



## The August 2023 cover paper

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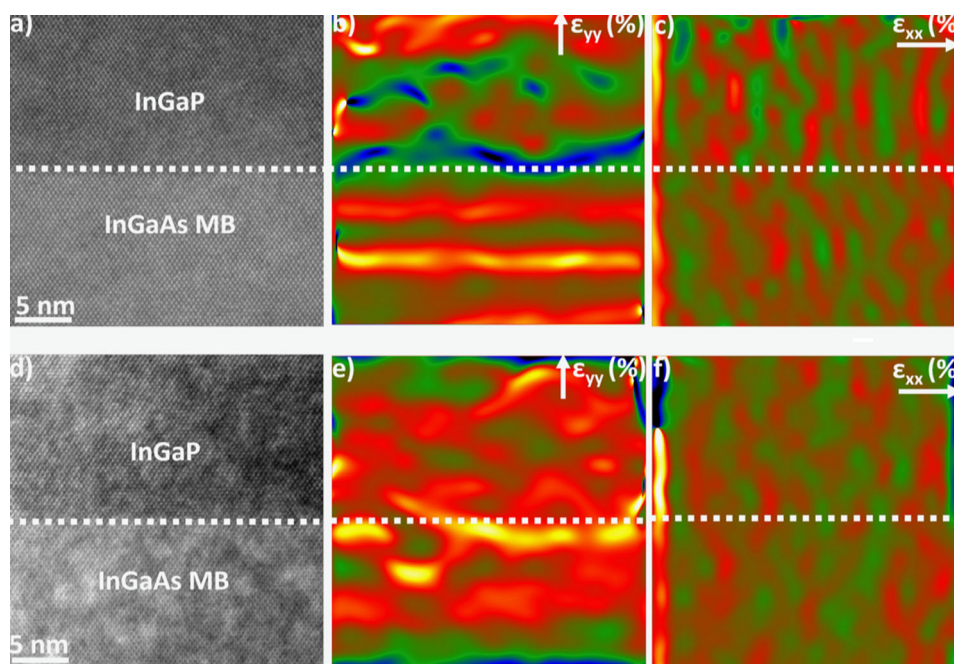
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### GRAPHICAL ABSTRACT



The cover for the August 2023 issues of the Journal of Materials Science comes from the paper by Nicholas Stephen and colleagues at several different Universities in the UK, Ireland and the USA with two authors also at the SuperSTEM Laboratory in Daresbury. The paper was handled by our Editor Kevin Jones. The paper is an investigation of metamorphic

buffers (MBs) used in compound semiconductor devices and is a classic illustration of the interaction between different disciplines. The paper is included in our “Electronic materials” Topical Collection.

The paper brings together three favorite topics, namely compound semiconductors, dislocations and transmission electron microscopy. The authors

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describe ‘waves of dislocations’ and the necessity of tailoring strain in the active region of a metamorphic laser. Although the paper is an original archival report, it does summarize the challenges and the reason for using parabolic-graded MBs rather than the simple superlattices from the 1980s. It might also make you think about hyphens. Like the cover image itself, figure 1 is a great example of using color to make a diagram clear—PDFs and hard copies of J Mater Sci are all in full color.

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their published form using the SharedIt link from the moment they appear online with their permanent DOI. Supplementary data are also available from the publisher’s website.

[1] Stephen N, Kumar P, Gocalinska A, Mura E, Kepaptsoglou D, Ramasse Q, Pelucchi E, Arredondo M (2023) J Mater Sci 58, 9547–9561. Dislocation and strain mapping in metamorphic parabolic-graded InGaAs buffers on GaAs. <https://doi.org/10.1007/s10853-023-08597-y>

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