Chemical Engineering Seminars – HT 2010

Week 4, Tuesday February 9th 2009, 4:00PM-5:00PM
Lecture Room 3, Thom Building, Engineering Science

Printing for the future: technologies, applications and modelling

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Abstract

Reel-to-reel printing technologies are key manufacturing processes for the development of mass-produced thin film electronic and biomedical devices.

In this presentation, industrial R2R printing technologies will be introduced, detailing the processes and novel inks Advantages and limitations over other printing methods, such as inkjet will be discussed. Recent work will be presented demonstrating the ability of printing technologies, such as flexography, to accurately reproduce complex functional patterns for the manufacture of EL lighting, OLED displays, dye-sensitized solar cells and biosensors. Associated background rheology and computational simulation work will be discussed.

Biography

Dr. Davide Deganello works as a researcher at Swansea University for the Welsh Centre for Printing and Coating, one of the world's leading centres for research and development of printing and coating processes.
Research interests comprise complex fluids rheology (including extensional flows and wetting phenomena), micro-manufacturing by printing of functional devices, CFD of complex fluids and systems (including free-surface flows and particle laden fluids), and micro-surface metrology.