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Autor(en) des Beitrags: Falco, A.; Salmerón, J.F.; Loghin, F.; Abdelhalim, A.; Lugli, P.; Rivadeneyra, A.

Titel des Beitrags: Optimization of process parameters for inkjet printing of CNT random networks on flexible substrates

Abstract: In this work, a comparison between the electro-optical characteristics of CNT random networks obtained through inkjet printing and spray-deposition on flexible substrates is presented. Transmittance values are similar in both fabrication techniques; however, the sheet resistance of the inkjetted layers diverges significantly with respect to the reference spray-deposited thin film. To overcome this limitation, we show a relationship between the printing resolution and the sheet resistance. Furthermore, big differences between the two studied substrates are found in the electro-optical characteristics of CNT films. This work shows a reliable procedure for the choice of substrates and printing parameters for the realization of fully inkjet-printed large area CNT networks for electrode and sensing applications.

Stichworte: Substrates, Printing, Resistance, Positron emission tomography, Films, Electrodes, Carbon nanotubes

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