

Continuous production of flexible carbon nanotube-based transparent conductive films

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Abstract This work shows a simple, single-stage, scalable method for the continuous production of high-quality carbon nanotube-polymer transparent conductive films from carbon feedstock. Besides the ease of scalability, a particular advantage of this process is that the concentration of nanotubes in the films, and thus transparency and conductivity, can be adjusted by changing simple process parameters. Therefore, films can be readily prepared for any application desired, ranging from solar cells to flat panel displays. Our best results show a surface resistivity of the order of 300 Ω square⁻¹ for a film with 80% transparency, which is promising at this early stage of process development.

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