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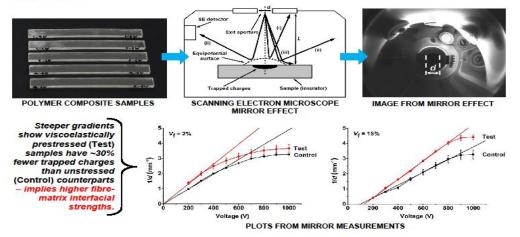
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Graphical abstract

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Research highlights:

- Viscoelastically generated prestress in a composite improves mechanical properties.
- Prestressed composites have 30% fewer trapped charges than unstressed counterparts.
- Implies that prestressed composites have higher fibre-matrix interfacial strengths.
- Tensile strength tests on similar composite samples support these findings.

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