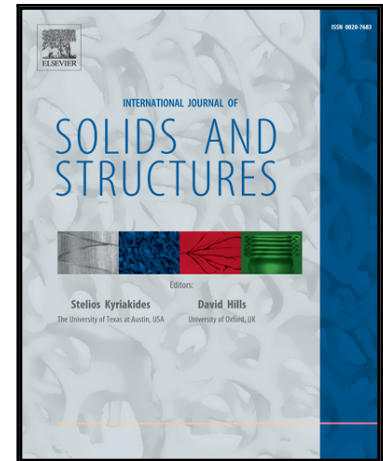


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A cellular metastructure incorporating coupled negative thermal expansion and negative Poisson's ratio

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Highlights

- A metastructure is devised to obtain tailorable thermal expansion and tunable Poisson's ratio.
- Analytical expressions for thermal expansion and Poisson's ratio are established and numerically validated.
- The metastructure can give paired negative thermal expansion and negative Poisson's ratio.
- Tailorable thermal expansion and Poisson's ratio are highly coupled with common parameters.

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