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## **S E M I N A R** **aus** **Halbleiterphysik und Nanotechnologie**

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### **“Aspects of recent developments in high-resolution roll-to-roll based Nanoimprint-Lithography”**

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Nanoimprint-Lithography has already proven to be a suitable method for the large-area fabrication of micro- and nanostructures. During the last years, its roll-to-roll version has been refined for different types of structures and applications. This has been done by developments throughout the whole process chain, including dedicated imprint-resists, as well as mastering for and surface modification of shims. In this talk the focus will be laid on three different application fields: (1) Micro-Fluidic devices for in-vitro diagnostics and drug-screening, (2) polymer waveguides for light management in photovoltaics, displays and diagnostics and (3) freeform micro-optical elements for innovative lighting solutions like ultrathin luminaires. Special challenges of these themes for the process and corresponding solutions will be presented.