

Cees Dekker, Curriculum Vitae



CV last updated
15-11-2022

Personal data

Full name	Cornelis Dekker
Date and place of birth	7 april 1959, Haren, The Netherlands
Nationality	Netherlands
Marital status	Married, 3 children
Address	Delft University of Technology Kavli Institute of NanoScience Delft Department of Bionanoscience Van der Maasweg 9, 2629 HZ Delft, The Netherlands phone +31 - 15 - 2786094 website: https://ceesdekkerlab.nl e-mail: c.dekker @ tudelft.nl

Education

- 1977-1983 Experimental Physics at the University of Utrecht
- 1984-1988 Ph.D. in Physics from University of Utrecht; thesis "Two-dimensional spin glasses"

Academic appointments

- 1984-1988 Research assistant at the University of Utrecht
- 1988-1993 Assistant professor at the University of Utrecht
- 1990-1991 Visiting researcher at IBM Research, Yorktown Heights, USA
- 1993-1999 Associate professor at Delft University of Technology
- 1999-*now* Antoni van Leeuwenhoek full professor at Delft University of Technology.
- 2000 Visiting researcher at Technion – Israel Institute of Technology, Haifa, Israel
- 2000-*now* Full professor of Molecular Biophysics, Delft University of Technology
- 2001-2010 Group leader of the Molecular Biophysics group
- 2006-*now* Distinguished University Professor, Delft University of Technology
- 2010-2013 Founding Chair of a new Department of Bionanoscience, TU Delft
- 2010-2018 Director of the Kavli Institute of Nanoscience Delft
- 2015-2020 Royal Academy Professor of the Royal Netherlands Academy of Arts and Sciences (KNAW)

Research overview

- 1981-1983 Undergraduate research projects in medical physics (visual system) and solid-state physics (NMR and Monte Carlo simulations in dilute magnetic systems).
- 1984-1988 Graduate research on low-dimensional spin glasses. Analysis of the dynamic susceptibility of a model spin glass led to experimental verification of theories on the critical dimensionality of random magnetic systems.
- 1988-1991 Noise phenomena in quantum point contacts and quantum Hall devices. Quantum size effects were found in the 1/f noise and shot noise of such devices. These noise experiments were among the first in what later became a major line of research in mesoscopic physics.
- 1990-1994 Vortex dynamics in high-T_c superconductors. The superconducting phase transition was studied from nonlinear electrical transport in high magnetic fields. Our experiments demonstrated a new ‘vortex-glass’ phase that was unknown in conventional superconductors.
- 1994-1998 Mesoscopic charge density waves. A unique thin-film and patterning technology was developed for a charge density wave conductor. Sliding charge density waves were studied in the previously unexplored phase-coherent regime of devices with sub-micron dimensions.
- 1994-2000 Assembly and properties of molecular nanostructures. We developed a large UHV system for atomic-scale fabrication and measurements, named NEXT (for Nanoscale EXperiments and Technology). A new method for deposition of organic materials was invented. Artificial molecular nanostructures were built by manipulating single molecules one-by-one by use of STM techniques.
- 1993-2007 Single carbon nanotubes. A new line of research was set up to study electrical transport through *single* organic molecules between nanoelectrodes. In 1996 a breakthrough was realized with carbon nanotubes. In collaboration with the group of Nobel laureate Rick Smalley who provided nanotube material, we studied the electronic properties of these unique molecular carbon cylinders at the single-molecule level through STM and transport experiments. We discovered many of the basic properties of electrons in these nanotubes as well as developed prototypes of single-molecule devices. We were the first to demonstrate that these nanotubes are quantum wires at the single-molecule level, with outstanding physical properties. We were also the first to experimentally demonstrate that nanotubes are metals or semiconductors, depending on their chirality. Our discoveries led to a breakthrough in the field of molecular electronics where we established a single-molecule transistor at room temperature for the first time – something that had been a dream for at least 30 years. In 2001, the journal Science proclaimed this work to be the scientific ‘breakthrough of the year’.
- 1998-2000 Transport through DNA. In 1998 we started electrical transport experiments on DNA molecules between nanoelectrodes. In the end we concluded that DNA is a good insulator – an important statement in a field where this was heavily disputed. However, at the very short (few nm) length scale it still carries a current at large bias. From a very different perspective, we subsequently used of the assembly properties of DNA for biomolecule-based electronics.
- **2001-now** Around the year 2000, I shifted the main focus of my work towards the biophysics of single biomolecules, and more general, towards nanobiology. This change of direction was driven by my fascination for the astonishing functioning of biological molecular structures, as well as by the long-term perspective that many interesting discoveries could be expected in this

field. The tools of nanotechnology do, in my opinion, provide exciting possibilities for studying biological systems. Below I mention projects in this area that we set up since then:

- 2001-2008 Ion and DNA transport in nanofluidic channels. We explored a range of phenomena of ion and DNA transport in fluidic channels in the size range from 10-1000 nm. We studied ion conductivity, streaming currents, charge inversion, and pressure-driven electrical power generation, and examined the size dependence of pressure-driven DNA transport and the conformation and dynamics of DNA confined in slit-like nanofluidic channels.
- 2001-2009 Single-molecule studies of restriction enzymes. Using AFM and magnetic tweezers, we studied the motor activity of the Type I restriction-modification enzyme EcoR124I. We discovered that it constitutes a processive double-strand translocase that tracks the DNA duplex. This is one of many examples where we have studied the mechanics of motor proteins using single-molecule methods.
- 2002-2008 Employing biomolecular motors on chips. We explored the use of kinesin motor proteins to actively transport microtubule shuttles in engineered environments. We made inverted gliding assays with kinesin motors fixed to a substrate and movement of microtubules along the kinesin-coated surface, all within nanofluidic channels. The energy derived from ATP hydrolysis was harnessed to perform work on the nanoscale for possible purposes as molecular sorting, transporting or actuation. We realized rectification, sorting, controlled stopping and restarting, and localized delivery. All in all, we demonstrated a fairly complete technology of motor-driven active nanofluidics.
- 2001-2012 DNA break repair through homologous recombination. By use of single-molecule techniques, in particular atomic force microscopy and optical/magnetic tweezers, we study the structure, dynamics and function of DNA repair proteins. Specifically, we have studied filament formation and strand exchange and invasion mediated by the bacterial protein RecA as well as the human Rad50/51/54 proteins. More generally, our research is aimed at disentangling the mechanisms for organizing and maintaining DNA in the cell. Most of our studies are in vitro single-molecule studies but we have recently also moved to in vivo studies in live bacterial cells.
- 2001-**now** Solid-state nanopores. We pioneered the use of solid-state nanopores, small holes in a thin solid-state membrane. We developed a new method to drill nanopores by use of TEM which allows real-time control and sub-nm size control. Translocation of single double-stranded DNA molecules was resolved. The DNA-length dependence illuminated the polymer physics in transport, the salt dependence indicated the DNA charge, and the current magnitude signaled DNA folding. We discovered nanobubbles in the noise properties of nanopores. Using optical tweezers we quantified the local forces acting on a DNA in a nanopore. We were the first to report graphene nanopores as well as the first to report plasmonic nanopores and optical readout of unlabeled DNA molecules. We use these nanopores to locally trap single biomolecules as well as to devise sequencing methods for both DNA and proteins. Building on our work on DNA origami nanopores, we now realized the world's smallest turbines that rotate driven by a salt gradient.
- 2007-2017 Biophysics of bacteria in nanofabricated structures. Using nanofabrication we made controlled landscapes for bacteria. Bacteria could populate islands and colonize neighboring ones. We studied the biophysics of bacterial motion in narrow slits as well as a number of basic

phenomena in the adaptation and evolution of bacterial populations. We discovered that bacteria can pass very narrow constrictions (even significantly smaller than their diameter). These anomalously shaped ‘flat’ bacteria allowed a new parameter regime to study cell division, and indeed we used this to prove that precise positioning of the cell division machinery is driven by the nucleoid. We also developed a near-zero-cost bacteria-in-paper technology to study spatially diverse landscapes. We used these platforms for a number of ecological studies (game theory with bacteria, antibiotics) but also realized the shaping of live single bacteria to arbitrary shapes (squares, triangles), model structures that we exploited to study the localization and dynamics of Min proteins and DNA in cells. We explored chromosome structure in shape-shifted cells where we visualized the genome in real space.

- **2010-now** Nuclear transport studied with biomimetic nuclear pore complexes made from nanopores. Using nanopores, we build minimal mimics of the nuclear pore complex to address the biophysical mechanism for nuclear import and export. Using nuclear porins in nanopores, we realized selectivity where transport proteins are translocated but other proteins are not. We exploit DNA origami to control the number of nuclear porins in the NPC mimics, and recently extended our toolbox by building ‘designer nuclear proteins’ bottom up and fabricating zero mode waveguides for optical measurements with superior signal resolution. We also realized a minimal mRNA export system.
- **2013-now** Nanopores for single-molecule protein dynamics and protein sequencing. While DNA transport studies led to a nanopore DNA sequencing technology, the next challenge is to sequence and study proteins to resolve the vast complexity of the proteome. We study folded proteins where we recently succeeded to make a new type of single-molecule device, the NEOTrap, where a single protein can be held in a nanopore for hours, to study internal dynamics at <ms resolution. We also demonstrated the first steps towards single-molecule protein sequencing with nanopores and are resolving PTMs on single peptides.
- **2014-2020** Diagnostics for neglected diseases. We developed point-of-care diagnostics test of neglected tropical diseases within resource-limited settings, based on Crspr/Cas9 detecting of pathogen’s DNA in body fluids. Using our expertise in the biomolecular sciences, we explored a new route to develop an electricity-free room-temperature assay that provides a visual readout on a blood sample that can be used by nontrained users in resource-limited settings.
- **2014-now** Synthetic cells, specifically cell division. Next to our live cell studies of the protein machinery of the bacterial cell division where the relevant proteins (FtsZ, Min,..) and the nucleoid were visualized, we started to explore a bottom up approach where we reconstitute proteins in nanofabricated chambers and lipid vesicles that are produced on chip. The long-term goal here is to realize a form of synthetic cell division and to understand the emergence of biological complexity out of components. Assembly of a synthetic cell will profoundly deepen and propel our fundamental insights into the workings of a living cell. We developed a range of techniques to produce and manipulate liposomes on chip, most prominently OLA and cDICE. Liposomes were manipulated in various ways on chip, e.g., where they were split into daughter liposomes. They were also used to obtain spatiotemporal control of coacervate formation. Current efforts are focused on reconstituting the archaeal CDV system in liposomes, as well as bacterial dynaminA and the Min system. Furthermore, we study arrays of RNA tiles as a constriction machinery.

