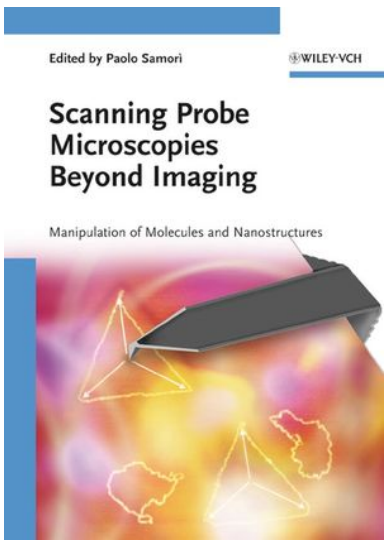

Scanning Probe Microscopies Beyond Imaging: Manipulation of Molecules and Nanostructures

Paolo Samorì (Editor)

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DESCRIPTION

This first book to focus on the use of SPMs to actively manipulate molecules and nanostructures on surfaces goes way beyond conventional treatments of scanning microscopy merely for imaging purposes. It reviews recent progress in the use of SPMs on such soft materials as polymers, with a particular emphasis on chemical discrimination, mechanical properties, tip-induced reactions and manipulations, as well as their nanoscale electrical properties. Detailing the practical application potential of this hot topic, this book is of great interest to specialists of wide-ranging disciplines, including physicists, chemists, materials scientists, spectroscopy experts, surface scientists, and engineers.

ABOUT THE AUTHOR

Since 2003, Paolo Samori holds a visiting professorship at the Institut de Science et d'Ingénierie Supramoléculaires (ISIS) of the Université Louis Pasteur of Strasbourg, France, where he is director of the Nanochemistry Laboratory.

He obtained his Laurea (master's degree) in industrial chemistry at the University of Bologna and went on to join the group of Prof. Jürgen P. Rabe at the Humboldt University of Berlin, Germany, where he received his doctorate in 2000 for his work on self-assembly of conjugated (macro)molecules at surfaces and interfaces. After a further year of post-doctoral research in the Rabe group, he was appointed Researcher at the Institute for Organic Synthesis and Photoreactivity of the National Research Council of Italy in 2001.

His current research interests include the self-assembly of hybrid architectures at surfaces, supramolecular electronics and fabrication of molecular scale nanodevices.

His work has been awarded with various prizes including the graduate student awards at E-MRS (in 1998) and MRS (2000), the Georg-Manecke Award 2002 by Berlin-Brandenburgischer Verband für Polymerforschung (BVP) as well as the IUPAC Prize for Young Chemists 2001.
