

Title: Spray coating methods for polymer solar cells fabrication: A review

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Abstract: The main focus of this review article is the introduction of relevant parameters in spray coating processes to provide better understanding on controlling the morphology of spray coated thin films for producing high performance polymer solar cells (PSC). Three main parameters have been identified as major influences on the spray coating processes. These are nozzle to substrate distance, solvent and mixed solvents effects, and substrate temperature and annealing treatment. Such spray coating techniques show great potential for large scale production, since these methods have no limitation in substrate size and low utilization of polymers which is promising to substitute the conventional spin coating methods. Currently available printing and coating methods are also briefly discussed in this review.