

## MESA+ SCIENTIFIC PUBLICATIONS 2004

### PhD-thesis

#### PHD-THESES UT, PREPARED AT UT

- Bakker, B.I. de Single molecule detection on the cell membrane with Near-field Scanning Optical Microscopy. (2004, maart 19). 135 pp. Enschede, Netherlands Febodruk BV Thesis advisor(s): Prof.dr. N.F. van Hulst, Dr. M.F. Garcia Parajo. ISBN: 90-365-2019-3
- Beek, R.C.H. van de High-Speed Low-Jitter Frequency Multiplication in CMOS. (2004, januari 8). 167 pp. Eindhoven Thesis advisor(s): prof.dr.ir. B. Nauta, Dr.ing. E.A.M. Klumperink. ISBN: 90-365-1989-6
- Bystrova, S. Diffusion Barriers for Cu Metallisation in Si Integrated Circuits. (2004, december 1). 165 pp. Enschede, The Netherlands PrintPartners Ipskamp Thesis advisor(s): prof.dr.ir. R.A.M. Wolters, prof.dr. J. Schmitz. ISBN: 90-365-2114-9
- Cate, M.G.J. ten Self-assembled receptors based on hydrogen bonds. (2004, mei 27). 169 pp. Enschede Print Partners Ipskamp Thesis advisor(s): Prof.dr.ir. D.N. Reinhoudt, Dr. M. Crego Calama. ISBN: 90-365-2053-3
- Corbellini, F. Molecular capsules based on ionic interactions in polar solvents. (2004, mei 7). 175 pp. Enschede Thesis advisor(s): Prof.dr.ir. D.N. Reinhoudt, Dr. M. Crego Calama. ISBN: 90-365-2040-1
- Garcia-Curiel, M.M. de la Luz Polymer-inorganic nanocomposites. (2004, januari 23). 160 pp. Enschede PrintPartners Ipskamp B.V. Thesis advisor(s): Prof.Dr.Ing. D.H.A. Blank. ISBN: 90-365-2013-4
- Gersen, H. Time resolved motion of pulses in photonic crystal waveguides - a real space investigation. (2004, juni 25). 98 pp. Enschede, Netherlands Febodruk BV Thesis advisor(s): Prof dr. L. Kuipers, Prof.dr. N.F. van Hulst. ISBN: 90-365-2047-9
- Gurlu, O. On the Atomic and Electronic Structure of Clean and Pt Covered Si(001) and Ge(001) surfaces. (2004, juni 25). 148 pp. Enschede, the Netherlands Universiteit Twente Thesis advisor(s): Prof.dr.ir. B. Poelsema, Dr.ir. H.J.W. Zandvliet. ISBN: 90-365-2064-9
- Hien, T.D. Microfabricated palladium based membranes for hydrogen separation. (2004, juni 4). 130 pp. Enschede Thesis advisor(s): Prof.dr. M.C. Elwenspoek, J.T.F. Keurentjes. ISBN: 90-365-2058-4
- Hof, A.J. Deuterium in the Gate Dielectric of CMOS Devices. (2004, oktober 29). 97 pp. Enschede Thesis advisor(s): prof.dr. J. Schmitz. ISBN: 90-365-2093-2
- Honschoten, J.W. van Modelling and optimisation of the microflow. (2004, april 16). 209 pp. Enschede Thesis advisor(s): Prof.dr. M.C. Elwenspoek, prof.dr.ir. W.F. Druyvesteyn. ISBN: 90-365-2030-4
- Kuijpers, A.A. Micromachined capacitive long range displacement sensor for nano-positioning of microactuator systems. (2004, december 8). 196 pp. Universiteit Twente Thesis advisor(s): Prof.dr. M.C. Elwenspoek, Dr.ir. G.J.M. Krijnen. ISBN: 90-365-2119-x
- Laan, D.C. van der Flux Pinning and Connectivity in Polycrystalline High-Temperature Superconductors. (2004, januari 30). 162 pp. Enschede Printpartners Ipskamp Thesis advisor(s): Prof.dr.ir. H.H.J. ten Kate, Dr.ir. B. ten Haken. ISBN: 90-9017820-1
- Marton, B. A Depth -Resolved Look at the Film Formation and Properties of Alkyd-Based Coatings. (2004, oktober 13). Enschede PrintPartners Ipskamp Thesis advisor(s): Prof.dr. G.J. Vancso, Dr. M.A. Hempenius. ISBN: 90-365-2086-X
- Merticar, A.R. Electrical instability of a-Si:H/SiN thin film transistors. (2004, juni 11). 168 pp. Enschede, The Netherlands Thesis advisor(s): Prof.dr.ir. F.G. Kuper, prof.dr.ir. A.J. Mouthaan. ISBN: 90-365-2056-8
- Mijatovic, D. MgB<sub>2</sub> THIN FILM AND JOSEPHSON DEVICES. (2004, juni 3). 119 pp. Enschede Ipskamp Printpartners Thesis advisor(s): Prof. H. Rogalla, Prof.Dr.Ing. D.H.A. Blank, Dr ing. A.J.H.M. Rijnders, Dr.ir. J.W.M. Hilgenkamp. ISBN: 90-365-2038-x
- Moere, R. van On the Energetics and Dynamics of Cu(001) and Co/Cu(001). (2004, april 16). 97 pp. Enschede, the Netherlands Febodruk B.V. Thesis advisor(s): Prof.dr.ir. B. Poelsema, Dr.ir. H.J.W. Zandvliet. ISBN: 90-365-2026-6
- Mulder, A. Multivalent cyclodextrin receptors in solution and at surfaces. (2004, mei 6). 191 pp. Enschede Print Partners Ipskamp Thesis advisor(s): Prof.dr.ir. D.N. Reinhoudt, Dr.ir. J. Huskens. ISBN: 90-365-2042-8

- Nguyen, H. van Multilevel interconnect reliability on the effects of electro-thermomechanical stresses. (2004, maart 19). 135 pp. Enschede, The Netherlands Thesis advisor(s): Prof.dr.ir. F.G. Kuper, prof.dr.ir. A.J. Mouthaan. ISBN: 90-365-2029-0
- Nguyen, L.T. Sputtered thin films for high density tape recording. (2004, augustus 27). 162 pp. Enschede PrintPartners Ipskamp Thesis advisor(s): Prof.dr. J.C. Lodder. ISBN: 90-365-2084-3
- Olah, A. Contact Mechanics of Polymer Interfaces: New Approaches in Testing and Control of Adhesion. (2004, november 3). Enschede PrintPartners Ipskamp Thesis advisor(s): Prof.dr. G.J. Vancso. ISBN: 90-365-2105-X
- Onclin, S. A molecular printboard on glass. (2004, oktober 8). 157 pp. Enschede Printpartners Ipskamp Thesis advisor(s): Prof.dr.ir. D.N. Reinhoudt, Dr. B.J. Ravoo. ISBN: 90-365-2097-5
- Petre, O. Test Strategies for High-Speed Synchronization Interfaces. (2004, februari 27). 158 pp. Enschede, The Netherlands Febodruk B.V. Thesis advisor(s): Prof.dr.ir. Th. Krol, Dr.ir. H.G. Kerkhoff. ISBN: 90-365-2022-3
- Radovanovic, S. Integrated photodiodes for Gb/s data-rates in standard CMOS technology. (2004, december 1). 185 pp. Enschede Print Partners IPSkamp BV Thesis advisor(s): prof.dr.ir. B. Nauta, Dr.ir. A.J. Annema. ISBN: 90-365-2115-7
- Reinoso garcia, M.M. Chelating agents for actinide/lanthanide separation. (2004, december 10). 143 pp. Enschede Thesis advisor(s): Prof.dr.ir. D.N. Reinhoudt, Dr. W. Verboom. ISBN: 90-365-2106-8
- Sartori, A. Calix[4]arene metal complexes as nuclease and transacylase mimics. (2004, november 25). 183 pp. Enschede Thesis advisor(s): Prof.dr.ir. D.N. Reinhoudt, A. Casnati. ISBN: 90-365-2095-9
- Sekulic, J. Mesoporous and microporous titania membranes. (2004, oktober 29). 135 pp. Enschede Febodruk B.V. Thesis advisor(s): Prof.Dr.Ing. D.H.A. Blank. ISBN: 90-365-2107-6
- Steinkamp, T. Detection Strategies for Bioassays Based on Enzyme-Amplified Lanthanide Luminescence. (2004, juni 24). 111 pp. Enschede PrintPartners Ipskamp Thesis advisor(s): Prof.dr. U. Karst. ISBN: 90-365-2063-0
- Stouwdam, J.W. Lanthanide-doped nanoparticles as the active optical medium in polymer-based devices. (2004, februari 6). 159 pp. Thesis advisor(s): Prof.dr.ir. D.N. Reinhoudt, Dr.ir. F.C.J.M. van Veggel. ISBN: 90-365-2011-8
- Tan, F.S. Integrated Optical Filters based on Microring Resonators. (2004, februari 20). 117 pp. Enschede University of Twente Thesis advisor(s): prof.dr. A. Driessen. ISBN: 90-365-2023-1
- Tiggelaar, R.M. Silicon technology based microreactors for high temperature heterogeneous partial oxidation reactions. (2004, december 2). 262 pp. Enschede Thesis advisor(s): Prof.dr. M.C. Elwenspoek, J.C. Schouten, Dr. J.G.E. Gardeniers. ISBN: 90-365-2098-3
- Timmer, B.H. AMINA-chip. (2004, mei 28). 154 pp. Enschede Febodruk B.V. Enschede Thesis advisor(s): Prof.dr.ir. A. van den Berg, Dr.ir. W. Olthuis. ISBN: 90-365-2048-7
- Wang, Z. Detection of and Protection against Plasma Charging Damage in Modern IC Technology. (2004, september 17). 131 pp. Enschede Thesis advisor(s): Prof.dr.ir. F.G. Kuper. ISBN: 90-36502097-7
- Ymeti, A. Development of a Multichannel Integrated Young Interferometer Immunosensor. (2004, april 22). 148 pp. Enschede Thesis advisor(s): Prof.dr. J. Greve, prof.dr. P.V. Lambeck, Dr.ir. J.S. Kanger. ISBN: 90-365-2028-2
  
- Ackaert, J.G.G. Characterization, development and process damage minimization of various silicon oxides. (2004, september 8). 144 pp. Enschede, The Netherlands Thesis advisor(s): Prof.dr.ir. F.G. Kuper. ISBN: 90-365-2069-x
- Cubaynes, F.N. Ultra-thin plasma nitrided oxide gate dielectrics for advanced MOS transistors. (2004, juni 24). 166 pp. Eindhoven, The Netherlands Koninklijke Philips Electronics N.V. Thesis advisor(s): prof.dr. J. Schmitz, prof.dr.ir. C. de Meyer. ISBN: 90-365-2059-2

