

Contents

High Precision Local Electrical Probing: Potential and Limitations for the Analysis of Nanocontacts and Nanointerconnects.	1
B. Guenther, M. Maier, J. Koeble, A. Bettac, F. Matthes, C. M. Schneider and A. Feltz	
Ultra-Compact Multitip Scanning Probe Microscope with an Outer Diameter of 50 nm	9
Vasily Cherepanov, Evgeny Zubkov, Hubertus Junker, Stefan Korte, Marcus Blab, Peter Coenen and Bert Voigtländer	
Atomic Scale Interconnection Machine.	23
O. A. Neucheva, R. Thamankar, T. L. Yap, C. Troadec, J. Deng and C. Joachim	
The DUF Project: A UHV Factory for Multi-Interconnection of a Molecule Logic Gates on Insulating Substrate	35
D. Martrou, L. Guiraud, R. Laloo, B. Pecassou, P. Abeilhau, O. Guillermet, E. Dujardin, S. Gauthier, J. Polesel Maris, M. Venegas, A. Hinault, A. Bodin, F. Chaumeton, A. Piednoir, H. Guo and T. Leoni	
Challenges and Advances in Instrumentation of UHV LT Multi-Probe SPM System	53
Zhouhang Wang	
On the Road to Multi-Probe Non-Contact AFM.	81
T. Vančura, S. Schmitt, V. Friedli, S. Torbrügge and O. Schaff	

Atomically Precise Manufacturing: The Opportunity, Challenges, and Impact	89
John N. Randall, James R. Von Ehr, Joshua Ballard, James Owen, Rahul Saini, Ehud Fuchs, Hai Xu and Shi Chen	
Combined STM and Four-Probe Resistivity Measurements on Single Semiconductor Nanowires	107
M. Berthe, C. Durand, T. Xu, J. P. Nys, P. Caroff and B. Grandidier	
Probing Electronic Transport of Individual Nanostructures with Atomic Precision	119
Shengyong Qin and An-Ping Li	
Surface Conductance Measurements on a MoS₂ Surface Using a UHV-Nanoprobe System	131
R. Thamankar, O. A. Neucheva, T. L. Yap and C. Joachim	
Multi-Probe Characterization of 1D and 2D Nanostructures Assembled on Ge(001) Surface by Gold Atom Deposition and Annealing	141
M. Wojtaszek, M. Kolmer, S. Godlewski, J. Budzioch, B. Such, F. Krok and M. Szymonski	
Nanometer-Scale Four-Point Probe Resistance Measurements of Individual Nanowires by Four-Tip STM	153
S. Hasegawa, T. Hirahara, Y. Kitaoka, S. Yoshimoto, T. Tono and T. Ohba	
Silicon Surface Conductance Investigated Using a Multiple-Probe Scanning Tunneling Microscope	167
Janik Zikovsky, Mark H. Salomons, Stanislav A. Dogel and Robert A. Wolkow	
Atomic-Scale Devices in Silicon by Scanning Tunneling Microscopy	181
J. A. Miwa and M. Y. Simmons	
Electronic Transport on the Nanoscale	197
C. A. Bobisch, A. M. Bernhart, M. R. Kaspers, M. C. Cottin, J. Schaffert and R. Möller	

Solid State Nano Gears Manipulations	215
Cedric Troadec, Jie Deng, Francisco Ample, Ramesh Thamankar and Christian Joachim	
Probing Single Molecular Motors on Solid Surface.	225
Haiming Guo, Yeliang Wang, Min Feng, Li Gao and Hongjun Gao	



<http://www.springer.com/978-3-642-28171-6>

Atomic Scale Interconnection Machines
Proceedings of the 1st AtMol European Workshop
Singapore 28th-29th June 2011
Joachim, C. (Ed.)
2012, IX, 244 p., Hardcover
ISBN: 978-3-642-28171-6