Solution-processed organic light-emitting diodes

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Organic light-emitting devices (OLEDs) have many promising applications in active matrix displays, solid-state lighting, visible light communication, and medical treatment, which make them attractive in fundamental and applied researches. Currently, the manufacturing of OLEDs mainly relies on high-vacuum thermal evaporation, which is highly expensive and complicated. Alternatively, solution-processed OLEDs are favorable due to the merits of large-area and low-cost. In this talk, the state-of-the-art solution-processable OLEDs, including the high-performance materials and the cutting-edge thin-film technologies, will be presented and explained. Especially, the innovative technologies of transfer printing and inkjet printing for solution-processed OLEDs will be elaborated, which are more competitive for large-area mass production.

Biography

Dr. Guohua Xie obtained his Ph.D. degree from Jilin University (China) in 2011, working on OLED microdisplays. From August 2011, Dr. Xie carried out his postdoctoral research at TU Dresden (Germany), sponsored by Alexander von Humboldt Foundation. From January 2013 to January 2015, Dr. Xie worked at the Organic Semiconductor Center of the University of St Andrews (UK). Since January 2015, he has been serving as an associate professor at the College of Chemistry and Molecular Sciences of Wuhan University (China), focusing on the interdisciplinary research of organic optoelectronic materials and devices. Dr. Xie has co-authored over 200 peer-reviewed publications with an H-index of 45 and contributed to three edited book chapters on organic optoelectronics. In 2020, Dr. Xie has been admitted as a Fellow of Royal Society of Chemistry. Currently, Dr. Xie is a member of Youth Editorial Board respectively for “Chinese Journal of Luminescence”, “SmartMat” and “The Innovation”.

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