1.
Record Nr.	UNINA9910585936903321
Autore	Muhlberger Michael
Titolo	Nanoimprint Lithography Technology and Applications
Pubbl/distr/stampa	Basel, : MDPI - Multidisciplinary Digital Publishing Institute, 2022
Descrizione fisica	1 online resource (180 p.)
Soggetti	Technology: general issues
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.

2.
Record Nr.	UNINA9910161647503321
Autore	Alvaro R. Lara
Titolo	Quantitative Systems Biology for Engineering Organisms and Pathways
Pubbl/distr/stampa	Frontiers Media SA, 2016
Descrizione fisica	1 online resource (126 p.)
Collana	Frontiers Research Topics
Soggetti	Biotechnology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	Studying organisms as a whole for potential metabolic(ally) engineering of organisms for production of (bio)chemicals is essential for industrial biotechnology. To this end, integrative analysis of different -omics measurements (transciptomics, proteomics, metabolomics, fluxomics) provides invaluable information. Combination of experimental top-down and bottom-up approaches with powerful analytical tools/techniques and mathematical modeling, namely (quantitative) systems biology, currently making the state of art of this discipline, is the only practice that would improve our understanding for the purpose. The use of high-throughput technologies induced the required development of many bioinformatics tools and mathematical methods for the integration of obtained data. Such research is significant since compiling information from different levels of a living system and connecting them is not an easy task. In particular, construction of dynamic models for product improvement has been one of the goals of many research groups. In this Research Topic, we summarize and bring a general review of the most recent and relevant contributions in quantitative systems biology applied in metabolic modeling perspective. We want to make special emphasis on the techniques that can be widely implemented in regular scientific laboratories and in those works that include theoretical presentations. With this Research Topic we discuss the importance of applying systems biology approaches for finding metabolic engineering targets

for the efficient production of the desired biochemical integrating information from genomes and networks to industrial production. Examples and perspectives in the design of new industrially relevant chemicals, e.g. increased titer/productivity/yield of (bio)chemicals, are welcome. Addition to the founded examples, potential new techniques that would frontier the research will be part of this topic. The significance of multi 'omics' approaches to understand/uncover the pathogenesis/mechanisms of metabolic diseases is also one of the main topics.