AEROSOL JET PRINTING OF SILVER LINES FOR PRINTED ELECTRONICS APPLICATIONS

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Aerosol Jet Printing is a recently developed additive technology that produces finer feature sizes than traditional ink-jet and screen printing processes. In this technique, the ink is converted to a fine aerosol with droplet sizes of the order of 1 micron, and this aerosol mist is directed to the substrate in a flowing carrier gas. On exit from the print nozzle, a sheath gas focuses the mist to produce a high resolution printed pattern. In this poster, the printing and the subsequent sintering of the silver ink are explored. Printing process parameters, including the carrier and sheath gas velocities and printing speed, as well as sintering parameters are varied in an attempt to define a process window. The surface roughness and the electrical properties of the lines are also reported.

[1] Unpublished. ISCST shall not be responsible for statements or opinions contained in papers or printed in its publications.