



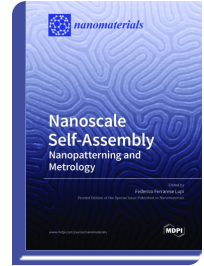
Special Issue Reprint

Nanoscale Self-Assembly: Nanopatterning and Metrology

www.mdpi.com/books/reprint/4612

Edited by
Federico Ferrarese Lupi

ISBN 978-3-0365-1961-6 (Hardback)
ISBN 978-3-0365-1960-9 (PDF)



The self-assembly process underlies a plethora of natural phenomena from the macro to the nano scale. Often, technological development has found great inspiration in the natural world, as evidenced by numerous fabrication techniques based on self-assembly (SA). One striking example is given by epitaxial growths, in which atoms represent the building blocks. In lithography, the use of self-assembling materials is considered an extremely promising patterning option to overcome the size scale limitations imposed by the conventional photolithographic methods. To this purpose, in the last two decades several supramolecular self-assembling materials have been investigated and successfully applied to create patterns at a nanometric scale.

Although considerable progress has been made so far in the control of self-assembly processes applied to nanolithography, a number of unresolved problems related to the reproducibility and metrology of the self-assembled features are still open. Addressing these issues is mandatory in order to allow the widespread diffusion of SA materials for applications such as microelectronics, photonics, or biology.

In this context, the aim of the present Special Issue is to gather original research papers and comprehensive reviews covering various aspects of the self-assembly processes applied to nanopatterning. Topics include the development of novel SA methods, the realization of nanometric structures and devices, and the improvement of their long-range order. Moreover, metrology issues related to the nanoscale characterization of self-assembled structures are addressed.



Order Your Print Copy
You can order print copies at
www.mdpi.com/books/reprint/4612

MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.



Open Access

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.



Author Focus

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.



High Quality & Rapid Publication

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.



High Visibility

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).



Print on Demand and Multiple Formats

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.