

Developments in scan strategies for high-speed and low-dose microscopy

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Introduction

- Scanning transmission electron microscopy (STEM) is a widespread and useful technique in the materials scientist's toolbox. However serial imaging is slow,
- exacerbated by imperfect scan coils require additional wait times, increasing the sample's exposure to the electron beam. • Several strategies have been proposed to improve acquisition times (e.g. compressed sensing, novel scan paths [1]), though these do not remove effects from the scan coils, becoming particularly evident at lower dwell times.
- We explore a range of scan strategies to increase imaging times, increase scan efficiency, and reduce beam damage, whilst maintaining crystallographic precision.