## ACADEMIC JOURNAL REFEREED

*Journal articles*

- Abbas, W. , Nijhuis, A., Ilyin, Y.U., Haken, B. ten Kate, H.H.J. ten A Fully Automatic Press for Mechanical and Electrical Testing of Full Size ITER Conductors under Transverse Cyclic Load. *Advances in cryogenic engineering* 50, (2004). (pp. 51-58) ISSN: 0065-2482
- Alatas, H. , Iskandar, A., Tjia, M.O., Valkering, T.P. Dark, antidark soliton-like solutions and their connection in a finite deep nonlinear Bragg grating with a mirror. *Journal of nonlinear optical physics & materials* nr: 2, 13, (2004). (pp. 259-274) ISSN: 0218-8635
- Andersson, S.M.H. , Berg, A. van den Microfabrication and microfluidics for tissue engineering: state of the art and future opportunities. *Lab on a chip* nr: 2, 4, (2004). (pp. 98-103) ISSN: 1473-0197
- Andersson, S.M.H. , Berg, A. van den Microtechnologies and nanotechnologies for single-cell analysis. *Current opinion in biotechnology* nr: 1, 15, (2004). (pp. 1-6) ISSN: 0958-1669
- Arun, A.J. , Heuvelmans, S., Gerritsma, G.J., Kerkhoff, H.G. Test Structures and their Application in Structural Testing of Digital RSFQ Circuits. *Physica C Mar* 2004, (2004). (pp. 103-111) ISSN: 0921-4534
- Ashima sah, A.S. , Castricum, H.L. Hydrophobic modification of  $\gamma$ -alumina membranes with organochlorosilanes. *Journal of membrane science* 243, (2004). (pp. 125-132) ISSN: 0376-7388
- Auletta, T. , Dordi, B., Mulder, A., Sartori, A., Onclin, S., Bruinink, C.M., Nijhuis, C.A., Beijleveld, H., Peter, M., Schönherr, H., Vancso, G.J., Casnati, A., Ungaro, R., Ravoo, B.J., Huskens, J., Reinhoudt, D.N. Writing Patterns of Molecules on Molecular Printboards. *Angewandte Chemie, International Edition in English* 43, (2004). (pp. 369-373) ISSN: 0570-0833
- Auletta, T. , Jong, M.R. de, Mulder, A., Veggel, F.C.J.M. van, Huskens, J., Reinhoudt, D.N., Zou, S(han), Zapotoczny, S.J., Schönherr, H., Vancso, G.J., Kuipers, L.  $\beta$ -Cyclodextrin Host-Guest Complexes Probed under Thermodynamic Equilibrium: Thermodynamics and AFM Force Spectroscopy. *Journal of the American Chemical Society* 126, (2004). (pp. 1577-1584) ISSN: 0002-7863
- Bahatyrova, S. , Frese, R.N., Werf, K.O. van der, Otto, C., Hunter, C.N., Olsen, J.D. Flexibility and Size Heterogeneity of the LH1 Light Harvesting Complex Revealed by Atomic Force Microscopy. *Journal of biological chemistry* nr: 20, 279, (2004). (pp. 21327-21333) ISSN: 1083-351X
- Basabe desmonts, M.L. , Beld, J., Zimmerman, R.S., Hernando, J., Mela, P., Garcia Parajo, M.F., Hulst, N.F. van, Berg, A. van den, Reinhoudt, D.N., Crego Calama, M. A simple approach to sensor discovery and fabrication on self-assembled monolayers on glass. *Journal of the American Chemical Society* nr: 23, 126, (2004). (pp. 7293-7299) ISSN: 0002-7863
- Batov, I.E. , Schapers, T.H., Golubov, A., Ustinov, A.V. Andreev reflection and enhanced subgap conductance in NbN/Au/InGaAs-InP junctions. *Journal of applied physics* (2004). (pp. 3366-3370) ISSN: 0021-8979
- Bauer, G.E.W. , Brataas, A., Tserkovnyak, Y., Halperin, B., Zwierzycki, M.P., Kelly, P.J. Dynamic ferromagnetic proximity effect in photoexcited semiconductors. *Physical review letters* nr: 12, 92, (2004). (pp. 126601-1-126601-4) ISSN: 0031-9007
- Bechger, L. , Vos, W.L. Homogeneity of Oxide Air-Sphere Crystals from Millimeter to 100-nm Length Scales: A Probe for Macroporous Photonic Crystal Formation. *Chemistry of materials* 16, (2004). (pp. 2425-2432) ISSN: 0897-4756
- Beek, R.C.H. van de , Vaucher, C.S., Leenaerts, D.M.W., Klumperink, E.A.M., Nauta, B. A 2.5-to-10 GHz Clock Multiplier Unit with 0.22 ps RMS jitter. *IEEE journal of solid-state circuits* nr: 11, 39, (2004). (pp. 1862-1872) ISSN: 0018-9200
- Beekmans, L.G.M. , Hempenius, M.A., Vancso, G.J. Morphological Development of Melt Crystallized Poly(propylene oxide) by In Situ AFM: Formation of Banded Spherulites. *European polymer journal* 40, (2004). (pp. 893-903) ISSN: 0014-3057
- Berg, A. van den Lab-on-a-chip detects ammonia. *TrAC. Trends in analytical chemistry (Regular ed.)* nr: 6, 23, (2004). (pp. VII-VIII) ISSN: 0165-9936
- Besselink, G.A.J. , Kooyman, R.P.H., Os, P.J.H.J. van, Engbers, G.H.M., Schasfoort, R.B.M. Signal amplification on planar and gel-type sensor surfaces in surface plasmon resonance-based detection of prostate-specific antigen. *Analytical biochemistry* nr: 1, 333, (2004). (pp. 165-173) ISSN: 0003-2697

- Besselink, G.A.J. , Vulto, P., Lammertink, R.G.H., Schlautmann, S., Berg, A. van den, Olthuis, W., Engbers, G.H.M., Schasfoort, R.B.M. Electroosmotic guiding of sample flows in a laminar flow chamber. *Electrophoresis* 25, (2004). (pp. 3705-3711) ISSN: 0173-0835
- Blum, C. , Meixner, A.J., Subramaniam, V. Room temperature spectrally resolved single molecule spectroscopy reveals new spectral forms and photophysical versatility of Aequorea Green Fluorescent Protein variants. *Biophysical journal* 87, (2004). (pp. 4172-4179) ISSN: 0006-3495
- Boukamp, B.A. , Otter, M.W. den, Bouwmeester, H.J.M. Transport processes in mixed conducting oxides: combining time domain experiments and frequency domain analysis. *Journal of solid state electrochemistry* nr: 9, 8, (2004). (pp. 592-598) ISSN: 1432-8488
- Boukamp, B.A. , Pham thi ngoc mai, P.T.N.M., Blank, D.H.A., Bouwmeester, H.J.M. Ionic and electronic conductivity in lead-zirconate-titanate (PZT). *Solid state ionics* nr: 3-4, 170, (2004). (pp. 239-254) ISSN: 0167-2738
- Boukamp, B.A. *Electrochemical Impedance Spectroscopy in Solid State Ionics: Recent Advances*. *Solid state ionics* nr: 1-4, 169, (2004). (pp. 65-73) ISSN: 0167-2738
- Boukamp, B.A. *Impedance Spectroscopy, Strength and Limitations*. *Technisches Messen* 71, (2004). (pp. 454-459) ISSN: 0171-8096
- Bouwmeester, H.J.M. , Otter, M.W. den, Boukamp, B.A. Oxygen transport in La<sub>0.6</sub>Sr<sub>0.4</sub>Co<sub>1-y</sub>FeyO<sub>3-d</sub>. *Journal of solid state electrochemistry* nr: 9, 8, (2004). (pp. 599-605) ISSN: 1432-8488
- Bret, B.P.J. , Lagendijk, A. Anisotropic enhanced backscattering induced by anisotropic diffusion. *Physical review E Statistical physics, plasmas, fluids, and related interdisciplinary topics* nr: 036601, 70, (2004). (pp. 036601-1-036601-5) ISSN: 1063-651X
- Brinkman, A. , Golubov, A., Kupriyanov, M.Y. Proximity effect in normal metal-multiband superconductor hybrid structures. *Physical review B Condensed matter* 69, (2004). (pp. 214407) ISSN: 0163-1829
- Brocks, G. , Brink, J.G.J. van den, Morpurgo, A.F. Electronic correlations in oligo-acene and -thiophene organic molecular crystals. *Physical review letters* nr: 14, 93, (2004). (pp. 146405-1-146405-4) ISSN: 0031-9007
- Brouwer, E.A.M. , Kooij, E.S., Wormeester, H., Hempenius, M.A., Poelsema, B. Application of Principal Component Analysis to Ellipsometric Spectra. *Journal of physical chemistry B* nr: 23, 108, (2004). (pp. 7748-7753) ISSN: 1089-5647
- Bruccoleri, F. , Klumperink, E.A.M., Nauta, B. Wide-Band CMOS Low-Noise Amplifier Exploiting Thermal-Noise Canceling. *IEEE journal of solid-state circuits* nr: 2, 39, (2004). (pp. 275-282) ISSN: 0018-9200
- Bruinink, C.M. , Peter, M., Boer, M.J. de, Kuipers, L., Huskens, J., Reinhoudt, D.N. Stamps for submicrometer soft lithography fabricated by capillary force lithography. *Advanced materials* nr: 13, 16, (2004). ISSN: 0935-9648
- Cacciapaglia, R. , Casnati, A., Stefano, S. di, Mandolini, L., Paolemili, D., Reinhoudt, D.N., Sartori, A., Ungaro, R. Dinuclear barium(II) complexes based on a calix[4]arene scaffold as catalysts of acyl transfer. *Chemistry: a European journal* nr: 18, 10, (2004). (pp. 4436-4442) ISSN: 0947-6539
- Cambi, A. , Lange, F. de, Maarseveen, N.M. van, Nijhuis, M., Joosten, B., Dijk, E.M.H.P. van, Bakker, B.I. de, Fransen, J.A.M., Bovee-Geurts, P.H.M., Leeuwen, F.N. van, Hulst, N.F. van, Figdor, C.G. Microdomains of the C-type lectin DC-SIGN are portals for virus entry into dendritic cells. *Journal of cell biology* nr: 1, 164, (2004). (pp. 145-155) ISSN: 0021-9525
- Cate, M.G.J. ten , Crego Calama, M., Reinhoudt, D.N. Formation of a hydrogen-bonded receptor assembly in niosomal membranes. *Journal of the American Chemical Society* nr: 35, 126, (2004). (pp. 10840-10841) ISSN: 0002-7863
- Cate, M.G.J. ten , Huskens, J., Crego Calama, M., Reinhoudt, D.N. thermodynamic stability of hydrogen-bonded nanostructures: a calorimetric study. *Chemistry: a European journal* nr: 15, 10, (2004). (pp. 3632-3639) ISSN: 0947-6539
- Cherny, D. , Hoyer, W., Subramaniam, V., Jovin, T.M. Double-stranded DNA Stimulates the Fibrillation of alpha-Synuclein in vitro and is Associated with the Mature Fibrils: An Electron Microscopy Study. *Journal of molecular biology* 344, (2004). (pp. 929-938) ISSN: 0022-2836
- Clicq, D. , Tjerkstra, R.W., Gardeniens, J.G.E., Berg, A. van den, Baron, G.V., Desmet, G. Porous silicon as a stationary phase for shear-driven chromatography. *Journal of chromatography A* nr: 1-2, 1032, (2004). (pp. 185-191) ISSN: 0021-9673

