

Showcasing research from Dr Hessam Mehr's laboratory, School of Chemistry, University of Glasgow, Scotland, UK.

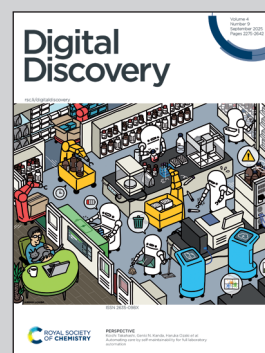
Programmable aerosol chemistry coupled to chemical imaging establishes a new arena for automated chemical synthesis and discovery

Aerosol microdroplets are gaining attention as inherently parallel media for chemical reactions, but harnessing their full potential requires revisiting the fundamentals of synthetic chemistry. How will syntheses be conceived and executed in this new arena, and what toolbox of analytical techniques is suited to the challenge of interrogating vast inhomogeneous reactivity outcomes? In this work, we set out a framework, enabled by open programmable hardware, microscopy and machine vision, that opens up a pathway for translating traditional synthesis and discovery methodology for execution in aerosol microdroplets.

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See S. Hessam M. Mehr *et al.*, *Digital Discovery*, 2025, **4**, 2423.