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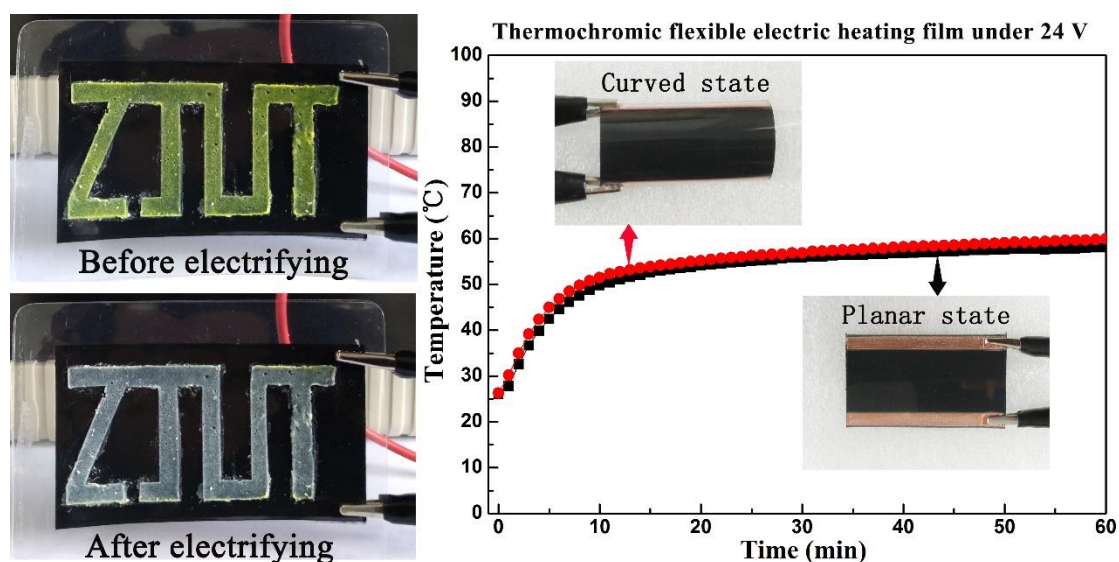
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### Graphical Abstract



Electrothermal composites composed of PEO as polymer matrix, pyrolysis N991/MWCNTs as conductive filler and nano sized SiO<sub>2</sub> particles as non-conductive filler were used to fabricate flexible electric heating films with thermochromic function.

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