- Colas, P., Colijn, A.P., Fornaini, A., Giomataris, Y., Graaf, H. van der, Heijne, E.H.M., Llopart, X., Schmitz, J., Timmermans, J., Visschers, J.L. The readout of a GEM or Micromegas-equipped TPC by means of the Medipix2 CMOS sensor as direct anode. *Nuclear instruments and methods in physics research. Section A, Accelerators, spectrometers, detectors and associated equipment* nr: 2, 1, (2004). (pp. 506-510) ISSN: 0168-9002
- Corbellini, F., Mulder, A., Sartori, A., Ludden, M.J.W., Casnati, A., Ungaro, R., Huskens, J., Crego Calama, M., Reinhoudt, D.N. Assembly of a supramolecular capsule on a molecular printboard. *Journal of the American Chemical Society* nr: 51, 126, (2004). (pp. 17050-17058) ISSN: 0002-7863
- Daghero, D., Gonnelli, R.S., Umarrino, G.A., Dolgov, O.V., Kortus, J., Golubov, A., Shulga, S.V. The determination of the electron-phonon interaction from tunneling data in the two-band. *Physica C* 408-410, (2004). (pp. 353) ISSN: 0921-4534
- Dam, T.V.A., Olthuis, W., Bergveld, P. Sensing properties of perovskite oxide La<sub>0.5</sub>SR<sub>0.5</sub>Co<sub>0-3-d</sub> obtained by using pulsed laser deposition. *Sensors and actuators B (Chemical)* nr: 1-2, 103, (2004). (pp. 165-168) ISSN: 0925-4005
- Dam, T.V.A., Olthuis, W., Bergveld, P. Work function characterization of electroactive materials using an E MOSFET. *IEEE sensors journal* nr: 3, 4, (2004). (pp. 284-287) ISSN: 1530-437X
- Dao, T.N.N., Donahue, M.J., Dumitru, I., Spinu, L., Whittenburg, S.L., Lodder, J.C. Dynamic Susceptibility of Nanopillars. *Nanotechnology* nr: 77523-6, 15, (2004). (pp. S634-S638) ISSN: 0957-4484
- Debesset, S., Hayden, C.J., Dalton, C., Eijkel, J.C.T., Manz, A.M. An AC Electroosmotic Micropump for Circular Chromatographic Applications. *Lab on a chip* 4, (2004). (pp. 396-400) ISSN: 1473-0197
- Degenhart, G.H., Dordi, B., Schönherr, H., Vancso, G.J. Micro and Nanofabrication of Robust Reactive Arrays Based on Covalent Coupling Dendrimer to Activated Monolayers. *Langmuir* 20, (2004). (pp. 6216-6224) ISSN: 0743-7463
- Dekker, R., Klunder, D.J.W., Borreman, A., Diemeer, M.B.J., Worhoff, K., Driessen, A., Stouwdam, J.W., Veggel, F.C.J.M. van Stimulated emission and optical gain in LaF<sub>3</sub>:Nd nanoparticle-doped polymer-based waveguides. *Applied physics letters* nr: 25, 85, (2004). (pp. 6104-6106) ISSN: 0003-6951
- Deladi, S., Krijnen, G.J.M., Elwenspoek, M.C. Distinction of the irreversible and reversible actuation regions of B-doped poly-Si based electrothermal actuators. *Journal of micromechanics and microengineering* nr: 14, (2004). (pp. S31-S36) ISSN: 0960-1317
- Deladi, S., Krijnen, G.J.M., Elwenspoek, M.C. Parallel beams/lever electrothermal out-of-plane actuator. *Microsystem technologies* nr: 10, (2004). (pp. 393-399) ISSN: 0946-7076
- Deladi, S., Svetovoy, V.B., Krijnen, G.J.M., Elwenspoek, M.C. Flash-release - an alternative for releasing complex MEMS devices. *Journal of micromechanics and microengineering* nr: 14, (2004). (pp. 1659-1664) ISSN: 0960-1317
- Deladi, S., Tas, N.R., Berenschot, J.W., Krijnen, G.J.M., Boer, M.J. de, Boer, J.H. de, Peter, M., Elwenspoek, M.C. Micromachined fountain pen for atomic force microscope based nanopatterning. *Applied physics letters* nr: 22, 85, (2004). (pp. 5361-5363) ISSN: 0003-6951
- Devred, A., Baynham, D., Bottura, L., Chorowski, M., Fabbriatore, P., Leroy, D., Ouden, A. den, Rifflet, J.M., Rossi, L., Vincent-Viry, O., Volpini, G. High field accelerator magnet R&D in Europe. *IEEE transactions on applied superconductivity* nr: 2, 14, (2004). (pp. 339-344) ISSN: 1051-8223
- Diehl, J.G.R., Wasinski, F.A.H., Roberz, B., Luftmann, H., Schmidt, T.C., Andersson, J.T., Karst, U. Liquid chromatography/electrochemistry/mass spectrometry as screening technique for alcohols and phenols in fuels. *Microchimica acta* 146, (2004). (pp. 137-147) ISSN: 0026-3672
- Doeswijk, L.M., Rijnders, A.J.H.M., Blank, D.H.A. Pulsed laser deposition: metal versus oxide ablation. *Applied physics A (Materials science and processing)* 78, (2004). (pp. 263-268) ISSN: 0947-8396 (Invited)
- Dordi, B., Pickering, J.P., Schönherr, H., Vancso, G.J. Inverted Chemical Force Microscopy: Following Interfacial Reactions on the Nanometer Scale. *European polymer journal* 40, (2004). (pp. 939-947) ISSN: 0014-3057
- Dordi, B., Pickering, J.P., Schönherr, H., Vancso, G.J. Probing Chemical Reactions at the Nanometer Scale: Inverted Chemical Force Microscopy of Reactive Self-Assembled Monolayers. *Surface science* 570, (2004). (pp. 57-66) ISSN: 0039-6028

- Dudarev, A.V. , Berriaud, C., Boxman, E.W., Broggi, F., Dolgetta, N., Juster, F.P., Tetteroo, M., Kate, H.H.J. ten Quench Evolution and Hot Spot Temperature in the ATLAS B0 Model Coil. *IEEE transactions on applied superconductivity* nr: 2, 14, (2004). (pp. 518-521) ISSN: 1051-8223
- Eijkel, J.C.T. , Berg, A. van den, Manz, A.M. Cyclid electrophoretic and chromatographic separation methods. *Electrophoresis* nr: 2, 25, (2004). (pp. 243-252) ISSN: 0173-0835
- Eijkel, J.C.T. , Bomer, J.G., Tas, N.R., Berg, A. van den 1-D nanochannels fabricated in polyimide. *Lab on a chip* nr: 3, 4, (2004). (pp. 161-163) ISSN: 1473-0197
- Emmelkamp, J. , Wolbers, F., Andersson, S.M.H., DaCosta, R., Wilson, B.C., Vermes, I., Berg, A. van den The potential of autofluorescence for the detection of single living cells for label-free cell sorting in microfluidic systems. *Electrophoresis* nr: 21-22, 25, (2004). (pp. 3740-3745) ISSN: 0173-0835
- Esser, M , Zoethout, E., Zandvliet, H.J.W., Wormeester, H., Poelsema, B. Kinetic growth manipulation of Si(001) homoepitaxy. *Surface science* nr: 1-3, 552, (2004). (pp. 35-45) ISSN: 0039-6028
- Fernandez, C.O. , Hoyer, W., Zweckstetter, M., Jares-Erijman, E.A., Subramaniam, V., Griesinger, C., Jovin, T.M. NMR of alpha-synuclein-polyamine complexes elucidates the mechanism and kinetics of induced aggregation. *EMBO journal* (2004). (pp. 1-8) ISSN: 0261-4189
- Flück, E. , Hammer, M., Vos, W.L., Hulst, N.F. van, Kuipers, L. Near-field probing of photonic crystals. *Photonics and nanostructures* 2, (2004). (pp. 127-135) ISSN: 1569-4410
- Fominov, I.V. , Golubov, A. Density of states in d-wave superconductors of finite size. *Physical review B Condensed matter* 70, (2004). (pp. 212513) ISSN: 0163-1829
- Garcia-Curiel, M.M. de la Luz , Barsema, J.N., Galindo, R.E., Cangialosi, D., Garcia-Turiel, J., Zyl, W.E. van, Verweij, H., Blank, D.H.A. Hybrid organic inorganic nylon-6/SiO<sub>2</sub> nanocomposites: transport properties. *Polymer engineering and science* nr: 7, 44, (2004). (pp. 1240-1246) ISSN: 0032-3888
- Garcia-Curiel, M.M. de la Luz , Garcia-Turiel, J., Norder, B., Chavez, F., Kooi, B.J., Zyl, W.E. van, Verweij, H., Blank, D.H.A. Polyamide-6/Silica nanocomposites. *Advanced engineering materials* nr: 9, 6, (2004). (pp. 724-729) ISSN: 1438-1656
- Garcia-Curiel, M.M. de la Luz , Rooij, M.B. de, Winnubst, A.J.A., Zyl, W.E. van, Verweij, H. Friction and wear studies on nylon-6/SiO<sub>2</sub> nanocomposites. *Journal of applied polymer science* nr: 3, 92, (2004). (pp. 1855-1862) ISSN: 0021-8995
- Garcia-Curiel, M.M. de la Luz , Vliet, G. van, Cate, M.G.J. ten, Chavez, F., Norder, B. Large-scale extrusion processing and characterization of hybrid nylon-6/SiO<sub>2</sub> nanocomposites. *Polymers for advanced technologies* nr: 4, 15, (2004). (pp. 164-172) ISSN: 1042-7147
- Garcia-Curiel, M.M. de la Luz , Vliet, G. van, Jahin, S., Schrauwen, B.A.G., Sarkissov, A., Zyl, W.E. van, Boukamp, B.A. Polypropylene/SiO<sub>2</sub> nanocomposites with improved mechanical properties. *Review advanced materials science* nr: 2, 6, (2004). (pp. 169-175) ISSN: geen
- Gardeniers, J.G.E. , Berg, A. van den Lab-on-a-Chip systems for biomedical and environmental monitoring. *Analytical and bioanalytical chemistry* nr: 7, 378, (2004). (pp. 1700-1703) ISSN: 1618-2642
- Gardeniers, J.G.E. , Berg, A. van den Micro and nanofluidic devices for environmental and biomedical applications. *International journal of environmental analytical chemistry* 84, (2004). (pp. 809-819) ISSN: 0306-7319
- Gastel, R. van , Bartelt, N.C., Feibelman, P.J., Leonard, F., Kellogg, G.L. Relationship between domain-boundary free energy and the temperature dependence of stress-domain patterns. *Physical review B Condensed matter and materials physics* nr: 24, 70, (2004). (pp. 245413) ISSN: 1098-0121
- Gersen, H. , Dijk, E.M.H.P. van, Korterik, J.P., Hulst, N.F. van, Kuipers, L. Phase mapping of ultrashort pulses in bimodal photonic structures: A window on local group velocity dispersion. *Physical review E Statistical physics, plasmas, fluids, and related interdisciplinary topics* nr: 6, 70, (2004). (pp. 066609-1-066609-12) ISSN: 1063-651X
- Gersen, H. , Klunder, D.J.W., Korterik, J.P., Driessen, A., Hulst, N.F. van, Kuipers, L. Propagation of a femtosecond pulse in a microresonator visualized in time. *Optics letters* nr: 11, 29, (2004). (pp. 1291-1293) ISSN: 0146-9592
- Gielens, F.C. , Hien, T.D., Rijn, C.J.M. van, Vorstman, M.A.G., Keurentjes, J.T.F. microsystem technology for hig-flux hydrogen separation membranes. *Journal of membrane science* nr: 243, (2004). (pp. 203-213) ISSN: 0376-7388

- Godeke, A. , Dhallé, M.M.J., Morelli, A., Stobbelaar, L., Weeren, H. van, Eck, H.J.N. van, Abbas, W., Nijhuis, A., Ouden, A. den, Haken, B. ten A Device to Investigate the Axial Strain Dependence of the Critical Current Density in Superconductors. *Review of scientific instruments* 75, (2004). (pp. 5112-5118) ISSN: 0034-6748
- Golubov, A. , Koshelev, A.E. Mixed state in dirty two-band superconductors: application to MgB<sub>2</sub>. *Physica C* 408-410, (2004). (pp. 338) ISSN: 0921-4534
- Golubov, A. , Kupriyanov, M.Y., Il'ichev, E. The current-phase relation in Josephson junctions. *Reviews of modern physics* nr: 2, 76, (2004). (pp. 411-469) ISSN: 0034-6861
- Gottardi, L. , Bassan, M., Flokstra, J., Karbalai-Sadegh, A., Minenkov, Y., Podt, M., Reincke, W., Shumack, A., Waard, A. de, Frossati, G. Two-stage SQUID system and transducers development for MiniGrail. *Classical and quantum gravity* 21, (2004). (pp. 1191-1196) ISSN: 0264-9381
- Groesen, E. van , Sopaheluwakan, A., Andonowati, Direct characterization of states and modes in defect grating structure. *Journal of nonlinear optical physics and materials* nr: 2, 13, (2004). (pp. 155-173) ISSN: 0218-8635
- Gurlu, O. , Zandvliet, H.J.W., Poelsema, B. Electronic properties of (2x1) and c(4x2) domains on Ge(001) studied by scanning tunneling spectroscopy. *Physical review letters* nr: 6, 93, (2004). (pp. 066101) ISSN: 0031-9007
- Gurlu, O. , Zandvliet, H.J.W., Poelsema, B., Dag, S., Ciraci, S. Initial stages of Pt growth on Ge(001) studied by scanning tunneling microscopy and density functional theory. *Physical review B Condensed matter and materials physics* nr: 8, 70, (2004). (pp. 085312) ISSN: 1098-0121
- Hadjersi, T. , Gabouze, N., Kooij, E.S., Zinine, A., Ababou, A., Chergui, W., Cheraga, H., Belhousse, S., Djeghri, A. Metal-assisted chemical etching in HF/Na<sub>2</sub>S<sub>2</sub>O<sub>8</sub> OR HF/KMnO<sub>4</sub> produces porous silicon. *Thin solid films* nr: 1-2, 459, (2004). (pp. 271-275) ISSN: 0040-6090
- Hallbäck, A.S.V.M. , Oncel, N., Huskens, J., Zandvliet, H.J.W., Poelsema, B. Inelastic electron tunneling spectroscopy on decanethiol at elevated temperatures. *Nano letters* nr: 12, 4, (2004). (pp. 2393-2395) ISSN: 1530-6984
- Hammer, M. , Yudistira, D., Stoffer, R. Modeling of grating assisted standing wave microresonators for filter applications in integrated optics. *Optical and quantum electronics* nr: 1-3, 36, (2004). (pp. 25-42) ISSN: 0306-8919
- Hammer, M. Quadriridirectional eigenmode expansion scheme for 2-D modeling of wave propagation in integrated optics. *Optics communications* nr: 4-6, 235, (2004). (pp. 285-303) ISSN: 0030-4018
- Hayden, C.J. , Eijkel, J.C.T., Dalton, C. An Alternative Method of Fabricating Sub-Micron Resolution Masks Using Excimer Laser Ablation. *Journal of micromechanics and microengineering* 14, (2004). (pp. 826-831) ISSN: 0960-1317
- Hayen, H. , Alvarez-Grima, M.M., Debnath, S.C., Noordermeer, J.W.M., Karst, U. Liquid chromatography/coordination ionspray-mass spectrometry (LC/CIS-MS) for the analysis of rubber vulcanization products. *Analytical chemistry* 76, (2004). (pp. 1063-1068) ISSN: 0003-2700
- Hayen, H. , Deschamps, A.A., Grijpma, D.W., Feijen, J., Karst, U. LC/MS studies on the in vitro degradation of a poly(ether ester) block copolymer. *Journal of chromatography A* 1029, (2004). (pp. 29-36) ISSN: 0021-9673
- Heilemann, M. , Tinnefeld, P., Sanchez Mosteiro, G. ir., Garcia Parajo, M.F., Hulst, N.F. van, Sauer, M. Multistep Energy Transfer in Single Molecular Photonic Wires. *Journal of the American Chemical Society* nr: 21, 126, (2004). (pp. 6514-6515) ISSN: 0002-7863
- Hempen, C. , Karst, U. A dual fluorophore system for simultaneous bioassays. *Analytica chimica acta* 521, (2004). (pp. 117-122) ISSN: 0003-2670
- Hens, Z. , Vanmaekelbergh, D., Kooij, E.S., Wormeester, H., Allan, G., Delerue, C. Effect of quantum confinement on the dielectric function of PbSe. *Physical review letters* nr: 2, 92, (2004). (pp. 026808) ISSN: 0031-9007
- Herber, S. , Eijkel, J.C.T., Olthuis, W., Bergveld, P., Berg, A. van den Study of chemically induced pressure generation of hydrogels under isochoric conditions using a microfabricated device. *Journal of chemical physics* nr: 6, 121, (2004). (pp. 2746-2751) ISSN: 0021-9606
- Herber, S. , Olthuis, W., Bergveld, P., Berg, A. van den Exploitation of a pH-sensitive hydrogel disk for CO<sub>2</sub> detection. *Sensors and actuators B (Chemical)* nr: 1-2, 103, (2004). (pp. 284-289) ISSN: 0925-4005

