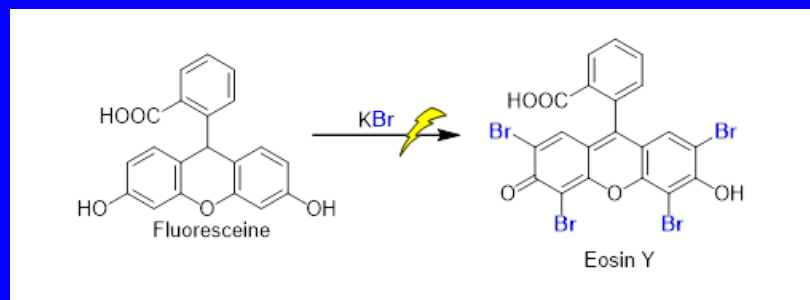


Exploring the Power of Electrosynthesis: A Hands-On Lab Experience



Electrosynthesis offers a cleaner, safer, and more sustainable route to performing chemical transformations—eliminating the need for harsh reagents, reducing waste, and enabling precise reaction control using electricity as the driving force. In this interactive lab session, we will introduce the versatility of electrosynthetic methods through real-world applications, highlighting their relevance to modern green manufacturing. Following a brief overview of the core principles and practical considerations of electrosynthesis, participants will engage directly with a live experiment: the electrochemical bromination of fluorescein to Eosin Y. This transformation, traditionally requiring hazardous bromine, will instead showcase in situ generation of bromine via anodic oxidation of bromide ions. The experiment provides a visually striking demonstration of reaction progress through a clear colour change, while illustrating key electrochemical concepts in an accessible format.

Participants will have the opportunity to select and adjust experimental parameters themselves, using the ElectraSyn 2.0 platform, to optimise reaction conditions and gain hands-on experience with electrochemical methods. By the end of the session, you'll leave not only with a deeper understanding of electrosynthesis but also with practical insight into how these techniques can be leveraged for greener, scalable chemical processes in industry.

Dr. Kevin Lam

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