Record Nr. UNINA9910585936903321 Autore Muhlberger Michael Titolo Nanoimprint Lithography Technology and Applications Basel, : MDPI - Multidisciplinary Digital Publishing Institute, 2022 Pubbl/distr/stampa Descrizione fisica 1 electronic resource (180 p.) Technology: general issues Soggetti Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Sommario/riassunto Nanoimprint Lithography (NIL) has been an interesting and growing field in recent years since its beginnings in the mid-1990s. During that time, nanoimprinting has undergone significant changes and developments and nowadays is a technology used in R&D labs and industrial production processes around the world. One of the exciting things about nanoimprinting process is its remarkable versatility and the broad range of applications. This reprint includes ten articles, which represent a small glimpse of the challenges and possibilities of this technology. Six contributions deal with nanoimprint processes aiming at specific applications, while the other four papers focus on more general aspects of nanoimprint processes or present novel materials. Several different types of nanoimprint processes are used: plate-to-plate, roll-to-plate, and roll-to-roll. Plate-to-plate NIL here also includes the use of soft and flexible stamps. The application fields in this reprint are broad and can be identified as plasmonics, superhydrophibicity, biomimetics, optics/datacom, and life sciences,

showing the broad applicability of nanoimprinting. The sections on the

nanoimprint process discuss filling and wetting aspects during nanoimprinting as well as materials for stamps and imprinting.