- 2014-2020 Single-molecule studies on SMC complexes and other DNA-processing protein complexes. Over the years, we developed a number of single-molecule techniques (magnetic tweezers, high-speed AFM, and single-molecule fluorescence assays), which we used to study a variety of protein systems, such as for nucleosome assembly, HARP annealing helicases, and SMC proteins such as condensin and cohesin. Furthermore, we studied the properties of supercoiled DNA at the single-molecule level, for example, examining the dynamics of DNA plectonemes and their relation to DNA sequence. For SMC complexes like condensin we realized a breakthrough where we unambiguously demonstrated DNA loop extrusion by real time visualization. We are currently heavily expanding our single-molecule studies of condensin and related SMC proteins as these are the key organizers of chromosomes. We discovered many novel properties of SMC complexes, e.g. we revealed a new type of chromosomal motifs which we named Z-loops, we imaged the scrunching motion of SMC complexes with AFM, we resolved the very large step size of SMC complexes, we discovered that they also exhibit a novel type of phase condensation, and that they have the ability to bypass huge roadblocks along DNA.
- 2020-**now** Genome-in-a-box: building a chromosome from the bottom up. To figure how the nanoscale local interactions of DNA and proteins or confinement lead to macroscale emergent features of a full chromosome, we study megabasepair long DNA molecules in vitro. We strip, purify and reconstitute a bacterial chromosome in a microfabricated chamber or liposome, and add purified components such as SMCs or nucleoid-associated proteins. In essence, we aim to construct a full-scale in vitro model system of a chromosome.

Main research achievements to date

- 1988, first realization of a model two-dimensional spin glass and verification of its dynamics
- 1990, first measurement of quantum size effect in the noise of quantum point contacts
- 1991, demonstration of a new vortex-glass phase in high-temperature superconductors
- 1996, first mesoscopic charge density waves devices
- 1996, first electrical measurements on a single metal nanocluster between nanoelectrodes
- 1997, discovery that carbon nanotubes behave as quantum coherent molecular wires
- 1998, discovery that carbon nanotubes act as chirality-dependent semiconductors or metals
- 1998, discovery of room-temperature transistors, made from a single nanotube molecule
- 1999, first measurement of the wavefunction of single molecular orbitals of carbon nanotubes
- 1999, discovery of kink heterojunctions of carbon nanotubes
- 1999, decisive evidence for a new Luttinger description of interacting electrons in nanotubes
- 2000, discovery that nanotubes can carry extraordinary large current densities
- 2000, resolved the controversial issue of electronic transport through DNA molecules by measurements of insulating behavior at the single molecule level
- 2000, demonstration of an AFM technique for single-molecule manipulation of nanotubes
- 2001, discovery of single-electron transistors at room temperature based on nanotubes
- 2001, realization of first logic circuits with carbon nanotube devices
- 2001, discovery of the molecular structure of DNA repair enzymes with AFM

- 2002, exploration of new assembly routes with carbon nanotubes functionalized with DNA
- 2003, demonstrated the first biosensors made out of a carbon nanotube
- 2003, resolved the structure and mechanism of DNA repair proteins
- 2003, discovery of a new technique for fabricating solid-state nanopores for DNA translocation
- 2004, discovery of new physics in translocation of DNA through nanopores
- 2004, first experimental study of ions conduction in nanofluidic channels
- 2004, first electrochemistry with individual single-wall carbon nanotubes
- 2004, STM detection and control of phonons in carbon nanotubes
- 2004, first electrical docking of microtubules on kinesin-coated nanostructures
- 2004, first biophysics characterization of the mechanical properties of double-stranded RNA
- 2004, first single-molecule study of DNA translocation by a restriction-modification enzyme
- 2005, discovery of the mechanism of DNA uncoiling by topoisomerase enzymes
- 2005, discovery of long-range conformational changes in Mre11/DNA repair complexes
- 2005, first force measurements on a DNA molecule in a nanopore
- 2006, first demonstration of molecular sorting in a lab on a chip using biomotors
- 2006, discovery of nanobubbles in solid-state nanopores
- 2006, first estimate of electrokinetic energy conversion in a nanofluidic channel
- 2007, first real-time detection of strand exchange in homologous recombination by RecA
- 2007, discovery of a low persistence length of ends of microtubules
- 2007, resolved the mechanism of biosensing with carbon nanotubes
- 2008, first observation of protein-coated DNA translocation through nanopores
- 2008, resolved the origin of the electrophoretic force on DNA in nanopores
- 2008, discovered a significant velocity increase of microtubules in electric fields
- 2008, discovered an anomalous electro-hydrodynamic orientation of microtubules
- 2008, resolved the origin of noise in carbon nanotubes in liquid
- 2009, discovery of a new phenotype for bacteria in narrow nanofluidic slits
- 2009, first detection of local protein structures along DNA using solid-state nanopores
- 2010, developed a new way ('wedging transfer') to manipulate nanostructures
- 2010, first report of DNA translocation through graphene nanopores
- 2010, realized hybrid nanopores by directed insertion of α -hemolysin into solid-state nanopores
- 2011, first in vitro measurements of transport across a single biomimetic nuclear pore complex
- 2011, development of multiplexed magnetic tweezers for kilo-molecule experiments
- 2011, resolved the mechanism of homology recognition in DNA homologous recombination
- 2012, discovery that nucleoid occlusion underlies the accuracy of bacterial cell division
- 2012, first ever study of the dynamics DNA supercoils and the discovery of supercoil hopping
- 2013, controlled shaping of live bacterial cells into arbitrary shapes
- 2013, discovery of spontaneous fluctuations in the handedness of histone tetrasomes□
- 2014, first study of Min protein oscillations in shape-shifted bacteria
- 2015, discovery that condensin is a highly flexible protein structure
- 2015, co-discovered a new way to sequence DNA using Raman spectra in plasmonic nanopores
- 2015, first detection of DNA knots using nanopores
- 2016, developed a novel way to produce liposomes on chip
- 2016, discovery of mechanical trapping of DNA in a double-nanopore system

- 2016, first mapping out of Min protein patterns in fully confined fluidic chambers
- 2017, co-discovered treadmilling of FtsZ filaments that drives bacterial cell division
- 2017, discovery that the condensin complex is a chemomechanical motor that moves on DNA
- 2018, discovery that genomes have a hidden code that determines its threedimensional structure
- 2018, made a breakthrough in proving that condensin proteins organize DNA by loop extrusion
- 2018, detected DNA molecules in a plasmonic nanopore by label-free optical sensing
- 2018, built the first mimics of nuclear pore complexes using DNA origami
- 2019, showed first optical tweezing of single proteins in plasmonic nanopores
- 2019, first visualization of the circular chromosome of E coli bacteria.
- 2019, discovered that cell boundary and crowders set the size and position E coli chromosomes
- 2019, obtained spatiotemporal control of coacervate formation within liposomes
- 2020, discovered a new type of loops in chromatin (Z loops)
- 2020, provided evidence for scrunching model for DNA loop extrusion with AFM of condensin
- 2020, reconciled Min-protein pattern formation in vitro and in vivo
- 2020, provided direct observation of independently moving replisomes in Escherichia coli
- 2020, pioneered designer FG-Nup for a selective transport barrier of the Nuclear Pore Complex
- 2021, discovered bridging-induced phase separation by cohesin SMC protein complexes
- 2021, demonstrated the ability to insert ultrawide DNA origami pores in liposomes
- 2021, developed a nanopore electro-osmotic trap for the label-free study of single proteins
- 2021, showed nontopological DNA loop extrusion by the SMC passage of huge roadblocks
- 2021, demonstrated unlimited re-reading of single proteins using nanopore sequencing
- 2022, first-ever realization of a nanoscale turbine built from DNA origami on a nanopore
- 2022, resolved the CTCF-cohesin interaction that underlies chromosomal TAD structures
- 2022, demonstrated reading of single PTMs on single peptides using nanopore sequencing

Awards and prizes

- 1999 recipient of the Discover Award for Emerging Future Technologies
- 1999 appointment as Antoni van Leeuwenhoek professor
- 2000 recipient of a NWO Pionier Award for ‘Single-molecule electronics from nanotubes to DNA’
- 2001 Burgen scholar, Academia Europaea
- 2001 recipient of the Agilent Europhysics Prize “for the discovery of multi and single walled carbon nanotubes and pioneering studies of their fundamental mechanical and electronic properties”
- 2002 recipient of the Julius Springer Prize for Applied Physics “for the discovery of the electronic properties of carbon nanotubes and for pioneering work on their application in single-molecule electronic devices”
- 2003 elected as member of the Royal Netherlands Academy of Arts and Sciences (KNAW)
- Honorary doctorate, Universiteit Hasselt, Belgium, 2003
- 2003 NWO Spinoza award for outstanding, pioneering and inspiring scientific work (highest-level scientific award in the Netherlands)
- 2003 Diesrede (annual major speech at the Dies Natalis of Delft University)