- Hernando Campos, J. , Hoogenboom, J.P., Dijk, E.M.H.P. van, Garcia Lopez, J.J., Crego Calama, M., Reinhoudt, D.N., Hulst, N.F. van, Garcia Parajo, M.F. Single Molecule Photobleaching Probes the Exciton Wavefunction in a Multichromophoric System. *Physical review letters* nr: 23, 93, (2004). (pp. 236404-1-236404-4) ISSN: 0031-9007
- Hernando Campos, J. , Witte, P.A.J. de, Dijk, E.M.H.P. van, Kortkerik, J.P., Nolte, R.J.M., Rowan, A.E., Garcia Parajo, M.F., Hulst, N.F. van Investigation of Perylene Photonic Wires by Combined Single-Molecule Fluorescence and Atomic Force Microscopy. *Angewandte Chemie, International Edition in English* nr: 31, 43, (2004). (pp. 4045-4049) ISSN: 0570-0833
- Hien, T.D. , Jansen, H.V., Gadgil, V.J., Bostan, C.G., Berenschot, J.W., Rijn, C.J.M. van, Elwenspoek, M.C. Silicon nitride nanosieve membrane. *Nano letters* nr: 2, 4, (2004). (pp. 283-287) ISSN: 1530-6984
- Hillborg, H. , Tomczak, N., Olah, A., Schönherr, H., Vancso, G.J. Nanoscale Hydrophobic Recovery: A Chemical Force Microscopy Study of UV/Ozone - Treated Crosslinked Poly(dimethylsiloxane).. *Langmuir* 20, (2004). (pp. 785-794) ISSN: 0743-7463
- Hinderling, C. , Keles, Y., Stöckli, T., Knapp, H.F., De los Arcos, T., Oelhaven, P., Korczagin, I., Hempenius, M.A., Vancso, G.J., Pugin, R., Heinzelmann, H. Organometallic Block Copolymers As Catalyst Precursors For Templated Carbon Nanotube Growth. *Advanced materials* 16, (2004). (pp. 876-879) ISSN: 0935-9648
- Hoekstra, H.J.W.M. , Klunder, D.J.W., Driessen, A. Theory for the measurements of dispersion characteristics in wave guiding structures with a scanning near-field optical microscope. *Journal of the Optical Society of America A (Optics and image science)* nr: 2, 21, (2004). (pp. 280-287) ISSN: 0740-3232
- Honschoten, J.W. van , Druyvesteyn, W.F., Raangs, R., Krijnen, G.J.M., Elwenspoek, M.C. Self noise reduction in acoustic measurements with a particle velocity sensor by means of a cross correlation technique. *Acta acustica sinica* 14, (2004). (pp. S31-S36) ISSN: 0371-0025
- Honschoten, J.W. van , Krijnen, G.J.M., Svetovoy, V.B., Bree, H.E. de, Elwenspoek, M.C. Analytic model of a two wire thermal sensor for flow and sound measurements. *Journal of micromechanics and microengineering* nr: 11, 14, (2004). (pp. 1468-1477) ISSN: 0960-1317
- Honschoten, J.W. van , Svetovoy, V.B., Lammerink, T.S.J., Krijnen, G.J.M., Elwenspoek, M.C. Determination of the sensitivity behavior of an acoustic thermal flow sensor by electronic characterization. *Sensors and actuators* nr: 112, 1, (2004). (pp. 1-9) ISSN: 0250-6874
- Hoyer, W. , Cherny, D., Subramaniam, V., Jovin, T.M. Rapid Self-assembly of alpha-Synuclein Observed by In Situ Atomic Force Microscopy. *Journal of molecular biology* 340, (2004). (pp. 127-139) ISSN: 0022-2836
- Hozoi, A. , Lodder, J.C. Recording performances of perfectly aligned HSS heads. *IEEE Transactions on Magnetics IEEE transactions on magnetics MMM-Intermag* nr: 4, 40 (nr: 4), (2004, januari 5 / 2004, januari 9). (pp. 2422-2424) ISBN: 0018-9464 / ISSN: 0018-9464
- Huskens, J. , Mulder, A., Auletta, T., Nijhuis, C.A., Ludden, M.J.W., Reinhoudt, D.N. A model for describing the thermodynamics of multivalent host-guest interactions at interfaces. *Journal of the American Chemical Society* nr: 21, 126, (2004). (pp. 6784-6797) ISSN: 0002-7863
- Ilyin, Y.U. , Nijhuis, A., Abbas, W., Kate, H.H.J. ten Electromagnetic Performance of Sub-Size NbTi CICC's Subjected to Transverse Cyclic Loading. *IEEE transactions on applied superconductivity* nr: 2, 41, (2004). (pp. 1503-1506) ISSN: 1051-8223
- Isai, I.G. , Holleman, J., Wallinga, H., Woerlee, P.H. Conduction and trapping mechanisms in SiO2 films grown near room temperature by multipolar electron cyclotron resonance plasma enhanced chemical vapor deposition. *Journal of vacuum science and technology* nr: 3, B22, (2004). (pp. 1022-1029) ISSN: 1071-1023
- Isai, I.G. , Holleman, J., Woerlee, P.H., Wallinga, H. Low hydrogen content silicon nitride films deposited at room temperature with a multipolar ECR plasma source. *Journal of the Electrochemical Society* nr: 10, 151, (2004). (pp. C649-C654) ISSN: 0013-4651
- Jansen, R. , Erve, O.M.J. van 't, Postma, F.M., Lodder, J.C. Comment on "giant magnetocurrent exceeding 3400% in magnetic tunnel transistors with spin-valve base layers" [Appl. Phys. Lett. 83, 951 (2003)]. *Applied physics letters* nr: 21, 84, (2004). (pp. 4337-4338) ISSN: 0003-6951
- Jansen, R. , Gokcan, H., Erve, O.M.J. van 't, Postma, F.M., Lodder, J.C. Spin-valve transistors with high magnetocurrent and 40mA output current. *Journal of applied physics* nr: 11, 95, (2004). (pp. 6927-6929) ISSN: 0021-8979

- Jewell, M.C. , Godeke, A., Lee, P.J., Larbalestier, D.C. The Upper Critical Field of Stoichiometric and Off-Stoichiometric Bulk, Binary Nb<sub>3</sub>Sn. *Advances in cryogenic engineering* 50B, (2004). (pp. 474) ISSN: 0065-2482
- Karst, U. Electrochemistry/mass spectrometry (EC/MS) - a new tool to study drug metabolism and reaction mechanisms. *Angewandte Chemie, International Edition in English* 43, (2004). (pp. 2476-2478) ISSN: 0570-0833
- Karst, U. Liquid chromatography-mass spectrometry: reaching maturity rapidly. *Analytical and bioanalytical chemistry* nr: 4, 378, (2004). (pp. 841-841) ISSN: 1618-2642
- Kerkwijk, B. , Garcia-Curiel, M.M. de la Luz, Zyl, W.E. van, Winnubst, A.J.A., Mulder, E.J., Schipper, D.J., Verweij, H. Friction behaviour of solid oxide lubricants as second phase in alpha-Al<sub>2</sub>O<sub>3</sub> and stabilised ZrO<sub>2</sub> composites. *Wear* 256, (2004). (pp. 182-189) ISSN: 0043-1648
- Keurentjes, J.T.F. , Gielens, F.C., Hien, T.D., Rijn, C.J.M. van, Vorstman, M.A.G. High flux palladium membranes based on microsystem technology. *Industrial and engineering chemistry research* nr: 43, (2004). (pp. 4768-4772) ISSN: 0888-5885
- Khomyakov, P. , Brocks, G. Real-space finite-difference method for conductance calculations. *Physical review B Condensed matter and materials physics* 70, (2004). (pp. 195402-1-195402-13) ISSN: 1098-0121
- Klein Koerkamp, K.J. , Enoch, S., Segerink, F.B., Hulst, N.F. van, Kuipers, L. Strong influence of hole shape on extraordinary transmission through periodic arrays. *Physical review letters* nr: 18, 92, (2004). (pp. 183901-1-183901-4) ISSN: 0031-9007
- Klumperink, E.A.M. , Louwsma, S.M., Wienk, G.J.M., Nauta, B. A CMOS Switched Transconductor Mixer. *IEEE journal of solid-state circuits* nr: 8, 39, (2004). (pp. 1231-1240) ISSN: 0018-9200
- Koopman, M. , Cambi, A., Bakker, B.I. de, Joosten, B., Figdor, C.G., Hulst, N.F. van, Garcia Parajo, M.F. Near-field scanning optical microscopy in liquid for high resolution single molecule detection on dendritic cells. *FEBS letters* 573, (2004). (pp. 6-10) ISSN: 0014-5793
- Korczagin, I. , Hempenius, M.A., Vancso, G.J. Poly(ferrocenylsilane-block-methacrylates) via Sequential Anionic and Atom Transfer Radical Polymerization. *Macromolecules* nr: 37, 37, (2004). (pp. 1686-1690) ISSN: 0024-9297
- Koshelev, A.E. , Golubov, A. Why magnesium diboride is not described by anisotropic Ginzburg-Landau theory. *Physical review letters* 92, (2004). (pp. 107008) ISSN: 0031-9007
- Krieg, H.M. , Modise, S.J., Keizer, K., Neomagus, H.W.J.P. Salt rejection in nanofiltration for single and binary salt mixtures in view of sulphate removal. *Desalination* nr: 2, 171, (2004). (pp. 205-215) ISSN: 0011-9164
- Krioukov, E. , Klunder, D.J.W., Driessen, A., Greve, J., Otto, C. Two-photon fluorescence excitation using an integrated optical microcavity: a promising tool for biosensing of natural chromophores. *Talanta* (2004). ISSN: 0039-9140
- Lambeck, P.V. , Hoekstra, H.J.W.M., Lith, J. van, Elzakker, G. van Two novel integrated optical sensor types for measuring chemical concentrations, based on chemically induced changes of modal field profiles. *Journal of nonlinear optical physics and materials* nr: 2, 13, (2004). (pp. 209-228) ISSN: 0218-8635
- Lammertink, R.G.H. , Schlautmann, S., Besselink, G.A.J., Schasfoort, R.B.M. Recirculation of Nanoliter Volumes within Microfluidic Channels. *Analytical chemistry* nr: 11, 76, (2004). (pp. 3018-3022) ISSN: 0003-2700
- Leeuwen, F.W.B. van , Beijleveld, H., Kooijman, H., Spek, A.L., Verboom, W., Reinhoudt, D.N. Synthesis and conformational evaluation of p-tert-butylthiacalixarene-crowns. *Journal of organic chemistry* nr: 11, 69, (2004). (pp. 3928-3936) ISSN: 0022-3263
- Leeuwen, F.W.B. van , Verboom, W., Shi, X, Davis, J.T., Reinhoudt, D.N. Selective 226RA<sup>2+</sup> ionophores provided by self-assembly of guanosine and isoguanosine derivatives. *Journal of the American Chemical Society* nr: 50, 126, (2004). (pp. 16575-16581) ISSN: 0002-7863
- Leeuwen, S.M. van , Hayen, H., Karst, U. Liquid chromatography/electrochemistry/mass spectrometry of polycyclic aromatic hydrocarbons. *Analytical and bioanalytical chemistry* 378, (2004). (pp. 917-925) ISSN: 1618-2642
- Leeuwen, S.M. van , Hendriksen, L, Karst, U. Determination of aldehydes and ketones using derivatization with 2,4-dinitrophenylhydrazine (DNPH) and liquid chromatography/atmospheric pressure photoionization-mass spectrometry (LC/APPI-MS). *Journal of chromatography A* 1058, (2004). (pp. 107-112) ISSN: 0021-9673

