

Abstract Submitted
for the DFD12 Meeting of
The American Physical Society

Investigation of thin film coating process for printed electronics with suspension ink by slot die coating SEUNG-HYUN LEE, INYOUNG KIM, Korea Institute of Machinery & Materials — Slot die coating process can be easily combined with roll-to-roll process and handle various coating liquid with wide range of viscosity and solid content. It is also pre-metered coating and the thickness of the coated layer can be easily predicted and controlled by a given feed flow rate and coating speed. Therefore, recently, slot die coating process is extending the use of fabrication of thin film printed electronics such as transparent conductive film and thin film solar cell etc. In the present study, we elucidated thin film coating process for printed electronics with suspension ink by slot die coating. Numerical study was investigated the effect of coating die design and rheological characteristics of suspension ink on coating uniformity. Slot die coating experiments was also performed with suspension ink which is composed of Cu(InGa)Se₂ nano-particle and ethanol solvent and compared with numerical simulation.

Seung-Hyun Lee
Korea Institute of Machinery & Materials

Date submitted: 08 Aug 2012

Electronic form version 1.4