- 2004 elected as Fellow of the Institute of Physics
- 2005 honorary Ørsted lecture, Denmark
- 2005 appointed member of the New York Academy of Sciences
- 2005 recipient of the International Montefiore Award for outstanding contributions of electrical engineering to biomedical engineering and life sciences
- 2006 Appointed as a Distinguished University Professor at TU Delft, which is an honorary title given to only very few (currently 2) professors in recognition of outstanding achievements.
- 2006 recipient of the Innovation in Nano Research Prize, awarded by the Minister of Science and Technology, Republic of Korea
- 2006 elected as a Fellow of the American Physical Society 'for seminal experimental discoveries of the electronic properties of carbon nanotubes and other contributions to nanoscience'
- 2009 ERC Advanced Grant recipient
- 2011 recipient of the inaugural Reijer Hooykaas Prize for positive contributions to the dialogue between science and religion
- 2012 recipient of the Nanoscience Prize from the International Society for Nanoscale Science, Computation and Engineering for 'outstanding discoveries and contributions to the field of (biomolecular) nanoscale science and nanotechnology'
- 2012 recipient of the Physica Prize of the Dutch Physical Society
- 2013 elected as member of the Bataafsch Genootschap der Proefondervindelijke Wijsbegeerte
- 2014 knighted as Knight in the Order of the Netherlands Lion
- 2015 recipient of a second ERC Advanced Grant
- 2015 recipient of the Royal Academy Professor Prize of the Royal Netherlands Academy of Arts and Sciences (KNAW)
- 2017 recipient of the NanoSmat Prize 'for achievements and contributions to nanoscience and nanotechnology'.
- 2018 recipient of the 2018 Leermeesterprijs ('Professor of Excellence Award') from TU Delft.
- 2020 recipient of a third ERC Advanced Grant
- 2020 Wallace H. Coulter Distinguished Lecture Award of the International Society of Laboratory Hematology
- 2021 Nano Research Award 'for significant contributions to nanoscience ranging from carbon nanotubes to nanobiology'
- 2022 Elected as Fellow of the International Society for Science and Religion

Other honors

- 390 publications, including 30+ in Nature and Science, see publication list on <https://ceesdekkerlab.nl/publications/>
- H-index 117.
- Our work has received over 80,000 citations, and our papers are currently cited at a rate of ~4500 times per year.
- 15 publications have actually been cited more than 1000 times.
- In 2001, our work was selected as 'Breakthrough of the year' by the journal Science.
- The work was highlighted with dozens of covers on journals such as Nature, Science, PNAS,

Molecular Cell, see <https://ceesdekkerlab.nl/research/cover-gallery/>

- Throughout the years, our work has received a lot of attention and appreciation from both the scientific community (as evident from editorials in journals such as Nature, Science, Physics Today, Physics World, etc.) and the wider audience (with news coverage in the New York Times, Wall Street Journal, Le Monde, Scientific American, etc).
- Our group has consistently received the highest possible scores for quality in independent external on-site reviews.
- In 2007, Dekker co-initiated a new strategic direction at Delft University of Technology by convincing the Board of the University to set up a new large initiative in Bionanoscience at Delft. An entire new department has been formed aimed at fostering research at the interface between nanoscience and molecular, synthetic and cell biology. Dekker took a lead in establishing this new department as its first Chair.
- In 2012, Dekker was the main applicant in a consortium at Delft and Leiden that managed to receive a significant (51 M€) grant for research ‘Frontiers of Nanoscience’ (NanoFront). He is now leading the Steering Board of this consortium as a chairman.
- In 2014, Dekker co-initiated a new strategic direction at Delft University of Technology by successfully convincing the Board of the University to set up a new university-wide initiative for science and technology focused on global development.
- In 2017, Dekker was one of the main applicants in a national consortium that managed to receive a significant (25 M€) grant for research on BaSyC: building a synthetic cell from molecular components.

Organizational assignments, advisory committees, editorial boards, and the like

- 2000-2006 FOM Werkgemeenschap Fysica van Levensprocessen
- 2001-2011 Governing board (Raad van Bestuur) of FOM
- 2001-2006 Editorial Board of Nano Letters
- 2001 Editorial Advisory board for the International Society for Nanoscale Science, Computation and Engineering
- 2002-2010 Scientific advisory board of NABsys, a startup nanobiotech company in Providence, US
- 2002-2012 Editorial Board of Nanotechnology
- 2003 Scientific Advisory Board of GenoRx Inc, silicon valley startup company focused on DNA sensing applications
- 2003 Program committee International Conference on Biological Physics, Gotenborg, Sweden
- 2004 Advisory committee for the Conference “Images of Science. New Interactions between Science and Society” organized by the Rathenau Institute and the Dutch Ministry of Education
- 2004 KNAW committee on ‘Gevolgen nanotechnologie’
- 2004 Program committee annual ALW/FOM/VvBF&BT meeting on Molecular and Cellular Biophysics, Lunteren
- 2004-2006 Chairman faculty Department of NanoScience
- 2005-2011 Editorial Board of Small
- 2005-2010 Editorial Board of NanoBiotechnology
- 2006 Co-organizer Kavli workshop for science journalists

- 2006-2009 Commissie voor Biochemie en Biofysica of the Dutch Royal Academy of Sciences
- 2006-2012 Wetenschappelijke Adviesraad van het Instituut voor Cultuurethiek
- 2006-2007 Management team Department of NanoScience
- 2006-now Supplementary advisor to the Board of the University as Universiteitshoogleraar
- 2007-now Editorial Advisory Board of ACS Nano
- 2007 Organizer (together with P. McEuen) of the first Kavli futures symposium ‘The merging of bio and nano – towards cyborg cells’, Greenland
- 2007 Co-initiator of a new Department of Bionanoscience
- 2008-2013 Chairman of search committee for new faculty
- 2008 Organizing committee workshop Synthetic Biology, Groningen
- 2008 Scientific advisory committee for the NanoScience Center in Technion, Israel
- 2008-now Editorial Board of Nano Research
- 2008 RGO/KNAW Commissie Synthetische Biologie
- 2009-2013 Management team of the Faculty of Applied Sciences
- 2010-2013 Founding chair of Department of Bionanoscience
- 2010-2014 Scientific director of the 3TU Center of Excellence ‘Bionanoapplications’
- 2010-2018 Director of the Kavli Institute of Nanoscience Delft
- 2010-2012 Advisory Board of the John Templeton Foundation
- 2010-2014 Redactieraad tijdschrift Radix
- 2010-2012 Editorial Board of Integrative Biology
- 2010-2012 Raad voor Aard- en Levenswetenschappen of the Dutch Royal Academy of Sciences
- 2010-2016 Scientific Director of the Centre of Competence Applications of Nanotechnology and the Centre for Bio-Nano Applications of the three Technical Universities in the Netherlands.
- 2013-now Chairman of the Steering group for the 51 M€ program ‘Frontiers of Nanoscience’
- 2013-now Scientific Advisory Board of CeNS, the Center for Nanoscale Science at LMU Munich
- 2013-now Editorial Board of Trends in Biotechnology
- 2013 Main organizer of the first Kavli Nanoscience Nexus at Puerto Rico – a joint meeting of the 4 Kavli Institutes of Nanoscience at Caltech, Cornell, Delft, and Harvard
- 2013 Advisory Board of the UK Multidisciplinary Synthetic Biology Research Centre at Oxford
- 2013 Scientific Advisory Board of the Institute of Bioengineering of Ecole Polytechnique Fédérale de Lausanne
- 2015 Advisory Editorial Board of the journal Reviews in Physics
- 2015 National Committee for the Trend Analysis Biotechnology 2016, a joint effort of the Netherlands Commission on Genetic Modification (COGEM) and the Health Council of the Netherlands, supported by the Scientific Council for Government Policy (WRR)
- 2015 Main organizer of the first EC workshop ‘Towards a synthetic cell’, Delft December 2015
- 2015 Organizer of the KNAW Academy Symposium ‘Towards creating a minimal cell’
- 2015-2016: member of the Steering Board of Delft Global

- 2017 Co-organizer of the first European Future Symposium on ‘Building a synthetic cell - the ultimate challenge in the life sciences’ Schloss Ringberg, June 2017
- 2017 Co-organizer 1st Single Molecule Protein Sequencing International Conference, Delft December 2017
- 2019 Co-organizer of the 2019 Symposium “SynCell2019: Defining the Challenges”, Madrid, October 2019
- 2019 Co-organizer 2nd Single Molecule Protein Sequencing International Conference, Jerusalem September 2019
- 2021 Biophysics Advisory Committee for LMU Munich
- 2022 Co-organizer 3rd Single Molecule Protein Sequencing International Conference, Delft October 2022

Teaching

1984-1988 Utrecht

- Physics lab courses for biology students
- Information technology courses for pharmaceutical students
- Medical physics lab courses for medical biology students

1988-1993 Utrecht

- Coordinator for instructions and exams for the full curriculum of second-year physics students. This involved the organization, supervision, and practical training of students for quantum mechanics, atomic physics, thermodynamics, statistical physics, waves and optics, and solid-state physics
- Lab course ‘noise in semiconductors’ for physics students
- Some courses on solid-state physics
- Graduate course on ‘disordered systems’
- Instructor for course on ‘Solid state physics’ for physics students
- Course on ‘Physics of conducting polymers’

1998-2004 Delft

- Taught the main-curriculum course on ‘Solid state physics’ for physics students.

2004-2008 Delft

- Lectures on ‘Molecular motors’ in the Biophysics course for masters physics students

2005- 2013 Delft

- Developed and taught the course ‘Introduction to biophysics’ for physics freshmen

2011- 2013

- Set up an entirely new Bachelors program on Nanobiology, a joint effort of Erasmus University and TU Delft. The program, now in its 4th year, is highly successful, drawing 100 freshmen students annually (limited by numerus fixus, as enrollment is higher by a factor of 3). A Nanobiology masters has started in 2016.

2012- 2014 Delft

- Teaching variety of guest lectures
- Co-teaching ‘Science and argumentation’ for bachelors students in physics.

2014-*now*

- Director of the Honors Program for Nanobiology
- Journal club for honors students of the Nanobiology Bachelors studies.
- Journal club for honors students of the Applied Physics studies

2020

- Co-teaching of the nanobiology masters course NB5040 “research presentations”

Funding from external sources

R. J. J. Zijlstra and C. Dekker

"Noise spectroscopy in semiconductors and semiconductor devices".

FOM werkgemeenschap Halfgeleiders 1988

H. W. de Wijn, A. F. M. Arts, C. Dekker and J. Dijkhuis

"Dynamics of phonons and magnons".

FOM werkgemeenschap Vaste Stof 1989

H. W. de Wijn and C. Dekker

"Noise spectroscopy in semiconductors and semiconductor devices".

FOM werkgemeenschap Halfgeleiders 1990

H. W. de Wijn, A. F. M. Arts, and C. Dekker

"Dynamics of phonons and magnons".

