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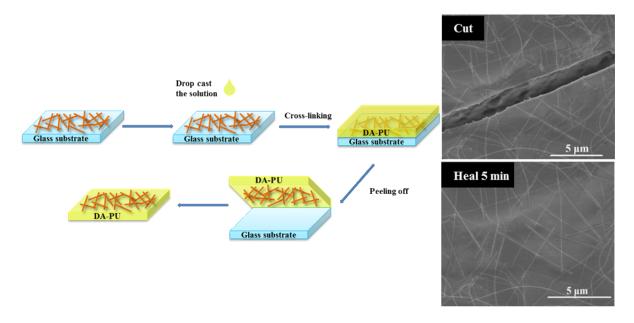
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Graphical abstract



Highlights

- Self-healing flexible conductor comprises copper nanowire and polyurethane sheath.
- The nanocomposite conductor exhibits a sheet resistance of 22.3 Ω ·sq-1.
- Healing behavior can be repeated 5 times without significant loss of conductivity.
- The nanocomposite conductor sustains large-strain deformation.

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