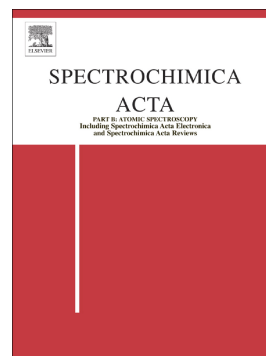


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Analysis of organic multilayer structures using a  
combined grazing incidence X-ray fluorescence/X-ray  
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**Abstract**

Organic light-emitting diodes (OLEDs) continue to attract research interest due to their application in bright displays and solid-state lighting. The highest efficiency values are reached with multilayer devices. The morphology of these layers is important for device performance. A current field of development is the application of solution-based deposition techniques. In general, solution processed devices do not yet reach the performance of OLEDs with vapor deposited materials. In this study, we used typical OLED materials with a sulfur based small molecule host, which can be vapor deposited as well as solution processed, to prepare single and multilayer samples. Samples consisted of the host layer deposited on a hole transport and a buffer layer and were investigated with a combination of grazing incidence X-ray fluorescence (GIXRF) and X-ray reflectometry (XRR). Measurements were performed us-

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