FOM werkgemeenschap Vaste Stof 1991

R. J. J. Zijlstra and C. Dekker

"Noise spectroscopy in semiconductors and semiconductor devices".

Esprit II Basic Research Action "Electrical fluctuations and noise in advanced microelectronics",
1988

C. Dekker

"Experiments on the glass phase of magnetic flux lines in high-T_c superconductors"

NATO Science fellowship, 1990

H. W. de Wijn and C. Dekker

"The vortex-glass phase in disordered superconductors"

Nationaal Onderzoeksprogramma Hoge-T_c Supergeleiders, 1992

C. Dekker, L. J. Geerligs, and J. E. Mooij

"Electrical transport through a single polymer chain"

FOM beleidsruimte 1993

J. E. Mooij and C. Dekker

"STM experiments on single conducting polymer chains".

FOM werkgemeenschap Vaste Stof 1993

J. E. Mooij, G. E. W. Bauer, and C. Dekker

"Mesoscopic charge-density-wave junctions".

FOM beleidsruimte 1994

J. E. Mooij, C. Dekker, P. Hadley, and C. J. P. M. Harmans

"Quantum transport in nanostructures"

FOM werkgemeenschap Vaste Stof 1994

J. E. Mooij, C. Dekker, P. Hadley, C. J. P. M. Harmans and L.P. Kouwenhoven

"Quantum transport in nanostructures"

FOM werkgemeenschap Gecondenseerde Materie 1996

C. Dekker

"Single carbon nanotubes"

FOM projektruimte 1997

C. Dekker and G.C.A.M. Janssen

"Quantum transport through single molecular wires and switches"

FOM projektruimte 1998

C. Dekker and A. W. Dunn

"Quantum electronic transport through a single row of C60 molecules"

TMR European Community program 1998

C. Dekker

"Electrical transport through DNA molecules"

FOM projektruimte 1999

C. Dekker, M. E. Michel-Beyerle, C. Schönenberger, U. Sivan, J. N. Patillon

"DNA-based electronics"

EC IST program 1999

J. N. Patillon, C. Dekker, M. Golden, C. Delalande, P. Ordejon

"Self-assembly with carbon nanotubes: Towards devices for information processing"

EC IST program 1999

E. S. Soldatov et al

"SET transport in molecular cluster nanostructures and devices based on it."

EC INTAS program 2000

G.W.K. van Dedem, C. Dekker, M.J. Vellekoop, I. T. Young

"Nanoscale electrophoresis"

FOM program Physics for Technology 2000

Th. Schalkhammer et al
"LifeTech"
Delft University of Technology DIOC program 2000

K. Firman et al
Single-molecule analysis of a DNA-based molecular motor
EMBO Fellowship 2001

C. Dekker
Single-molecule electronics from nanotubes to DNA
NWO Pionier program 2001

C. Wyman, J. van Noort, C. Dekker, R. Kanaar
Dynamic imaging and single-molecule manipulation of DNA repair reactions
FOM Fysische biologie II, 2001

K. Firman et al,
A molecular magnetic switch that links the biological and silicon worlds
EC IST program, 2002

L. Movileanu and C. Dekker
Threading a single protein through a nanopore
FOM projectruimte 2002

C. Dekker
Deposition equipment for nanoscience
FOM 2002

A. van den Berg et al
Nanofluidics
NanoImpuls, 2002

C. Dekker
NWO Spinoza, 2003

N. H. Dekker and C. Dekker
Unraveling the structure of RNA with single-molecule experiments
FOM Biomolecular physics 2003

M. Rubio et al
Molecular Machines – Design and Nano-Scale Handling of Biological Antetypes and Artificial Mimics- BIOMACH
EC 2004

C. Dekker

Four grants within the Dutch National Nanotechnology Initiative
NanoNed, 2005

K. Firman et al

A Biological Nanoactuator as a Molecular Switch for Biosensing
EC IST program, 2006

G. Wuite et al

DNA in action: Physics of the genome
FOM, 2007

I. Gut et al

READNA: Groundbreaking DNA Sequencing & Genotyping, new concepts/long term innovations
EC, 2007

U. Keyser et al

Novel spectroscopy with nanopores
EC, 2009

C. Dekker

Nanostructures for biology
ERC Advanced Grant, 2009

P. Schwille, C. Dekker, D. Sherratt

Synthetic biology of the bacterial cell division
Eurocores proposal ALW, 2009

C. Dekker, R. Kanaar, C. Wyman

Single-molecule studies of DNA repair proteins acting on DNA
Nanonext, 2010

J.E. Keymer and C. Dekker

Antibiotic resistance acquisition of bacteria in nanostructures
Nanonext, 2010

C. Dekker

Functionalization of hybrid bionanopores
Nanonext, 2010

G. Schitter and C. Dekker

Development and application of fast AFM in liquid for real-time imaging of motor proteins

Nanonext, 2010

J. Kinaret et al

Graphene-Driven Revolutions in ICT and Beyond

EC FET Flagship 2012

C. Dekker et al

Frontiers of Nanoscience

OCW/NWO, 2012

C. Dekker and H. Zandbergen

Real-time TEM imaging of DNA dynamics

NanoFront, 2013

A. Aksimentiev, M. Jonsson, C. Dekker

Plasmonic nanopores for trapping, controlled motion and sequencing of DNA

NIH, 2013

W.T.S. Huck, B. Poolman, C. Dekker

Complex enzymatic networks for the bottom-up construction of a synthetic cell

NWO-CW, 2014

C. Dekker, H. van der Zant et al

Graphene Flagship, 2014

C. Dekker

A nanophysics approach to synthetic cell division

ERC Advanced Grant, 2015

C. Dekker

KNAW Academy professorship, 2015

C. Dekker and F. Hol

A bio-nano approach to point-of-care testing of parasitic DNA in resource-limited settings

Delft Global, 2015

C. Dekker

DNA structure in live cells shaped with nanofabrication

NanoFront, 2015

C. Dekker

Milling of nanostructures and pores in encapsulated graphene for DNA sensing

HZDR, 2016

C. Dekker, H. van der Zant et al

Graphene Flagship, second phase, 2016

C. Dekker

Milling plasmonic nanopore nanostructures for DNA optical trapping

HZDR, 2016

P. Onck, C. Dekker

Biomimetic nanopores - resolving the puzzling selectivity of the nuclear pore complex

FOM, 2016

C. Joo, C. Dekker, R. Eelkema, G. Maggla, A. Meyer, D de Ridder

Single-molecule protein sequencing

FOM, 2016

L.M. Veenhoff, P. Onck, C. Dekker, S. van Helden

Unravelling the molecular mechanism of impaired nuclear transport in ALS

NWO, 2016

C. Dekker

Nanopore formation by plasmonically controlled dielectric breakdown in ultrathin freestanding membranes

Oxford Nanopore Technologies, 2017

M. Dogterom, C. Dekker, W. Huck, G. Koenderink, J. van der Oost, B. Poolman

BaSyC Building a Synthetic Cell

OCW/NWO, 2017

C. Dekker, C. Joo., L. Restrepo, S. Heerema

Development of a nanopore-based single-molecule protein sequencer

NWO Take-off grant 2018

L.M. Veenhoff, P. Onck, C. Dekker, S. de Jong, H. Kampinga

Guardians of protein disorder

ENW, NWO, 2020

R.T. Dame, C. Dekker, W. de Laat, G. Wuite

Resolving the fundamental building principles of the genome

ENW, NWO, 2020

C. Dekker

Bottom up biophysics approach to resolve the looping structure of chromosomes
ERC Advanced Grant 2020

G. Maglia, S. Schmid, C. Dekker

Unravelling proteins one by one with nanopores
ENW, NWO, 2022

J. Gundlach, C. Dekker

Towards Single-Molecule Protein Sequencing with Nanopores
NHGRI, NIH, 2022

C. Dekker

Measuring single peptides and PTMs with nanopores
Oxford Nanopores Technologies, 2022

Patents

A. Bachtold and C. Dekker

‘Electronic device using carbon nanotubes’
US patent 7211853 B2

C. Joo, C. Dekker, H.G.T.M. Van Ginkel, A.S. Meyer

‘Single molecule protein sequencing’
NL patent PCT/NL2013/050537 WO2014/014347

G.F. Schneider, C. Dekker

‘Tailoring the hydrophobicity of graphene surfaces and nanostructures’
NL patent 2010776 PCT/NL2014/050291

Xu, Schneider, Zandbergen Wu, Song, Dekker,

‘New Lithographic method for the in-situ production of free-standing nanostructures’
NL patent 2008412 PCT/NL2013/050136; NL 48753 LV OCT-11-072; 2011E00074 NL

A. Aksimentiev, M. Jonsson, C. Dekker,

Plasmonic Nanopores for Trapping, Controlling, Displacement and Sequencing of DNA.
US patent 62/192,091

A. Aksimentiev, C. Dekker

Nanopore-Based System for Trapping, Controlled Displacement, and Sequencing of
(bio)Macromolecules
US patent. 11,333,655

C. Joo, C. Dekker, L. Restrepo-Perez

Detection of post-translational modifications and other amino acid side chain modifications with a nanopore

NL patent 2019P00020NL

M. L. Bengtson, M. Baradwaj, C. Dekker, O. Franch, J. van der Torre,

Detection of a target polynucleotide

NL patent N2024019

H. Brinkerhoff, C. Dekker

Protein and peptide fingerprinting and sequencing by nanopore translocation of peptide-oligonucleotide complexes

NL patent N2024579 P1600131NL00

F. Alijani, P. Steeneken, A. Japarisze, C. Dekker

2D material detector for activity monitoring of single living micro-organisms and nano-organisms

NL patent N2024356

Startup company

2018-2020: Co-founded Bluemics (together with C. Joo, L. Restrepo, S. Heerema)

