Low-Temperature Organic and oxide Transistors For Printable electronics

Henning Sirringhaus Cavendish Laboratory, University of Cambridge, Cambridge CB3 0HE

Abstract

Over recent years there has been tremendous progress in developing low-temperature processible organic and oxide semiconductors that can be processed by solution-based printing techniques and provide high charge carrier mobilities for both n-type and p-type field-effect transistor operation, good operational stability and other functionalities such as efficient electroluminescene, sensing or memory functions. In this talk I will discuss the basic device and charge transport physics of organic and oxide transistors, review manufacturing

approaches and assess their performance in light of a range of applications in displays and integrated systems.

Short biography

Prof. Henning Sirringhaus, FRS is the Hitachi Professor of Electron Device Physics at the Cavendish Laboratory and works on the charge transport, photo- and device physics of polymer and molecular semiconductors. He is co-founder of the spin-off companies, Plastic Logic/FlexEnable and Eight-19 Ltd, commercializing organic transistor and organic solar cell technology, respectively.