- Leinse, A. , Diemeer, M.B.J., Driessen, A. Scattering loss reduction in polymer waveguides by reflowing. *Electronics letters* nr: 16, 40, (2004). (pp. 992-993) ISSN: 0013-5194
- Li, X.M. , Auletta, T., Veggel, F.C.J.M. van, Huskens, J., Reinhoudt, D.N. Directed, selective insertion of single molecules into patterned self-assembled monolayers of alkanethiols with different chain lengths. *Organic and biomolecular chemistry* nr: 3, 2, (2004). (pp. 296-300) ISSN: 1477-0520
- Li, X.M. , Huskens, J., Reinhoudt, D.N. Reactive self-assembled monolayers on flat and nanoparticle surfaces, and their application in soft and scanning probe lithographic nanofabrication technologies. *Journal of materials chemistry* nr: 20, 14, (2004). (pp. 2954-2971) ISSN: 0959-9428
- Lint, W.B.S. de , Benes, N.E. Predictive charge-regulation transport model for nanofiltration from the theory of irreversible processes. *Journal of membrane science* 243, (2004). (pp. 365-377) ISSN: 0376-7388
- Lisfi, A. , Nguyen, L.T., Lodder, J.C., Williams, C.M. Investigation of magnetic anisotropy and role of underlayer in obliquely sputtered metallic thin films. *Journal of magnetism and magnetic materials* 272-276, (2003). (pp. e797-e799) ISSN: 0304-8853
- Lodahl, P. , Driel, A.F. van, Nikolaev, I., Irman, A., Overgaag, K., Vanmaekelbergh, D., Vos, W.L. Controlling the dynamics of spontaneous emission from quantum dots by photonic crystals. *Nature* 430, (2004). (pp. 654-657) ISSN: 0028-0836
- Lodder, J.C. Methods for preparing patterned media for high-density recording. *Journal of magnetism and magnetic materials* 272-276, (2004). (pp. 1692-1697) ISSN: 0304-8853 (Invited)
- Mahalingam, V. , Onclin, S., Peter, M., Ravoo, B.J., Huskens, J., Reinhoudt, D.N. Directed self-assembly of functionalized silica nanoparticles on molecular printboards through multivalent supramolecular interactions. *Langmuir* nr: 26, 20, (2004). (pp. 11756-11762) ISSN: 0743-7463
- Male, P. van , Croon, M.H.J.M. de, Tiggelaar, R.M., Berg, A. van den, Schouten, J.C. Heat and mass transfer in a square microchannel with asymmetric heating. *International journal of heat and mass transfer* nr: 1, 47, (2004). (pp. 87-99) ISSN: 0017-9310
- Masarik, M. , Stobiecka, A., Kizek, R., Jelen, F., Pechan, Z., Hoyer, W., Jovin, T.M., Subramaniam, V., Palecek, E. Sensitive Electrochemical Detection of Native and Aggregated  $\alpha$ -Synuclein Protein Involved in Parkinson's Disease. *Electroanalysis* nr: 13-14, 16, (2004). (pp. 1172-1181) ISSN: 1040-0397
- Manen, H.W.J. van , Paraschiv, V., Garcia Lopez, J.J., Schönherr, H., Zapotoczny, S.J., Vancso, G.J., Crego Calama, M., Reinhoudt, D.N. Functionalized Hydrogen-Bonded Assemblies as Templates for Metal-Containing Arrays of Nanorods. *Nano letters* 4, (2004). (pp. 441-446) ISSN: 1530-6984
- Mateos timoneda, M.A. , Crego Calama, M., Reinhoudt, D.N. Suprmolecular chirality of self-assembled systems in solution. *Chemical Society reviews* nr: 6, 33, (2004). (pp. 363-372) ISSN: 0306-0012
- Mazin, I.I. , Andersen, O.K., Jepsen, O., Golubov, A., Dolgov, O.V., Kortus, J. First-principles calculation of the superconducting transition in MgB2 within the anisotropic Eliashberg formalism. *Physical review B Condensed matter* 69, (2004). (pp. 056501) ISSN: 0163-1829
- Mela, P. , Tas, N.R., Berenschot, J.W., Nieuwkastele, J.W. van, Berg, A. van den Electrokinetic pumping and detection of low-volume flows in nanochannels. *Electrophoresis* nr: 21-22, 25, (2004). (pp. 3687-3693) ISSN: 0173-0835
- Menozzi, E. , Pinalli, R., Speets, E.A., Ravoo, B.J., Dalcanale, E., Reinhoudt, D.N. Surface-confined single molecules: assembly and disassembly of nanosize coordination cages on gold (111). *Chemistry: a European journal* nr: 9, 10, (2004). (pp. 2199-2206) ISSN: 0947-6539
- Merkle, R. , Maier, J., Bouwmeester, H.J.M. A linear free energy relation for gas-solid interactions: the correlation between surface rate constant and diffusion coefficient of oxygen tracer exchange for electron-rich perovskites. *Angewandte Chemie, International Edition in English* 43, (2004). (pp. 5069-5073) ISSN: 0570-0833
- Mijatovic, D. , Brinkman, A., Hilgenkamp, J.W.M., Rogalla, H., Rijnders, A.J.H.M., Blank, D.H.A. Pulsed-laser deposition of MgB2 and B thin films. *Applied physics A (Materials science and processing)* 79, (2004). (pp. 1243-1246) ISSN: 0947-8396
- Mirkhani, V. , Harkema, S., Kia, R. Bis[N,N'-bis(diphenylmethylene)ethylenediamine-kappa N-2,N']copper(II) dichlorocuprate(II). *Acta crystallographica Section C Crystal structure communications* 60, (2004). (pp. 343-344) ISSN: 0108-2701
- Mirone, G. , Marton, B., Vancso, G.J. Elastic Modulus Profiles in the Cross Sections of Drying Alkyd Coating Films: Modelling and Experiments. *European polymer journal* 40, (2004). (pp. 549-560) ISSN: 0014-3057

- Molen, K.L. van der , Segerink, F.B., Hulst, N.F. van, Kuipers, L. Influence of hole size on the extraordinary transmission through subwavelength hole arrays. *Applied physics letters* nr: 19, 85, (2004). (pp. 4316-4318) ISSN: 0003-6951
- Mulder, A. , Auletta, T., Sartori, A., Ciotto, S. del, Casnati, A., Ungaro, R., Huskens, J., Reinhoudt, D.N. Divalent binding of a bis(adamantyl)-functionalized calix[4]arene to beta-cyclodextrin-based hosts: an experimental and theoretical study on multivalent binding in solution and at self-assembled monolayers. *Journal of the American Chemical Society* nr: 21, 126, (2004). (pp. 6627-6636) ISSN: 0002-7863
- Mulder, A. , Huskens, J., Reinhoudt, D.N. Multivalency in supramolecular chemistry and nano-fabrication. *Organic and biomolecular chemistry* nr: 23, 2, (2004). (pp. 3409-3424) ISSN: 1477-0520
- Mulder, A. , Jukovic, A., Huskens, J., Reinhoudt, D.N. Bis(phenylthienyl)ethene-tethered beta-cyclodextrin dimers as photoswitchable hosts. *Organic and biomolecular chemistry* nr: 12, 2, (2004). (pp. 1748-1755) ISSN: 1477-0520
- Mulder, A. , Jukovic, A., Leeuwen, F.W.B. van, Kooijman, H., Spek, A.L., Huskens, J., Reinhoudt, D.N. Photocontrolled release and uptake of a porphyrin guest by dithienylethene-tethered beta-cyclodextrin host dimers. *Chemistry: a European journal* nr: 5, 10, (2004). (pp. 1114-1123) ISSN: 0947-6539
- Musa, A.M.S. , Borreman, A., Kok, A.A.M., Diemeer, M.B.J., Driessen, A. Experimental study of bent multimode optical waveguides. *Applied optics* nr: 30, 43, (2004). (pp. 5705-5707) ISSN: 0003-6935
- Nguyen, H. van , Salm, C., Krabbenborg, B.H., Bisschop, J., Mouthaan, A.J., Kuper, F.G. Fast Thermal Cycling-Enhanced Electromigration in Power Metallization. *IEEE transactions on device and materials reliability* nr: 2, 4, (2004). (pp. 246-255) ISSN: 1530-4388
- Nguyen, L.T. , Hozoi, A., Lodder, J.C. NiAl seed layer for obliquely sputtered thin film tape. *IEEE Transactions on Magnetics 2004 IEEE transactions on magnetics MMM-Intermag 2004* nr: 4, 40 (nr: 4), (2004, januari 5 / 2004, januari 9). (pp. 2401-2403) ISBN: 0018-9464 / ISSN: 0018-9464
- Nguyen, L.T., Lisfi, A., Lodder, J.C. Effect of gas pressure on properties of FePt film sputtered on polymer substrate. *Journal of applied physics Journal of applied physics MMM-Intermag* nr: 11, 95, (2004). (pp. 7492-7494) ISSN: 0021-8979
- Nguyen, L.T. , Lodder, J.C. Properties of obliquely sputtered Co on different underlayers on polymer substrate. *Journal of magnetism and magnetic materials* nr: 272-276, (2004). (pp. 2171-2172) ISSN: 0304-8853
- Nijhuis, A. , Ilyin, Y.U., Abbas, W., Haken, B. ten, Kate, H.H.J. ten Performance of an ITER CS1 Model Coil Conductor under Transverse Cyclic Loading up to 40,000 cycles. *IEEE transactions on applied superconductivity* nr: 2, 14, (2004). (pp. 1489-1494) ISSN: 1051-8223
- Nijhuis, A. , Ilyin, Y.U., Abbas, W., Haken, B. ten, Kate, H.H.J. ten Change of Interstrand Contact Resistance and Coupling Loss in Various Prototype ITER NbTi Conductors with Transverse Loading in the Transverse Cryogenic Cable Press up to 40,000 Cycles. *Cryogenics* nr: 5, 44, (2004). (pp. 319-339) ISSN: 0011-2275
- Nijhuis, A. , Ilyin, Y.U., Wessel, W.A.J., Abbas, W., Kate, H.H.J. ten Effect of Periodic Cyclic Deformation on the Voltage Current Transition of Nb3Sn Strands Tested in the Novel "TARSIS" Setup. *IEEE transactions on applied superconductivity* nr: 2, 14, (2004). (pp. 1464-1467) ISSN: 1051-8223
- Nijhuis, A. , Kate, H.H.J. ten, Ilyin, Y.U., Rabbers, J.J., Ouden, A. den Topical Conference on Voltage-Current Relation in Technical Superconductors: University of Twente, Enschede The Netherlands. *Physica C* nr: 1-4, 401, (2004). (pp. v) ISSN: 0921-4534
- Nijhuis, C.A. , Huskens, J., Reinhoudt, D.N. Binding control and stoichiometry of ferrocenyl dendrimers at a molecular printboard. *Journal of the American Chemical Society* nr: 39, 126, (2004). (pp. 12266-12267) ISSN: 0002-7863
- Olah, A. , Hempenius, M.A., Vancso, G.J. Synthesis, Characterization and Gold Loading of Polystyrene-Poly(pyridyl methacrylate) Core-Shell Latex Systems. *European polymer journal* 40, (2004). (pp. 763-773) ISSN: 0014-3057
- Onclin, S. , Mulder, A., Huskens, J., Ravoo, B.J., Reinhoudt, D.N. Molecular printboards: monolayers of beta-cyclodextrins on silicon oxide surfaces. *Langmuir* nr: 13, 20, (2004). (pp. 5460-5466) ISSN: 0743-7463
- Onoue, T. , Siekman, M.H., Abelmann, L., Lodder, J.C. Probe recording on CoNi/Pt multilayered thin films by using an MFM tip. *Journal of magnetism and magnetic materials* 272-276, (2003). (pp. 2317-2318) ISSN: 0304-8853