List of publications

390. I.C. Nova, J. Ritmejeris, H. Brinkerhoff, T.J.R. Koenig, J.H. Gundlach, C. Dekker
Mapping phosphorylation post-translational modifications along single peptides with nanopores
Nature Biotechn., submitted
389. N. De Franceschi, B. Hoogenberg, C. Dekker
Engineering ssRNA tile filaments for (dis)assembly and membrane binding
Nanoscale, submitted
388. C. Wen, E. Bertosin, X. Shi, C. Dekker, S. Schmid
Orientation-locked DNA origami for stable trapping of small proteins in the NEOtrap
Nano Lett., under review
387. I.F. Davidson, R. Barth, M. Zaczek, J. van der Torre, W. Tang, K. Nagasaka, R. Janissen, J. Kerssemakers, G. Wutz, C. Dekker, J.-M. Peters
CTCF is a DNA-tension-dependent barrier to cohesin-mediated DNA loop extrusion
Nature, under review
386. P. He, A. Katan, L. Tubiana, C. Dekker, D. Michieletto
Single-Molecule Structure and Topology of Kinetoplast DNA Networks
Phys. Rev. X, under review
385. B. Pradhan, R. Barth, E. Kim, I.F. Davidson, J. van der Torre, J.-M. Peters, C. Dekker
Can pseudotopological models for SMC-driven DNA loop extrusion explain the traversal of physical roadblocks bigger than the SMC ring size?
Cell Reports, in print
384. E. Kim, R. Barth, C. Dekker
Looping the genome with SMC complexes
Ann. Rev. Biochem., under review
383. A. Japaridze, R. van Wee, C. Gogou, J.W.J. Kerssemakers, C. Dekker
MukBEF-dependent chromosomal organization in widened E. coli bacteria
iScience, under review
382. M. Holub, A. Birnie, A. Japaridze, J. van der Torre, M. den Ridder, C. de Ram, M. Pabst, C. Dekker
Extracting and characterizing protein-free megabasepair DNA for in vitro experiments
Cell Rep. Mth., under review
381. X. Shi, A.-K. Pumm, C. Maffeo, F. Kohler, W. Zhao, D. Verschueren, A. Aksimentiev, H. Dietz, C. Dekker
A nanopore-powered DNA turbine
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380. S. Meindlhumer, J. Kerssemakers, C. Dekker
Quantitative analysis of surface wave patterns of Min proteins
Frontiers in Physics, 03 August 2022, doi.org/10.3389/fphy.2022.930811
379. A. Blanch Jover, C. Dekker
The archaeal Cdv cell division system
Trends in Microbiol., under review
378. R. Patton McCord, M. Taipale, S. Teichmann, R. Vorhees, Y. Wan C. Dekker, N.E.Sanjana
Voices on technology: The molecular biologists' ever-expanding toy box
Molec. Cell 82, 221 (2022)
377. N. De Franceschi, W. Pezeshkian, A. Fragasso, B.M.H. Bruininks, S. Tsai, S.J. Marrink, C. Dekker
A synthetic membrane shaper for controlled liposome deformation
ACS Nano, under review
376. S. Meindlhumer, F. Brauns, J. Finžgar, J. Kerssemakers, C. Dekker, E. Frey
Directing Min protein patterns with advective bulk flow
Nature Comm., under review
375. A. Fragasso, H.W. de Vries, J. Andersson, E.O. van der Sluis, E. van der Giessen, P.R. Onck, C. Dekker
Transport receptor occupancy in Nuclear Pore Complex mimics
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374. Y.-L. Ying, Z.-L. Hu, S. Zhang, Y. Qing, A. Fragasso, G. Maglia, A. Meller, H. Bayley, C. Dekker, Y.-T. Long
Nanopores: Beyond DNA Sequencing
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Bridging scales in a multiscale pattern-forming system
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372. M. Tišma, M. Panoukidou, H. Antar, Y.-M. Soh, R. Barth, B. Pradhan, J. van der Torre, D. Michieletto, S. Gruber, C. Dekker
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Probing nanomotion of single bacteria with graphene drums
Nature Nanotechnology 17, 637–642 (2022)
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360. C.N. Hulleman, R.Ø. Thorsen, E. Kim, C. Dekker, S. Stallinga, B. Rieger
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Frontiers Microbiol. 12, 685687 (2021)
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Nanopore electro-osmotic trap for the label-free study of single proteins and their conformations
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Genome-in-a-box: building a chromosome from the bottom up
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Invited talks

Below, I list invited presentations since 1997 (Before 1997, I did not keep a record of invited talks)

1997

Individual single-wall carbon nanotubes as quantum wires
International Winterschool on Electronic Properties of Novel Materials
Kirchberg, 1-8 March 1997

Thin film growth, patterning, and properties of the charge-density-wave conductor $Rb_{0.30}MoO_3$
March Meeting of the American Physical Society
Kansas City, 17-21 March 1997

Individual single-wall carbon nanotubes as quantum wires
Physics colloquium
University Leiden, 20 June 1997

Individual single-wall carbon nanotubes as quantum wires
Physics colloquium
University of Basel, 24 June 1997

Individual single-wall carbon nanotubes as quantum wires
International Workshop on Science of Carbon Nanotubes
Lexington, 10-11 July 1997

Individual single-wall carbon nanotubes as quantum wires
Workshop Physical and Chemical Foundations of Molecular Electronics
Stuttgart, 1-2 October 1997

Individual single-wall carbon nanotubes as quantum wires
Physics colloquium
University of Amsterdam, 7 October 1997

Carbon nanotubes as ultimate fibres and quantum wires
Physics colloquium
University of Wien, 21 October 1997

Nanotube quantum wires
Physics colloquium
University of Nijmegen, 28 October 1997

Individual carbon nanotubes as molecular quantum wires
Workshop on Functional Polymers
Amersfoort, 5 November 1997

Carbon nanotubes as molecular quantum wires
International Conference on Molecular Electronics
Puerto Rico, 14-18 December 1997

1998

Moleculaire Elektronica?

Seminar

Utrecht, 13 January 1998

Individual carbon nanotubes as molecular quantum wires.

Physics colloquium

University Groningen, 11 February 1998

Electronic structure and transport experiments on individual single-wall carbon nanotubes

International Winterschool on Molecular nanostructures

Kirchberg, 1-5 March 1998

Individual carbon nanotubes as molecular quantum wires.

March Meeting of the American Physical Society

Los Angeles, 16-19 March 1998

Individual carbon nanotubes as molecular quantum wires

Physics colloquium, Philips Research

Eindhoven, 25 March 1998

Individual carbon nanotubes as molecular quantum wires

National Solid State Seminar

Leiden, 15 May 1998

Carbon nanotubes as molecular quantum wires.

Physics colloquium, Institut für Festkörper- und Werkstofforschung

Dresden, 11 June 1998

Carbon nanotubes as molecular quantum wires.

International Symposium on Carbon based materials for microelectronics, European Material Research Society,

Strasbourg, 15-17 June 1998

Carbon nanotubes as molecular quantum wires.

International Conference on Disorder and Interactions in Quantum Hall and Mesoscopic Systems

Santa Barbara, 9-11 August 1998

Carbon nanotubes as molecular quantum wires.

Colloquium

Rice University, Houston, 13 August 1998

Carbon nanotubes as molecular quantum wires.

Physics colloquium

IBM Research Labs, Yorktown Heights, 14 August 1998

Electron transport through individual carbon nanotubes.

CECAM Workshop on Nanotubes

Lyon, 1 September 1998

Electronic structure of individual carbon nanotubes from STM spectroscopy.

CECAM Workshop on Nanotubes

Lyon, 2 September 1998

Carbon nanotubes as molecular quantum wires.

Ninth International Symposium on Small particles and inorganic clusters
Lausanne, 3-5 September 1998

Carbon nanotubes as molecular quantum wires.

International Workshop on Conductance through single atoms and molecules
Leiden, 10-11 September 1998

Carbon nanotubes as molecular quantum wires.

International Workshop of the European Nanostructure Network PHANTOMS Phasdom98
Neuchâtel, 27-29 September 1998

Carbon nanotubes as molecular quantum wires.

Physics colloquium
Harvard University, Boston, 2 October 1998

Een enkel molecuul als transistor

STT Nanotechnology Symposium
Delft, 8 October 1998

Carbon nanotubes as molecular quantum wires

Physics colloquium
Free University Amsterdam, 14 October 1998

Device applications of carbon nanotubes.

SRC/NASA Workshop on Emerging issue and opportunities in nanotubes and nanoelectronics
Stanford, 11-12 November 1998

Carbon nanotubes as molecular quantum wires.

International Conference on Molecular Nanotechnology
Santa Clara, 13-15 November 1998

Elektronisch transport door een enkel molecuul

Kenniscaleidoscoop TPD/TUD
Delft, 20 November 1998

Carbon nanotubes as molecular quantum wires.

International Workshop on Electron Transmission through Molecules and Molecular Interfaces
Maagan, Israël, 12-17 December 1998

1999

Carbon nanotubes as molecular quantum wires

Physics colloquium
DESY Hamburg, 7 January 1999

Carbon nanotubes as molecular quantum wires

Nanoscience symposium
München, 18 January 1999

Carbon nanotubes as molecular quantum wires.

International Conference on Quantum Physics at the Mesoscopic Scale
Les Arcs, 23-30 January 1999

Carbon nanotubes as molecular quantum wires

Marie Curie symposium
Nijmegen, 10 February 1999

Molecular Electronics; a birds eyes view of first experiments with single molecules

Plenary evening lecture at the national chemistry (SON) meeting on fluids and interfaces
Lunteren, 4 March 1999

Carbon nanotubes as molecular quantum wires

Plenary talk of the General Meeting of the German Physical Society (DPG)
Heidelberg, 15-19 March 1999

Carbon nanotubes as molecular quantum wires

Niels Bohr Institute Colloquium
Copenhagen, 31 March 1999

Recent SPM and transport experiments on individual single-wall carbon nanotubes

International Symposium on the Science and Technology of Nanostructured Materials
Philadelphia, 19-20 March 1999

Carbon nanotubes as molecular quantum wires

Faculty of Applied Sciences seminar
Delft, 20 May 1999

Carbon nanotube kinks as intramolecular junctions

International Workshop on the Science and Application of Nanotubes (NANOTUBE-99)
Lansing, 25-27 July 1999

Carbon nanotubes as molecular quantum wires

22nd International Conference on Low-Temperature Physics
Helsinki, August 4-11 1999

Carbon nanotube kinks as intramolecular junctions

International Conference on Electron Transport in Mesoscopic Systems
Göteborg, 12-15 August 1999

Carbon nanotubes as molecular quantum wires

Plenary talk at the European Conference on Molecular Electronics ECME99
Linköping, 8-12 September 1999

Carbon nanotubes as molecular quantum wires

General Physics colloquium
University Utrecht, 16 September 1999

Carbon nanotubes as molecular quantum wires

Mareel symposium
University Leiden, 19 october 1999

Towards carbon electronics: Electrical properties of carbon nanotube quantum wires

American Vacuum Society 46th International Symposium, topical meeting on Nanotubes Nanoelectronics and Field Emission
Seattle, USA, 25 - 29 October 1999

Carbon nanotubes as molecular quantum wires

General Physics colloquium
Caltech, 28 October 1999

Direct transport experiments through DNA molecules

Colloquium

Caltech, 28 October 1999

Elektronika met enkele moleculen ?

