



## Transition Metal Oxides in Organic Light Emitting Diodes

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Cuvillier Verlag Okt 2010, 2010. Taschenbuch. Book Condition: Neu. 211x149x12 mm. Neuware - Organic light emitting diodes (OLEDs) exhibit several specific properties such as an extremely thin design and a wide viewing angle, making them favorable for the application in display technology and general lighting. The development of OLEDs is strongly driven by the prospect of low-cost production of large area applications in the future. Accordingly, their performance was considerably enhanced in terms of efficiency and lifetime over the past years. The introduction of transition metal oxides (TMOs) in OLEDs is regarded as a promising concept for further improving their properties due to their technological compatibility with organic layers and their high thermal stability. The first results from the insertion of TMOs in OLEDs indicate their versatile application as neat functional layers and electrochemical dopants of organic semiconductors. On the other hand, the knowledge of their electronic properties and the mode of operation in OLEDs is very limited so far. In this context, it becomes apparent that fundamental mechanisms such as the electrochemical doping of organic semiconductors or the charge generation in interconnecting units of stacked OLEDs are not yet completely clarified. Thus, this work focuses on the...



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