

## **Establishing an electrochemistry platform in crop protection research**

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As part of our effort to capture burgeoning greener technologies for the discovery, optimization and manufacture of crop protection agents, we have been developing an electrochemistry platform at Syngenta. Electrosynthesis offers unique opportunities, particularly in the area of redox transformations where redox reagents may be directly replaced by an electrical potential that drives formation of benign, or even useful, redox partners such as dihydrogen. While exploring how best to incorporate electrosynthesis across our research and development pipeline, we have established several tools and techniques, ranging from high-speed and low-volume screening to scaled-down flow cells that mimic key parameters in production-scale electrochemistry. This presentation will detail the development of these tools framed against our pursuit of a green manufacturing route to Dioxopyritrione, studies that fed back into research to position this technology early in the discovery and development pipeline. This positioning of electrochemistry is part of our broader effort to enhance incorporation of burgeoning sustainable chemistry early in the pipeline for responsible end-to-end delivery.