Technologiedag TU Delft,

Delft, 13 November 1999

Carbon nanotubes as molecular quantum wires

Science Frontier Tsukuba'99

Tsukuba, Japan, 17-19 November 1999

Transport and STM experiments through single carbon nanotubes

Carbon Nanotube workshop

Tsukuba, Japan, 19 November 1999

Carbon nanotubes as molecular quantum wires

General physics colloquium

University Twente, 15 December 1999

2000

Carbon nanotubes as molecular quantum wires

Physics colloquium

ETH, Zurich, 12 January 2000

Carbon nanotubes as molecular quantum wires

Colloquium Amolf,

Amsterdam, 7 February 2000

Carbon nanotubes as molecular quantum wires

General physics colloquium

Orsay, 22 February 2000

Carbon nanotubes as molecular quantum wires

Plenary talk at the Condensed Matter Physics meeting of the European Physical Society

Montreux, 16 March 2000

Carbon nanotubes for molecular electronics

March Meeting of the American Physical Society, Minneapolis

Invited talk at the symposium on Molecular and Nanoscale Electronics

Minneapolis, 22 March 2000

Carbon nanotubes as molecular quantum wires

General physics colloquium, Technion

Haifa, Israel, 19 July 2000

Recent SPM and transport results on single carbon nanotubes

Invited talk about nanoelectronics at the Elba-Max Planck Forum 2000 on Nanoscale Science and Technology, Rome,

Italy 27-29 September 2000

Transport through junctions of carbon nanotubes

Workshop on "Electronic properties of mesoscopic systems"

9-13 October 2000, Ascona, Switzerland

Carbon nanotubes as molecular quantum wires

Bilateral Israel-Netherlands meeting

Enschede, 23-25 October 2000

Molecular electronics with carbon nanotubes and DNA?

DSM seminar

Sittard, 30 November 2000

Molecular electronics with carbon nanotubes and DNA?

General physics seminar, Ecole Normale Supérieure

Paris, 7 December 2000

2001

DNA-based electronics

7th Melari/NID workshop

Barcelona, 8 February 2001

New research at the Molecular Biophysics group

Delft-Leiden toogdag

Delft, 5 March 2001

Molecular electronics with carbon nanotubes and DNA ?

Sanken Int. Symp. on Biological Molecular Machines and Biodevices

Osaka, 14-16 maart 2001

Electronic properties of carbon nanotubes

NTT Science Forum

Tokyo, 2-3 April 2001

Molecular electronics with carbon nanotubes and DNA ?

ACS conference on biological applications of nanotechnology

Berkeley, June 3-6, 2001

Nanotechnologie en biofysica

Workshop KNAW

Amsterdam, 15 June 2001

Single-molecule electronic transport with carbon nanotubes and DNA

Gordon conference on Condensed Matter Physics

Connecticut, 18-21 June 2001

Single-molecule electronic transport with carbon nanotubes and DNA

Leopoldina symposium on single molecule chemistry (Deutsche Akademie der Naturforscher), Wittemberg, June 21-23, 2001

Recent transport and STM results on carbon nanotubes

Nanotube 2001

Potsdam, 22-26 July 2001

Single-molecule electronic transport with carbon nanotubes and DNA

Conference on Nanophysics and Bioelectronics

Dresden, 20-24 August 2001

Is DNA a well-conducting molecular wire?

Int. Conf. on electronic interactions and electron dynamics in DNA
Los Angeles, 8 September 2001

Molecular electronics with carbon nanotubes and DNA ?

BTG Nanotechnology workshop,
London, 14 September

Carbon nanotubes as a model system for molecular quantum wires and molecular electronics

Symposium on the 10th Anniversary of the the discovery of carbon nanotubes
Tsukuba, October 3-5

DNA-based electronics

EC workshop on DNA-based devices
Stuttgart, 8 October

Single-molecule electronics from nanotubes to DNA

NWO pionier symposium
Den Haag, 24 October

The unique properties and potential of carbon nanotubes

Mesa-plus annual day
Hengelo, 30 October 2001

Nanotechnologie: over DNA chips, nanobuisjes, en andere nano beloftes (en gevaren?)

Studium generale TU Delft
Delft, 21 November 2001

Carbon nanotubes as molecular wires

FOM Condensed Matter meeting, Plenary talk
Veldhoven, 19 December

2002

On nanotechnology and carbon nanotubes

Ehrenfest colloquium
Leiden, 23 January

Over fysica met een Utrechtse start

H.W. deWijn symposium
Utrecht, 1 February

Carbon nanotubes: a model system for fundamental science and molecular electronics devices

9th MEL-ARI/NID Workshop, plenary talk
Catania, 7 February

Nanotube transport and junctions

9th MEL-ARI/NID Workshop
Catania, 8 February

DNA transport experiments

9th MEL-ARI/NID Workshop
Catania, 8 February

Demonstrations of carbon nanotube based molecular devices and circuits
AAAS Nanoelectronics Session at the AAAS Nanotechnology Seminar
Boston, 14 February

On nanotechnology and carbon nanotubes
PION Physics Student Olympiad
Delft, 3 April

Carbon nanotubes as molecular quantum wires
EPS Condensed Matter Physics meeting, plenary talk
Brighton, 11 April

Single-molecule electronics with carbon nanotubes and DNA
Bionanotechnology
Oxford, 12 April

Single-molecule electronics with carbon nanotubes and DNA
Workshop on DNA-based molecular construction
Jena, 24 May

Possible applications of carbon nanotubes
DSM workshop on Nanotechnology
Rolduc, 7 May

Single-molecule electronics with carbon nanotubes and DNA
Trends in Nanotechnology TNT2002
Santiago de Compostela, September 3

Carbon Nanotube Transistor-Based Logic Circuits
10th Foresight Conference on Molecular Nanotechnology
Maryland, October 11

2003

Nanotechnologie, fascinatie voor het kleine
Diesrede 2003, Dies Natalis TU Delft
Delft, January 10

DNA-based electronics
NID workshop
Toulouse, 6 February

Carbon nanotubes and solid-state nanopores as model systems for science and applications
CENS workshop "Current Issues of Nano-Bio-Science"
Mauterndorf, 25 February

Over nanotechnologie en koolstof nanobuisjes
Symposium de Leidsche Fles
Leiden, 23 April

Nanotechnologie: Meten aan enkele nanobuisjes, DNA moleculen, en nog veel meer
Fysica 2003, plenary talk
Amsterdam, 25 April

Carbon nanotubes as model systems for science and applications

Nanoscience and Technology Conference, plenary talk

Groningen, 20 May

Koolstof nanobuisjes: van nanoelektronica tot biosensors

Limburgs Universitair Centrum

Diepenbeek, 29 May

Playing with nano-toys in bio-wonderland

Casimir Workshop

Egmond, 11 June

Carbon nanotubes, nanostructures, and single biomolecules

Bionanotechnology EuroConference

Granada, 12 July

Carbon nanotubes as model systems for science and applications

TOP Nano 21, plenary talk

St.Gallen, 10 September

Nanotechnology

Medtronic Science and Technology Meeting

Maastricht, 6 November

Carbon nanotubes as model systems for nanoscience and bionanotechnology

Workshop on Soft Condensed Matter and Nanoscale Physics, keynote address

Sydney, 2 December

Carbon nanotubes as model systems for nanoscience and nanotechnology

First International NanoSystems Symposium at UCLA, plenary talk

Los Angeles, 13 December

2004

Meten aan de moleculaire machinerie van de mens

Spinoza symposium

The Hague, February 4

Nanotechnologie: Het kleine is groots. Eén voor één meten aan nanobuisjes, DNA moleculen, en nog veel meer

CLD Studium Generale

Delft, March 16

STM Spectroscopy of Suspended Single-Wall Carbon Nanotubes

Foundations of Nanoscience: Self-Assembled Architectures and Devices, plenary talk

Snowbird, 21-23 April 2004

Carbon nanotubes: model systems for nanoscience and (bio)nanotechnology

Patent Office seminar

Rijswijk, April 27

Nanotechnology

Hoftorenlezing, Ministry of Education

The Hague, May 10

Nanotechnologie: Het kleine is groots. Eén voor één meten aan nanobuisjes, DNA moleculen, en nog veel meer
Studium generale
Utrecht, May 18

Carbon nanotubes and DNA for new (bio)physics and applications
International Society for Nanoscale Science, Computation and Engineering, plenary talk
Milan, June 11

New tools from nanotechnology for elucidating the physics of single biomolecules
Hubrecht Laboratory seminar
Utrecht, August 17

Single-DNA translocation experiments
International Conference for Biological Physics, plenary lecture
Göteborg, August 23-27

Solid-state nanopores, a new fabrication route and translocation of dsDNA
Workshop on Electronic Recognition of DNA molecules, plenary talk
Liege, September 1-3

Translocation of dsDNA through solid-state nanopores
Annual meeting on Molecular and Cellular Biophysics
Lunteren, September 27-28

An introduction to nanotechnology in the biomedical world
Symposium 'Nanotopia, Small World, Big Hopes'
Utrecht, September 16

New tools from nanotechnology for elucidating the physics of single biomolecules
Cavendish Laboratory Biological and Soft Systems seminar
Cambridge, October 29

2005

Solid-state nanopores, a new fabrication route and translocation of dsDNA
International Conference on the biophysics of single molecules, plenary talk
Aspen, January 1-7

