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### Solution processable phosphorescent organic light emitting diodes

Printed organic electronics is an emerging technology which attracts a lot of interest due to very broad range of possible applications. However in spite of very intensive research carried out since several years in academic and industrial laboratories, there are still many unsolved problems hindering implementation of this new technology. Concerning printed organic light emitting diodes (OLEDs) among different obstacles two have fundamental meaning – low efficiency and poor solution processability. In this work we will present how one increase efficiency of electroluminescence by employing triplet excited states using as the emitters new iridium complexes, and how one improve processability of the emissive layers by means of host-guest approach with ambipolar polymer as the host matrix.

### Biography

Jacek Ulanski is an Professor at Lodz University of Technology in Lodz, Poland since 1994; Full Professor since 2001; since 1999, he is the Head of Department of Molecular Physics. His research work lies in physical properties of polymers, molecular crystals, composites and nanocomposites, hydrogels, molecular relaxations, phase transitions, intermolecular interactions, transport of energy and charges. Developing of new materials and new processing techniques (like reticulate doping or zone-casting) for organic opto-electronic devices; construction and characterisation of OFETs, OLEDs, photovoltaics, photodiodes. He is a Supervisor of 21 PhD thesis, author and co-author of over 230 papers and monographs, many patents and over 100 lectures at international conferences.

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