- Oshovsky, G. , Verboom, W., Fokkens, R.H., Reinhoudt, D.N. Anion complexation by glycocluster thioureamethyl cavitands: novel ESI-MS-based methods for the determination of  $K_a$  values. *Chemistry: a European journal* nr: 11, 10, (2004). (pp. 2739-2748) ISSN: 0947-6539
- Oshovsky, G. , Verboom, W., Reinhoudt, D.N. (Thio)Urea-functionalized cavitands as excellent receptors for organic anions in polar media. *Collection of Czechoslovak chemical communications* nr: 5, 69, (2004). (pp. 1137-1148) ISSN: 0010-0765
- Ouden, A. den , Weeren, H. van, Wessel, W.A.J., Kate, H.H.J. ten, Kirby, G.A., Siegel, N., Taylor, T. Normal Zone Propagation in High-Current Density Nb<sub>3</sub>Sn Conductors for Accelerator Magnets. *IEEE transactions on applied superconductivity* nr: 2, 14, (2004). (pp. 279-282) ISSN: 1051-8223
- Ovsyanko, M.M. , Stoian, F.G., Wormeester, H., Poelsema, B. Novel local free energy minimum on the Cu(001) surface. *Physical review letters* nr: 8, 93, (2004). (pp. 086103) ISSN: 0031-9007
- Peter, M. , Hempenius, M.A., Kooij, E.S., Jenkins, A.T.A., Roser, S.J., Knoll, W., Vancso, G.J. Electrochemically Induced Morphology and Volume Changes in Surface-Grafted Poly(ferrocenyldimethylsilane) Monolayers. *Langmuir* 20, (2004). (pp. 891-897) ISSN: 0743-7463
- Peter, M. , Li, X.M., Huskens, J., Reinhoudt, D.N. Catalytic probe lithography: catalyst-functionalized scanning probes as nanopens for nanofabrication on self-assembled monolayers. *Journal of the American Chemical Society* nr: 37, 126, (2004). (pp. 11684-11690) ISSN: 0002-7863
- Pham thi ngoc mai, P.T.N.M. , Boukamp, B.A., Bouwmeester, H.J.M., Blank, D.H.A. Microstructural and electrical properties of nanocomposite PZT/Pt thin films made by pulsed laser deposition. *Ceramics international* 30, (2004). (pp. 1499-1503) ISSN: 0272--8842
- Pham thi ngoc mai, P.T.N.M. , Boukamp, B.A., Rijnders, A.J.H.M., Bouwmeester, H.J.M., Blank, D.H.A. Pulsed laser deposition of PZT/Pt composite thin films with high dielectric constants. *Applied physics A (Materials science and processing)* 79, (2004). (pp. 907-910) ISSN: 0947-8396
- Pieloni, T. , Sanfilippo, S., Bottura, L., Haverkamp, M., Tikhov, A., Effinger, E., Benedico, E., Smirnov, N. Field Decay and Snapback Measurements Using a Fast Hall Probe Sensor. *IEEE transactions on applied superconductivity* nr: 2, 14, (2004). (pp. 1822-1825) ISSN: 1051-8223
- Pijanowksa, D.G. , Sprenkels, A.J., Linden, H.J. van der, Olthuis, W., Bergveld, P., Berg, A. van den A flow-through potentiometric sensor for an integrated microdialysis system. *Sensors and actuators B (Chemical)* nr: 1-2, 103, (2004). (pp. 350-355) ISSN: 0925-4005
- Podt, M. , Flokstra, J., Rogalla, H. An experimental double relaxation oscillation superconducting quantum interference device with on-chip feedback. *Superconductor science and technology* 17, (2004). (pp. 701-704) ISSN: 0953-2048
- Poelsema, B. , Hannon, J.B., Bartelt, N.C., Kellogg, G.L. Bulk-surface vacancy exchange on Pt(111). *Applied physics letters* nr: 14, 84, (2004). (pp. 2551-2553) ISSN: 0003-6951
- Poelsema, B. , Vroonhoven, E. van, Zandvliet, H.J.W. Comment on: "(2x1)-(1x1) phase transition on Ge(001): quasi-chemical approximation and Monte Carlo simulations" [*Surface Science* 563 (2004) 99-109]. *Surface science* nr: 2, 573, (2004). (pp. 327-331) ISSN: 0039-6028
- Postma, F.M. , Ramaneti, R., Banerjee, T., Gokcan, H., Ul Haq, E., Blank, D.H.A., Jansen, R., Lodder, J.C. Epitaxial diodes of a half-metallic ferromagnet on an oxide semiconductor. *Journal of applied physics* nr: 11, 95, (2004). (pp. 7324-7326) ISSN: 0021-8979
- Puig, C.C. , Meijer, H.E.H., Michels, M.A.J., Segeren, L.H.G.J., Vancso, G.J. Characterization of Glass Transition Temperatures and Surface Energy of Bituminous Binders by Inverse Gas Chromatography. *Energy and Fuels* 18, (2004). (pp. 63-67) ISSN: 0887-0624
- Radosevic-Zivkovic, T. , Benes, N.E., Blank, D.H.A., Bouwmeester, H.J.M. Characterization and transport properties of surfactant-templated silica layers for membrane applications. *Journal of sol-gel science and technology* nr: 1, 31, (2004). (pp. 205-208) ISSN: 0928-0707
- Radosevic-Zivkovic, T. , Benes, N.E., Bouwmeester, H.J.M. Gas transport efficiency of ceramic membranes: comparison of different geometries. *Journal of membrane science* 236, (2004). (pp. 101-108) ISSN: 0376-7388
- Radovanovic, S. , Annema, A.J., Nauta, B. Bandwidth of Integrated Photodiodes in Standard CMOS for CD/DVD application. *Microelectronics reliability* (2004). ISSN: 0026-2714

- Ransley, J.H.T., McBrien, P.F., Burnell, G., Tarte, E.J., Evetts, J.E., Schulz, R.R., Schneider, C.W., Schmehl, A., Bielefeldt, H., Hilgenkamp, J.W.M., Mannhart, J. Capacitance measurements on grain boundaries in  $Y(1-x)Ca_xBa_2Cu_3O_{7-d}$ . *Physical review B Condensed matter* (2004). (pp. 104502-104502) ISSN: 0163-1829
- Reeuwijk, S.J. van, Karakaya, K., Graafsma, H., Harkema, S. Polarization switching in  $BaTiO_3$  thin films measured by X-ray diffraction exploiting anomalous dispersion. *Journal of applied crystallography* 37, (2004). (pp. 193-199) ISSN: 0021-8898
- Reinosa Garcia, M.M., Verboom, W., Reinhoudt, D.N., Malinowska, E., Pietrzak, M., Wojciechowska, D. Heavy metal complexation by N-acyl(thio)urea-functionalized cavitanol: synthesis, extraction and potentiometric studies. *Tetrahedron* nr: 49, 60, (2005). (pp. 11299-11306) ISSN: 0040-4020
- Rijnders, A.J.H.M., Blank, D.H.A., Choi, J., Eom, C.B. Enhanced surface diffusion through termination conversion during epitaxial  $SrRuO_3$  growth. *Applied physics letters* nr: 4, 84, (2004). (pp. 505-507) ISSN: 0003-6951
- Rijnders, A.J.H.M., Curras, S.R., Huijben, M., Blank, D.H.A., Rogalla, H. Influence of substrate-film interface engineering on the superconducting properties of  $YBa_2Cu_3O_{7-d}$ . *Applied physics letters* nr: 7, 84, (2004). (pp. 1150-1152) ISSN: 0003-6951
- Roy Chowdhury, S., Keizer, K., Elshof, J.E. ten, Blank, D.H.A. Effect of trace amounts of water on organic solvent transport through  $\gamma$ -alumina membranes with varying pore sizes. *Langmuir* nr: 11, 20, (2004). (pp. 4548-4552) ISSN: 0743-7463
- Sanchez Mosteiro, G. ir., Koopman, M., Dijk, E.M.H.P. van, Hernando Campos, J., Hulst, N.F. van, Garcia Parajo, M.F. Photon Antibunching Proves Emission from a Single Subunit in the Autofluorescent Protein DsRed. *ChemPhysChem* 5, (2004). (pp. 1782-1785) ISSN: 1439-4235
- Sarajlic, E., Boer, M.J. de, Jansen, H.V., Arnal, N., Puech, M., Krijnen, G.J.M., Elwenspoek, M.C. Advanced plasma processing combined with trench isolation technology for fabrication and fast prototyping of high aspect ratio MEMS in standard silicon wafers. *Journal of micromechanics and microengineering* nr: 14, (2004). (pp. S70-S75) ISSN: 0960-1317
- Schasfoort, R.B.M. Proteomics-on-a-chip: the challenge to couple lab-on-a-chip unit open. *Expert review of proteomics* nr: 1, 1, (2004). (pp. 123-132) ISSN: 1478-9450
- Schinkel, D., Boer, R.P. de, Annema, A.J., Tuijl, A.J.M. van A 1-V 15 Micro W High-Accuracy Temperature Switch. *Analog integrated circuits and signal processing* nr: 1, 41, (2004). (pp. 13-20) ISSN: 0925-1030
- Schmitz, J., Cubaynes, F.N., Havens, R.J., Kort, R. de, Scholten, A.J., Tiemeijer, L.F. Test Structure Design Considerations for RF-CV Measurements on Leaky Dielectrics. *IEEE transactions on semiconductor manufacturing* nr: 2, 17, (2004). (pp. 150-154) IEEE ISSN: 0894-6507
- Schmitz, J., Cubaynes, F.N., Kort, R. de, Havens, R.J., Scholten, A.J., Tiemeijer, L.F. The RF-CV method for characterization of leaky gate dielectrics. *Microelectronic engineering* 72, (2004). (pp. 149-153) Elsevier B.V. ISBN: 0167-9317 / ISSN: 0167-9317
- Schmuhl, R., Keizer, K., Berg, A. van den, Elshof, J.E. ten, Blank, D.H.A. Controlling the transport of cations through permselective mesoporous alumina layers by manipulation of electric field and ionic strength. *Journal of colloid and interface science* nr: 1, 273, (2004). (pp. 331-338) ISSN: 0021-9797
- Schmuhl, R., Roy Chowdhury, S., Elshof, J.E. ten, Berg, A. van den, Blank, D.H.A. Nanostructured ion-selective MCM-48 membranes. *Journal of sol-gel science and technology* 31, (2004). (pp. 249-252) ISSN: 0928-0707
- Schmuhl, R., Sekulic, J., Roy Chowdhury, S., Rijn, C.J.M. van, Keizer, K., Berg, A. van den, Elshof, J.E. ten, Blank, D.H.A. Si-compatible ion selective oxide interconnects with high tunability. *Advanced materials* nr: 11, 16, (2004). (pp. 900-904) ISSN: 0935-9648
- Schönherr, H., Crego Calama, M., Vancso, G.J., Reinhoudt, D.N. Spontaneous Resolution of Racemic Hydrogen-Bonded Nanoassemblies on Graphite Revealed by Atomic Force Microscopy. *Advanced materials* 16, (2004). (pp. 1416-1420) ISSN: 0935-9648
- Seiwert, B., Henneken, H., Karst, U. Ferrocenyl piperazine as derivatizing agent for the analysis of isocyanates and related compounds using liquid chromatography/electrochemistry/mass spectrometry (LC/EC/MS). *Journal of the American Society for Mass Spectrometry* 15, (2004). (pp. 1727-1736) ISSN: 1044-0305