Molecular Biophysics at the Kavli Institute of Nanoscience Delft
Seminar, MPI Dresden
Dresden, January 26

Nanostructures for kinesin-driven microtubule motility
Biomach meeting
Madrid, February 2

Translocation of dsDNA through solid-state nanopores
Nobel Symposium 131, Controlled nanoscale motion in biological and artificial systems, plenary talk
Backaskog Slott, Sweden, June 13-17

New tools from nanotechnology for elucidating the physics of single biomolecules
13th International Conference on Biopartitioning and Purification, plenary talk
Rotterdam, June 21, plenary talk

Translocation of dsDNA through solid-state nanopores
6th Annual Nanobiotechnology Symposium, plenary talk
Cornell University, August 16

Translocation of dsDNA through solid-state nanopores
Workshop on electronic recognition of biomolecules, plenary talk
Urbana Champaign, September 6-9

Nanotechnology for biologists
Kluyver colloquium
Delft, September 16

Nanoscience, from single-molecule science to applications
2005 IEEE International Ultrasonics Symposium, keynote address
Rotterdam, September 19

Nanostructures for biology, from molecules to molecular motors
International Conference From molecular switches to molecular motors, plenary talk
Ascona, September 19-22

Bionanoscience: Nanotechnologie voor de studie van structuur, dynamica en interacties van enkele biomoleculen
Voordracht, KNAW
Amsterdam, September 26

Nanotechnology: New tools for new science
Workshop Modern Tools for Materials Science, plenary talk
Delft, 20-21 October 2005

DNA dynamics in nanopores
International Conference on Biological Dynamics, plenary talk
Amsterdam, November 8

Nanoscience and nanotechnology, from single-molecule science to society
Honorary Ørsted lecture
Copenhagen, November 22

Nanotechnologie
Studium Generale, Universiteit Tilburg
Tilburg, December 1

Carbon nanotubes: Unique electronic properties and way beyond
International Conference on Micro and Nanotechnology 2005, plenary talk
London, December 12 (Royal Society)

Nanotechnology and nanoscience, from carbon nanotubes to single-molecule DNA biophysics
Frontier of Natural Sciences Lecture
Imperial College London, December 12

2006

Nanoscience from carbon nanotubes to single-molecule biophysics
Interdisciplinary Nanoscience Center, annual iNANO meeting, University of Aarhus, plenary talk
Aarhus, January 18

Force measurements on a DNA molecule that translocates a solid-state nanopore

APS March meeting, plenary talk

Baltimore, March 13-17

Translocation and force measurements of DNA molecules in solid-state nanopores

Single Molecule Biology conference, plenary talk

Cambridge, March 26-29

Translocation and force measurements of DNA molecules in solid-state nanopores

EPS/CMD general confrence / DPG Fruhjahrstagung, plenary talk

Dresden, March 31

Nanoscience from carbon nanotubes to single-molecule biophysics

Montefiore award symposium

Liege, March 21

Nanotechnology for single-molecule biophysics

TUE Seminar

Eindhoven, May 23

Bionanoscience en -technologie

CBB KNAW meeting

Amsterdam May 30

Nanoscience from carbon nanotubes to single-molecule biophysics

2006 Advanced Research Workshop Future Trends in Microelectronics: Up the Nano Creek, plenary talk

Crete, June 25-27

DNA translocation through solid state nanopores

ICN+T 2006 International Conference on Nanoscience and Technology, plenary talk

Basel, August 2-4

Nanoscience from carbon nanotubes to single-molecule biophysics

Nano Korea 2007, plenary talk

Seoul, August 31

Nanoscience from carbon nanotubes to single-molecule biophysics

KRICT Symposium on Chem Vision in Nanotechnology, plenary talk

Daejeon, August 29

DNA translocation through solid state nanopores

Kavli Seminar Caltech

Pasadena, September 2

Nanotechnology tools for biology, the power of single molecule biophysics

Caltech seminar

Pasadena September 3

Nanotechnology tools for biology, the power of single molecule biophysics

Philips seminar

Eindhoven, September 20

DNA translocation through solid state nanopores

Seminar University of Groningen

Groningen, October 5

Van 10^{-9} tot ∞
Studium Generale, TU Delft
Delft, October 31

Nanotechnologie
Vliegende Hollanders - Science & Technology Summit 2006
Amsterdam, November 15

Nanotechnologie
60 jaar FOM
Scheveningen, November 20

2007

DNA translocation through solid-state nanopores
Croucher Advanced Study Institute on 'Nano Science and Technology - From Basic Science to Device Applications',
Hong Kong University of Science and Technology, plenary lecture
Hong Kong, January 9

Nanoscience from carbon nanotubes to single-molecule biophysics
Croucher Advanced Study Institute on 'Nano Science and Technology - From Basic Science to Device Applications',
Hong Kong University of Science and Technology, plenary lecture
Hong Kong, January 10

DNA translocation through solid-state nanopores
Physics@FOM 2007
Veldhoven, January 24

DNA translocation through solid-state nanopores
International Symposium on Biomolecular Nanoscale Assemblies
Copenhagen, January 25

RecA/hRad51-mediated homologous recombination studied with magnetic tweezers
Single Molecule Biophysics 2007 winter workshop
Aspen, February 8

Nanotechnology tools for biology, the power of single molecule biophysics
National seminar Dutch Cancer Institute NKI-AvL
Amsterdam, April 13

Nanotechnology tools for biology, the power of single molecule biophysics
Belgian Physical Society and Belgian Biophysical Society joint meeting, plenary lecture
Antwerp, May 30

The merging of bio and nano – towards cyborg cells
Kavli Futures Symposium
Ilulissat, Greenland, June 12

The versatility of nanotechnology tools for biology, from DNA repair mechanisms to sequencing applications
Amolf seminar
Amsterdam, July 2

Nanofabricated channels for biophysics experiments on kinesin and microtubules
Annual Dutch meeting on Molecular and Cellular Biophysics 2007
Veldhoven, October 1

Nanotechnology tools for biology, the power of single molecule biophysics
2007 International Institute for Nanotechnology Symposium, Northwestern University, keynote address
Chicago, October 24

Nanobioscience & -technology
NSA Symposium Nanotechnologie
Amsterdam, October 30

Nanotechnology tools for biology, the power of single molecule biophysics
KNCV congres Het Element
Delft, November 8

Nanotechnologie, van nanobuiselectronica tot de krullen in DNA
Nanotechnologiefestival Nano Nu
Brussels, November 10

Nanotechnology tools for biology, the power of single molecule biophysics
Engineering Life Conference, plenary opening talk
Dresden, December 3

Nanotechnology tools for biology, the power of single molecule biophysics
University colloquium lecture series
Leipzig December 4

2008

DNA translocation through solid-state nanopores
Grosses Kolloquium
University of Köln, January 14

Nanotechnology tools for biology, the power of single molecule biophysics
Astbury Centre for Structural Molecular Biology seminar
University of Leeds, January 17

DNA translocation through nanopores
Kavli-EMBL Workshop
Delft, February 13

Nanotechnology tools for biology, the power of single-molecule biophysics
Erasmus University, seminar 'Frontier Science in the Netherlands'
Rotterdam, March 5

Nanotechnology for the life sciences
Life science and technology symposium on bio-imaging
Leiden, March 6

Nanotechnology tools for biology, the power of single molecule biophysics
Zurich Physics Colloquium
ETH Zurich, May 14

The power of single-molecule techniques for biophysics

XXI Sitges Conference on the Statistical Mechanics of Biophysics, Plenary talk
Sitges, June 4

Biosensing with carbon nanotube transistors

8th Annual Workshop on Carbon Nanostructures
Beijing, June 11

The power of single-molecule techniques for biophysics

8th Annual Workshop on Carbon Nanostructures
Changchun, June 13

Single-molecule biophysics

Workshop on the physics of micro and ^[1]_[SEP] nano flows, keynote lecture
Leiden University, June 19

Solid state nanopores for single-molecule studies

Weizmann Institute of Science, seminar
Rehovot, June 30

single-molecule biophysics

Bar Ilan University, seminar
Bar Ilan, July 1

The power of single-molecule techniques for biophysics

Russell Berrie Nanotechnology Institute Annual Lecture
Technion, Haifa, July 2

Solid-state nanopores for single-molecule biophysics

Physics Meets Biology 2008, plenary lecture
Oxford, July 15

Solid state nanopores for translocation of DNA, RNA and proteins

Gordon Research Conference on Single Molecule Approaches To Biology, invited lecture
New London, August 20

Solid-state nanopores and translocation processes

Dynamics Days Europe 2008 conference, plenary talk
Delft, August 27

Nanobioscience & nanobiotechnology

Interdepartementaal Overleg Biotechnologie over de Convergerende Technologieën
Scheveningen, September 3

Nanofabricated structures for analysis of single biomolecules

Synthetic Biology Workshop
Groningen, November 7

Nanotechnologie, van nanobuiselectronica tot de krullen in DNA

Studium Generale Erasmus University, Cool Science lezing
Rotterdam, September 23

Solid state nanopores for translocation of DNA, RNA and proteins

EMBL seminar
Heidelberg, November 21

Nieuwe mogelijkheden voor wetenschap in de synthetische biologie
Royal Academy of Art and Sciences, plenary talk
Amsterdam, November 24

2009

Solid state nanopores: A versatile tool for the study of polynucleotides and proteins
Single Molecule Biophysics 2009
Aspen, January 9

Solid state nanopores for single-molecule studies
Inaugural Nanobiology Seminar in the Biozentrum Basel
Basel, January 27

Controlled nanostructures as a tool to study biology
6th Dutch Soft Matter Meeting
Delft, February 28

Nanostructures for studying the physics of biomolecules and cells
Biophysical Society 53rd Annual Meeting
Boston, March 3

Nanostructures for studying the physics of single biomolecules and cells
Joint meeting of the Royal Academy of Sciences and the Young Academy of Sciences
Amsterdam, March 28

Solid state nanopores for single-molecule studies
Annual symposium of the Institute for Molecules and Materials, keynote lecture
Nijmegen, May 19

Solid state nanopores for detection of local structures along single DNA molecules
READNA Plenary meeting
Berlin, July 6