- Sekulic, J. , Elshof, J.E. ten, Blank, D.H.A. A microporous titania membrane for nanofiltration and pervaporation. *Advanced materials* nr: 17, 16, (2004). (pp. 1546-1550) ISSN: 0935-9648
- Sekulic, J. , Elshof, J.E. ten, Blank, D.H.A. Synthesis and characterization of microporous titania membranes. *Journal of sol-gel science and technology* 31, (2004). (pp. 201-204) ISSN: 0928-0707
- Sekulic, J. , Magraso, A., Elshof, J.E. ten, Blank, D.H.A. Influence of ZrO<sub>2</sub> doping on microstructure and permeability of mesoporous TiO<sub>2</sub> membrane. *Microporous and mesoporous materials* 72, (2004). (pp. 49-57) ISSN: 1387-1811
- Seo, Y-S. , Sim, K.S., Galambos, A., Lammertink, R.G.H., Vancso, G.J., Rafailovich, M. Nanowire and Mesh Conformations of Diblock Copolymer Blends at the Air/Water Interface. *Nano letters* 4, (2004). (pp. 483-486) ISSN: 1530-6984
- Sharpe, R.B.A. , Burdinski, D., Huskens, J., Zandvliet, H.J.W., Reinhoudt, D.N., Poelsema, B. Spreading of 16-mercaptohexadecanoic acid in microcontact printing. *Langmuir* nr: 20, 20, (2004). (pp. 8646-8651) ISSN: 0743-7463
- Smilde, H.J.H. , Ariando, A., Blank, D.H.A., Hilgenkamp, J.W.M., Rogalla, H. Pi-SQUIDS based on Josephson contacts between high-T<sub>c</sub> and low-T<sub>c</sub> superconductors. *Physical review B Condensed matter* 70, (2004). (pp. 024519-24519) ISSN: 0163-1829
- Smilde, H.J.H. , Ariando, A., Rogalla, H., Hilgenkamp, J.W.M. Bistable superconducting quantum interference device with built-in switchable pi/2 phase shifts. *Applied physics letters* nr: 9, 84, (2004). (pp. 4091-4093) ISSN: 0003-6951
- Speets, E.A. , Ravoo, B.J., Roesthuis, F.J.G., Vroegindeweij, F., Blank, D.H.A., Reinhoudt, D.N. Fabrication of arrays of gold islands on self-assembled monolayers using pulsed laser deposition through nanosieves. *Nano letters* nr: 5, 4, (2004). (pp. 841-844) ISSN: 1530-6984
- Spijksma, G.I. , Benes, N.E., Blank, D.H.A. Membrane separation of liquid-like droplets. *Separation and purification technology* 40, (2004). (pp. 103-108) ISSN: 1383-5866
- Spijksma, G.I. , Bouwmeester, H.J.M., Blank, D.H.A. Molecular design approach to a stable heterometallic zirconium-titanium alkoxide - potential precursor of mixed-oxide ceramics. *Inorganic chemistry communications* 7, (2004). (pp. 953-955) ISSN: 1387-7003
- Spijksma, G.I. , Bouwmeester, H.J.M., Blank, D.H.A. Stabilization and destabilization of zirconium propoxide precursors by acetylacetone. *Chemical communications* 16, (2004). (pp. 1874-1875) ISSN: 1359-7345
- Steinkamp, T. , Karst, U. Detection scheme for bioassays based on 2,6-pyridinedicarboxylic acid derivatives and enzyme-amplified lanthanide luminescence. *Analytica chimica acta* 526, (2004). (pp. 27-34) ISSN: 0003-2670
- Steinkamp, T. , Karst, U. Detection strategies for bioassays based on luminescent lanthanide complexes and signal amplification. *Analytical and bioanalytical chemistry* 380, (2004). (pp. 24-30) ISSN: 1618-2642
- Steinkamp, T. , Liesener, A., Karst, U. Reaction monitoring of enzyme-catalyzed ester cleavage by time resolved fluorescence spectroscopy and electrospray mass spectrometry - method development and comparison. *Analytical and bioanalytical chemistry* 378, (2004). (pp. 1124-1128) ISSN: 1618-2642
- Stouwdam, J.W. , Veggel, F.C.J.M. van Sensitized emission in Ln<sup>3+</sup>-doped TiO<sub>2</sub> semiconductor nanoparticles. *ChemPhysChem* nr: 5, 5, (2004). (pp. 743-746) ISSN: 1439-4235
- Sumption, M.D. , Scanlan, R.M., Ilyin, Y.U., Nijhuis, A., Collings, E.W. Magnetic Calorimetric and Transport Studies of Coupling and Interstrand Contact Resistance in Nb<sub>3</sub>Sn Rutherford Cables with Bimetallic Cores of Stainless Steel Bonded to Copper. *IEEE transactions on applied superconductivity* 50, (2004). (pp. 781-788) ISSN: 1051-8223
- Susanto, H. , Gils, S.A. van Analysis on the stability of Josephson vortices at tricrystal boundaries: A 3 phi[<sub>sub</sub> 0]/2-flux case. *Physical review B Condensed matter* 69, (2004). (pp. 212503) ISSN: 0163-1829
- Susanto, H. , Gils, S.A. van Instability of a lattice semifluxon in a current-biased 0- pi array of Josephson junctions. *Physical review B Condensed matter* 69, (2004). (pp. 092507) ISSN: 0163-1829
- Susanto, H. , Gils, S.A. van Semifluxons with a hump in a 0-pi Josephson junction. *Physica C* 408-410, (2004). (pp. 579-580) ISSN: 0921-4534
- Susanto, H. , Gils, S.A. van, Visser, T.P.P., Smilde, H.J.H. Static semifluxons in a long Josephson junction with pi-discontinuity points. *Physical review B Condensed matter* 68, (2003). (pp. 104501) ISSN: 0163-1829

- Tanaka, Y. , Nazarov, Y.V., Golubov, A., Kashiwaya, S. Theory of charge transport in diffusive normal metal/unconventional singlet superconductor contacts. *Physical review B Condensed matter* 69, (2004). (pp. 144519) ISSN: 0163-1829
- Tas, N.R. , Haneveld, J., Jansen, H.V., Elwenspoek, M.C., Berg, A. van den Capillary filling speed of water in nanochannels. *Applied physics letters* nr: 1, 85, (2004). (pp. 3274-3276) ISSN: 0003-6951
- Tiggelaar, R.M. , Loeters, P.W.H., Male, P. van, Oosterbroek, R.E., Gardeniers, J.G.E., Croon, M.H.J.M. de, Schouten, J.C., Elwenspoek, M.C., Berg, A. van den Thermal and mechanical analysis of a microreactor for high-temperature catalytic gas phase reactions. *Sensors and actuators A (Physical)* 112, (2004). (pp. 267-277) ISSN: 0924-4247
- Timmer, B.H. , Delft, K.M., Otjes, R.P., Olthuis, W., Berg, A. van den Miniaturized measurement system for ammonia in air. *Analytica chimica acta* nr: 1, 507, (2004). (pp. 137-143) ISSN: 0003-2670
- Timmer, B.H. , Olthuis, W., Berg, A. van den Sampling small volumes of ambient ammonia using a miniaturized gas sampler. *Lab on a chip* 4, (2004). (pp. 252-255) ISSN: 1473-0197
- Tomczak, N. , Vallée, R.A.L., Dijk, E.M.H.P. van, Garcia Parajo, M.F., Kuipers, L., Hulst, N.F. van, Vancso, G.J. Probing Polymers with Single Fluorescent Molecules. *European polymer journal* 40, (2004). (pp. 1001-1011) ISSN: 0014-3057
- Tomczak, N. , Vallée, R.A.L., Dijk, E.M.H.P. van, Kuipers, L., Hulst, N.F. van, Vancso, G.J. Segment Dynamics in Thin Polystyrene Films Probed by Single Molecule Optics. *Journal of the American Chemical Society* 126, (2004). (pp. 4748-4749) ISSN: 0002-7863
- Ul Haq, E. , Gokcan, H., Banerjee, T., Postma, F.M., Siekman, M.H., Jansen, R., Lodder, J.C. Nanoscale magnetic hysteresis of Ni80Fe20/Au/Co trilayers using ballistic electron magnetic microscopy. *Journal of applied physics* nr: 11, 95, (2004). (pp. 6930-6932) ISSN: 0021-8979
- Uranus, H.P. , Hoekstra, H.J.W.M. Modelling of microstructured waveguides using a finite-element-based vectorial mode solver with transparent boundary conditions. *Optics express* nr: 12, 12, (2004). (pp. 2795-2809) ISSN: 1094-4087
- Uranus, H.P. , Hoekstra, H.J.W.M., Groesen, E. van Galerkin finite element scheme with Bayliss-Gunzburger-Turkel-like boundary conditions for vectorial optical mode solver. *Journal of nonlinear optical physics and materials* nr: 2, 13, (2004). (pp. 175-194) ISSN: 0218-8635
- Uranus, H.P. , Hoekstra, H.J.W.M., Groesen, E. van Simple High-order Galerkin Finite Element Scheme for the Investigation of Both Guided and Leaky Modes in Anisotropic Planar Waveguides. *Optical and quantum electronics* 36, (2004). (pp. 239-257) ISSN: 0306-8919
- Valkering, T.P. , Irman, A. Chaos near the gap soliton in a Kerr grating. *Physical review E Statistical, nonlinear, and soft matter physics* 70, (2004). (pp. 036610-1-036610-9) ISSN: 1539-3755
- Vallée, R.A.L. , Tomczak, N., Kuipers, L., Vancso, G.J., Hulst, N.F. van Effect of Solvent on Nanoscale Polymer Heterogeneity and Mobility Probed by Single Molecule Lifetime Fluctuations. *Chemical physics letters* 384, (2004). (pp. 5-8) ISSN: 0009-2614
- Vonk, V. , Reeuwijk, S.J. van, Dekkers, J.M., Harkema, S., Rijnders, A.J.H.M., Graafsma, H. Strain-induced structural changes in thin YBa2Cu3O7-x films on SrTiO3 substrates. *Thin solid films* nr: 1,2, 449, (2004). (pp. 133-137) ISSN: 0040-6090
- Vroegindeweij, F. , Speets, E.A., Steen, J.A.J., Brugger, J.P., Blank, D.H.A. Exploring microstencils for sub-micron patterning using pulsed laser deposition. *Applied physics A (Materials science and processing)* 79, (2004). (pp. 743-745) ISSN: 0947-8396
- Vroonhoven, E. van , Zandvliet, H.J.W., Poelsema, B. (2x1)-(1x1) phase transition on Ge(001); Dimer break-up and surface roughening [vol 91, art no 116102 (2003)]. *Physical review letters* nr: 15, 93, (2004). (pp. 159902) ISSN: 0031-9007
- Vrouwe, E.X. , Lutttge, R., Berg, A. van den Direct measurement of lithium in whole blood using microchip capillary electrophoresis with integrated conductivity detection. *Electrophoresis* nr: 10-11, 25, (2004). (pp. 1660-1667) ISSN: 0173-0835
- Vysotsky, V.S. , Rakhmanov, A.L., Ilyin, Y.U. Influences of voltage-current characteristic difference on quench development in low-Tc and high-Tc superconducting devices. *Physica C* 401, (2004). (pp. 57-65) ISSN: 0921-4534

- Waard, A. de , Gottardi, L., Bassan, M., Coccia, E., Fafone, V., Flokstra, J., Karbalai-Sadegh, A., Minenkov, Y., Moleti, A., Pallottino, G.V., Podt, M., Pors, B.J., Reincke, W., Rocchi, A., Shumack, A., Srinivas, S., Visco, M., Frossati, G. Cooling down MiniGRAIL to milli-Kelvin temperatures. *Classical and quantum gravity* 21, (2004). (pp. S465-S471) ISSN: 0264-9381
- Wang, Z. , Ackaert, J.G.G., Salm, C., Kuper, F.G., Tack, M., De Backer, E., Coppens, P., De Schepper, L., Vlachakis, B. Plasma-Charging Damage of Floating MIM Capacitors. *IEEE transactions on electron devices* nr: 6, 51, (2004). (pp. 1017-1024) ISSN: 0018-9383
- Wel, A.P. van der , Gierink, S.L.J., Frye, R., Boccuzzi, V., Nauta, B. A Robust 43 GHz VCO in CMOS for OC-768 SONENT Applications. *IEEE journal of solid-state circuits* nr: 7, 29, (2004). (pp. 1159-1163) ISSN: 0018-9200
- Wessel, W.A.J. , Nijhuis, A., Ilyin, Y.U., Abbas, W., Haken, B. ten Kate, H.H.J. ten A Novel "Test Arrangement for Strain Influence on Strands" (TARSIS): Mechanical and Electrical Testing of ITER Nb3Sn Strands. *Advances in cryogenic engineering* 50, (2004). (pp. 466-473) ISSN: 0065-2482
- Wolbers, F. , Andersson, S.M.H., Vermes, I., Berg, A. van den Apoptosis induced kinetic changes in autofluorescence - possible application for single cell analysis on chip. *Apoptosis* nr: 6, 9, (2004). (pp. 749-755) ISSN: 1360-8185
- Wolbers, F. , Buitenhuis, P., Haanen, C., Vermes, I. Apoptotic cell death kinetics in vitro depend on the cell types and the inducers used. *Apoptosis* nr: 3, 9, (2004). (pp. 385-392) ISSN: 1360-8185
- Wormeester, H. , Benes, N.E., Spijksma, G.I., Verweij, H., Poelsema, B. CO<sub>2</sub> sorption of a ceramic separation membrane. *Thin solid films* 455-456, (2004). (pp. 747-751) ISSN: 0040-6090
- Wormeester, H. , Kooij, E.S., Mewe, A.A., Rekveld, S., Poelsema, B. Ellipsometric characterisation of heterogeneous 2D layers. *Thin solid films* nr: 56, 455, (2004). (pp. 323-334) ISSN: 0040-6090
- Woudenberg, F.C.M. , Sager, W.F.C., Elshof, J.E. ten, Verweij, H. Nanostructured dense ZrO<sub>2</sub> thin films from nanoparticles obtained by emulsion precipitation. *Journal of the American Ceramic Society* nr: 8, 87, (2004). (pp. 1430-1435) ISSN: 0002-7820
- Wubs, C.M. , Suttorp, L.G., Lagendijk, A. Multiple-scattering approach to interatomic interactions and superradiance in inhomogeneous dielectrics. *Physical review A (Atomic, molecular, and optical physics)* 70, (2004). (pp. 053823/1-053823/17) ISSN: 1050-2947
- Wubs, C.M. , Suttorp, L.G., Lagendijk, A. Spontaneous emission rates in finite photonic crystals of plane scatterers. *Physical review E Statistical physics, plasmas, fluids, and related interdisciplinary topics* nr: 016616, 69, (2004). (pp. 016616-1-016616-17) ISSN: 1063-651X
- Yanson, I.K. , Beloborod'ko, S.I., Naidyuk, Y.G., Dolgov, O.V., Golubov, A. Phonon self-energy effects in the superconducting energy gap of MgB<sub>2</sub> point-contact spectra. *Physical review B Condensed matter* 69, (2004). (pp. 100501) ISSN: 0163-1829
- Yantovsky, E. , Gorski, J., Smyth, B., Elshof, J.E. ten Zero-emission fuel-fired power plants with ion transport membrane. *Energy* nr: 12-15, 29, (2004). (pp. 2077-2088) ISSN: 0360-5442
- Zandvliet, H.J.W. , Gastel, R. van, Gurlu, O., Poelsema, B. Coexistence of (2x1) and c(4x2) phases on Ge(001). *Physics letters. Section A* nr: 5-6, 326, (2004). (pp. 457-461) ISSN: 0375-9601
- Zandvliet, H.J.W. , Gurlu, O., Gastel, R. van, Poelsema, B. Faceting of <010> steps on Si(001) and Ge(001) surfaces. *Physical review B Condensed matter and materials physics* nr: 12, 69, (2004). (pp. 125311) ISSN: 1098-0121
- Zandvliet, H.J.W. , Poelsema, B. Overhangs in the solid-on-solid model. *Physics letters. Section A* nr: 1-2, 333, (2004). (pp. 142-145) ISSN: 0375-9601
- Zanino, R. , Bagnasco, M., Dittrich, G., Fietz, W., Fillunger, H., Hampshire, D., Heller, H., Komarek, P., Langhans, O., Maix, R., Marchese, V., Martovetsky, N., Mitchell, N., Nijhuis, A., Raff, S., Ricci, M.V., Suesser, M., Salpietro, E., Savoldi Richard, L., Taylo Tcs tests and performance assessment of the ITER Toroidal Field Model Coil (phase II). *IEEE transactions on applied superconductivity* nr: 2, 14, (2004). (pp. 1519-1522) ISSN: 1051-8223
- Zhang, L. , Bain, J.A., Zhu, J.G., Abelmann, L., Onoue, T. A Model for Mark Size Dependence on Field Emission Voltage in Heat-Assisted Magnetic Probe Recording on CoNi/Pt Multilayers. *IEEE Transactions on Magnetics* 2004 IEEE transactions on magnetics MMM-Intermag 2004 nr: 4, 40 (nr: 4), (2004, januari 5 / 2004, januari 9). (pp. 2549-2551) ISBN: 0018-9464 / ISSN: 0018-9464

- Zou, S(han) , Ma, Y., Hempenius, M.A., Schönherr, H., Vancso, G.J. Grafting of Single, Stimuli-Responsive Poly(ferrocenylsilane) Molecules to Gold Surfaces.. *Langmuir* 20, (2004). (pp. 6278-6287) ISSN: 0743-7463
- Zwierzycki, M.P., Tserkovnyak, Y., Kelly, P.J., Brataas, A., Bauer, G.E.W. First principles study of magnetization relaxation enhancement and spin-transfer in thin magnetic films. *Molecular physics reports* 40, (2004). (pp. 200-2005) ISSN: 1505-1250

*Books - author*

- Andersson, S.M.H. , Berg, A. van den Lab on chips for Cellomics; Micro and Nanotechnologies for Life Sciences. (2004). 360 pp. Dordrecht Kluwer Academic Press ISBN: 1-4020-2860-1
- Bertolotti, M. , Driessen, A., Michelotti, F. Microring resonators as building blocks for VLSI Photonics. 39th Course of the International School of Quantum Electronics 18-10-2003 - 25-10-2003 ISSN 0094-243X, (2004). 451 pp. Melville, New York 2004 American Institute of Physics ISBN: 0-7354-0184-5

*Books - chapter*

- Abelmann, L. , Bos, A.G. van den, Lodder, J.C. Magnetic Force Microscopy - Towards Higher Resolution. *Magnetic Microscopy of Nanostructures nr: Chapter 12*, (2003). (pp. 253-283) Springer (Berlin Heidelberg New York)
- Blank, D.H.A. , Doeswijk, L.M., Karakaya, K., Koster, G., Rijnders, A.J.H.M. Pulsed laser deposition of dielectrics. *High-K Gate Dielectric* (2004). (pp. 89-122) London, United Kingdom IOP Publishing Ltd. ISBN: 0 7503 0906 7
- Driessen, A. , Leinse, A., Musa, A.M.S., Ridder, R.M. de, Sular, N. Polymer-based Integrated Optics Devices. *Polymer Optical Fibers* (2004). (pp. 73-101) California, USA American Scientific Publishers ISBN: 1-588883-012-8
- Gadgil, V.J. , Morrissey, F. Applications of Focused Ion Beam in Nanotechnology. *Encyclopedia of Nanoscience and Nanotechnology 1*, (2004). (pp. 101-110) American Science Publishers ISBN: 1-58883-057-8
- Hempenius, M.A. , Peter, M., Robbins, N.S., Kooij, E.S., Lammertink, R.G.H., Vancso, G.J. Water-Soluble Polyferrocenylsilanes for Supramolecular Assemblies by Layer-by-Layer Deposition. *Macromolecules Containing Metal and Metal-Like Elements: Organoiron Polymers nr: 2*, (2004). (pp. 99-114) West Sussex (England) Wiley-Interscience ISBN: 0-471-45078-2
- Jansen, H.V. , Tas, N.R., Berenschot, J.W. MEMS-based nanotechnology. *Encyclopedia of nanoscience and nanotechnology* (2004). (pp. 163-275) American Scientific Publishers ISBN: 1-58883-061-6
- Kooij, E.S. , Brouwer, E.A.M., Mewe, A.A., Wormeester, H., Poelsema, B. Self-assembly of nanocolloidal gold films. *Encyclopedia of Nanoscience and Nanotechnology* (2004). (pp. 3459-3469) New York Marcel Dekker ISBN: 0-8247-4797-6
- Kooij, E.S. , Brouwer, E.A.M., Wormeester, H., Poelsema, B. Ionic strength effects: Tunable nanocrystal distribution in colloidal gold films. *Encyclopedia of Nanoscience and Nanotechnology* (2004). (pp. 1515-1523)
- Kooij, E.S. , Galca, A.C., Wormeester, H., Poelsema, B. Structural and optical anisotropy of nanoporous anodic aluminum oxide. *Encyclopedia of Nanoscience and Nanotechnology* (2004). (pp. 3685-3695) New York Marcel Dekker ISBN: 0-8247-4797-6
- Lammertink, R.G.H. , Korczagin, I., Hempenius, M.A., Vancso, G.J. Metal-Containing Polymers for High-Performance Resist Applications. *Macromolecules Containing Metal and Metal-Like Elements: Organoiron Polymers nr: 2*, (2004). (pp. 115-133) Wiley-Interscience ISBN: 0-471-45078-2
- Mela, P. , Tas, N.R., Berg, A. van den, Elshof, J.E. ten Nanofluidics. *Encyclopedia of Nanoscience and Nanotechnology 6*, (2004). (pp. 739-755) American Scientific Publishers ISBN: 1-58883-062-4
- Schönherr, H. , Crego Calama, M., Vancso, G.J., Reinhoudt, D.N. Atomic Force Microscopy Studies of Hydrogen-Bonded Nanostructures on Surfaces. *Dekker Encyclopedia of Nanoscience and Nanotechnology* (2004). (pp. 155-167) New York (USA) Marcel Dekker, Inc.
- Schönherr, H. Scanning Force Microscopy. *Encyclopedia of Polymer Science and Technology* (2004). New York (USA) John Wiley & Sons

- Wolbers, F., Haanen, C., Andersson, S.M.H., Berg, A. van den, Vermes, I. Analysis of apoptosis on chip - Why the move to chip technology. Lab-on-Chips for Cellomics - Micro and Nanotechnologies for Life Sciences (2004). (pp. 197-224) Dordrecht Kluwer Academic Publishers ISBN: 1-4020-2860-1
- Wormeester, H., Kooij, E.S., Poelsema, B. Self-Assembled Thin Films: Optical Characterization. Encyclopedia of Nanoscience and Nanotechnology (2004). (pp. 3361-3371) New York Marcel Dekker ISBN: 0-8247-4797-6

## PATENTS

### *Applied*

- Acar, M., Leenaerts, D.M.W., Nauta, B. Tentative title: A High Frequency, High Swing Frequency Divider. (2004, augustus 6). applied: PHNL040893EPP
- Acar, M., Leenaerts, D.M.W., Nauta, B. Tentative Title: A Wide-Band Injection-Locked Frequency Divider. (2004, juni 7). applied: PHNL040284EPP
- Driessen, A. Device and method for receiving, processing and transmitting optical and electrical signals and method for manufacturing such a device. (2003, oktober 14). applied: 10/477,655
- Heideman, R.G., Ikking, T.J., Lambeck, P.V. Integrated Optical Lightwave device. (2004, februari 26). applied: 98934977,4 European
- Holleman, J. Radiation-emitting semiconductor device and method of manufacturing of such a device. (2004). applied: W02004042831
- Schasfoort, R.B.M. Werkwijze en mengsel voor (bio)chemische analyse en synthese. (2004, december 1). applied: 102 7633

### *Approved*

- Beek, R.C.H. van de, Klumperink, E.A.M., Nauta, B., Vaucher, C.S. PHASE LOCKED LOOP. (2004, maart 11). approved: W02004021574
- Bergveld, P., Dam, T.V.A., Olthuis, W. Hydrogen peroxide sensor. (2004, augustus 5). approved: NL1022482C
- Boom, J.M. van de, Annema, A.J., Dijkmans, E.C., Westra, J.R. Digital To Analog Converter. (2004, januari 21). approved: EP1382123
- Heideman, R.G., Ikking, T.J., Lambeck, P.V. Integrated Optical Lightwave device. (2004, juni 11). approved: 3562651 Japan
- Heideman, R.G., Ikking, T.J., Lambeck, P.V. Integrated Optical Lightwave device. (2003, september 9). approved: 6,618536 B1 USA
- Klumperink, E.A.M., Louwsma, S.M., Stikvoort, E. Switched Transconductor Mixer. (2004, december 16). approved: PHNL0307707
- Marmottant, P.G.M., Hilgenfeldt, S., Gardeniers, J.G.E. Device and method for inducing directional transport. (2004, juni 3). approved: NL 1026321
- Schlereth, D.D., Kooyman, R.P.H. Biosensor for in-situ study of reduction and oxidation processes. (2004). approved: DE19824629
- Sharpe, R.B.A., Burdinski, D. Method for Patterning a substrate surface. (2004, oktober 7). approved: PHGB030186
- Sharpe, R.B.A., Burdinski, D. Nanofabrication based on nucleated SAM growth. (2004, december 1). approved: PHNL041458 EPP