In vitro measurements of transport across a single biomimetic nuclear pore complex
2009 Mechanisms of Nuclear Transport Meeting
Banff, Canada, August 25

Nanotools for biology
7th Dutch Soft Matter Meeting
Delft, September 27

Solid state nanopores for nucleic acid analysis
Harvard University seminar
Boston, October 13

Single-molecule transport across solid-state nanopores and biomimetic nuclear pore complexes
University of Cambridge seminar
Cambridge, October 22

Single-molecule biophysics of chromatin maintenance^[11]
Epigenome Workshop on Nucleosome Dynamics
Rotterdam, November 6

Fysica, fascinatie en vergezichten rond synthetische biologie
Symposium 'Science of Fiction'
Delft, November 24

Biophysics and adaptation of bacteria in nanofabricated landscapes
Workshop on Evolution: Foundations, Fundamentals, and Disease
Hong Kong, December 9

2010

Using nanostructures for biology at the single cell and single molecule level
Lorentz Center workshop on micro- and nanofluidics for cell biology
Leiden, January 19

Single-molecule techniques for cell biology
Medical Delta meeting
LUMC Leiden, February 5

Nanobiologie, nieuwe mogelijkheden op de grens van nano en bio
Science Café Leiden
Leiden, March 16

Nanotech tools for biology, the power of single-molecule biophysics
World Student Conference on Particle Technology
Delft, April 23

Squeezing bacteria in nanochannels
Biotech
Dresden, May 3

Nanotechnologie
Nanotopia
Nijmegen, May 27

Nanotechnologie, werken met de bouwstenen van de schepping
Nanocongres 'Kan de schepping beter? Grote vragen over kleine deeltjes'
Utrecht, June 11

Novel avenues opening up with solid state nanopores
2nd READNA Symposium on Advanced Nucleic Acid Analysis
Oxford, July 8

Single-molecule transport across an individual biomimetic nuclear pore complex
Second Workshop on the Nuclear Pore Complex
Albuquerque, July 17

Single-molecule translocation through solid-state nanopores
Biosensing with channels
Ile de Berder, August 25

Solid state nanopores for single molecule studies
Third International NanoBio Conference 2010
Zurich, August 26

Nanostructures for Addressing Single Biomolecules and Cells
Life Science Symposium 2010 on "Engineering Life"
Lausanne, September 2

Nanowetenschap
Studium Generale
Delft, September 22

Squeezing E. coli bacteria in nanochannels
Symposium on "DNA transfer and biofilms"
Freiburg, October 11

Nanotechnology
Elsevier Technologiedebat
Den Haag, November 25

2011

Single-molecule Transport across an Individual Biomimetic Nuclear Pore Complex
Single Molecule Biophysics 2011
Aspen, January 12

Where nano meets bio
Kavli Futures Symposium on Nanoscience
Caltech, January 15

Single-molecule translocation through solid-state nanopores
International Symposium on Advanced Science and Technology for Single Molecular Analysis of DNA and related molecules
Kyoto, January 25

The mechanics of homology recognition in recombination disentangled using dual molecule manipulation
Keystone Symposium on DNA Replication and Recombination
Keystone, February 28

Solid state nanopores for single-biomolecule studies
Seminar School of Nanoscience and Nanoengineering, University of North Carolina Greensboro North Carolina,
March 4

In vitro measurements of single-molecule transport across an ^[1]individual biomimetic nuclear pore complex
Biophysical Society Meeting
Baltimore, March 9

Science at the interface of nanotechnology and biology
Flanders Academy of Sciences
Brussels, March 23

Solid state nanopores for single-biomolecule studies
IMEC seminar
Leuven, May 20

Bacterial cell division studied in synthetic cell shapes
First EuroSYNBIO Conference
Cannes, May 26

Bionanoscience

ICFO

Barcelona, June 16

A fast, accurate typing system

READNA plenary meeting

Sandhamn, June 30

Bacterial antibiotic resistance in confined space

NanoNext-NanoLoc meeting

Utrecht, July 5

Single-molecule transport across an individual biomimetic nuclear pore complex

EMBO Workshop on Mechanisms of Nucleocytoplasmic Trafficking

Jerusalem, November 7

Single-molecule transport across an individual biomimetic nuclear pore complex

Workshop Controlled molecular sensing using nanopores

London, December 14

2012

Using nanostructures for biology at the single cell and single molecule level

Lab-on-a-Chip workshop: Reaching new horizons with nanotechnology

Gothenburg, February 2

The versatility of solid state nanopores

2012 Zing Nanopore Conference

Lanzarote, February 9

Single-molecule transport across an individual biomimetic nuclear pore complex

56th Annual Meeting of the Biophysical Society

San Diego, February 25

Translocation of biomolecules through solid state nanopores

56th Annual Meeting of the Biophysical Society

San Diego, February 29

Single-molecule transport across an individual biomimetic nuclear pore complex

March Meeting of the American Physical Society

Boston, March 1

What is life?

Spinoza te paard

The Hague, March 20

Solid state nanopores for single-biomolecule studies

Workshop Forces in Biomolecular Systems

Venice, March 26

Using the toolbox of nanotechnology for single-molecule biophysics

9th Annual Conference on the Foundations of Nanoscience

Snowbird, April 18

Human enhancement, a critical reflection
CEC Consultation on Human Enhancement
Brussel, April 25

Using the toolbox of nanotechnology for single-molecule biophysics
Fysica-Chemie 2012
Enschede, May 30

Single-molecule translocation through solid-state nanopores
CECAM workshop on DNA sequencing and detection with nanopores
Pisa, June 11

Using the toolbox of nanotechnology for single-molecule biophysics
Vienna Biocenter seminar
Vienna, July 12

Dynamics of DNA supercoils
Workshop on DNA reactions and DNA/chromosome dynamics
Woodshole, September 10

Single molecule investigations with solid-state nanopores
3rd READNA Symposium on Advanced Nucleic Acid Analysis
Barcelona, September 27

What sets the dividing plane in E. coli bacteria?
Workshop Synthetic Biology: Engineering Complex Biological Systems
Groningen, October 4

Using the toolbox of nanotechnology for single-molecule biophysics
Physics colloquium
Eindhoven, November 15

2013

Dynamics of DNA supercoils
Single Molecule Biophysics Conference 2013
Aspen, January 9

Nanobiologie: nieuwe wetenschappelijke vragen, implicaties voor de grote vragen
Opening symposium of the Abraham Kuyper Center
VU Amsterdam, February 22

Dynamics of DNA supercoils
Workshop Physics of the Genome
Amsterdam, March 14

Cell division and Min oscillations in arbitrarily shaped E. coli bacteria
EuroSynBio meeting on Synthetic Biology: Engineering Complex Biological Systems
Elmau, May 7

Solid-state nanopores for single-molecule detection
Swiss Nanoconvention 2013, keynote address
Basel, May 23

Addressing biological complexity with nanostructures

Kavli Nexus on Nanoscience
Puerto Rico, May 29

A variety of solid-state nanopores for single-molecule analysis

Nordita workshop on Novel approaches to DNA sequencing
Stockholm, June 14

The appeal of single-molecule and single-cell studies

Diffusion Fundamentals V, keynote address
Leipzig, August 26

Addressing biological complexity with nanostructures

CENS Workshop Nanosciences, Great Adventures on Small Scales
Venice, September 16

Exploring biophysics of bacteria that exhibit nanofabricated shapes

NCMLS workshop New Frontiers in Synthetic Life
Nijmegen, November 11

Solid-state nanopores, from graphene to DNA origami and beyond

International Symposium on Single Biomolecule Analysis 2013
Kyoto, November 22

Why would a biologist ever be interested in nanotechnology?

Hubrecht Institute CSD Masterclass 2013
Doornwerth, December 12

2014

Nanobiologie, wetenschap voor onze toekomst

Voordracht Korvezee genootschap
Delft, January 24

Nanotech for single-DNA and single-cell studies

CECAM workshop on "Biomolecules under non-natural conditions"
Stuttgart, March 11

Nanopores and nanostructures for biophysics experiment from single DNA molecules to bacteria

International Workshop on DNA-Based Nanotechnology: Digital Chemistry
Dresden, May 6

Cell division and Min oscillation patterns in E coli bacteria that are shaped by microfluidics

Academy Colloquium "50 Years of Fts: the A-Z of Bacterial Cell Division"
Amsterdam, May 15

Cell division and Min oscillation patterns in E coli bacteria that are shaped by microfluidics

FLOW14, keynote lecture
Enschede, May 20

Nanopores and nanostructures for research from single molecules to bacteria

NBC-15 Biotechnology by Dutch Design, keynote lecture
Ede, May 27

Leven op de nanoschaal
Nacht van de Universiteit
Amsterdam, June 4

The quest of life, towards synthetic cell division
VVTP symposium "Engineering Life"
Delft, June 11

Nanopores and nanostructures for biophysics experiments from single molecules to bacteria
GRC Biointerface Science
Barga, June 18

Pattern formation of Min proteins in E coli bacteria sculpted into novel shapes
GRC Single Molecule Approaches to Biology
Barga, July 14

Bionanotechnology and Synthetic Biology: Key Technologies for the 21st Century^{[1][2]}
Clipper Conference 2014: Disruptive Innovations, ^[1]^[2]Pivotal Moments and Crossroads
Amsterdam, October 3

Nanotechnology for biology, from single molecules to bacteria
Phillips Centennial lecture
Eindhoven, October 8

DNA translocation through novel types of solid-state nanopores
CECAM workshop "Nanofluidics in physics and biology"
Lausanne, October 30

Nanopores and nanostructures for biophysics experiment from single molecules to bacteria
Frontier Scientists Workshop of the Korean Academy of Science and Technology, keynote lecture
London, November 1

Using the tools of nanotechnology for biology at the single-molecule and single-cell scale
EMBL seminar
Heidelberg, December 3

Nanopores and nanostructures for biophysics experiments from single molecules to bacteria
Distinguished Lecture in Biological Engineering
Lausanne, December 15

2015

Nanopores and nanostructures for biophysics experiments from single molecules to bacteria
Kavli Energy NanoSciences Institute Inaugural Symposium
UC Berkeley, January 15

DNA translocation through graphene nanopores
Physics@FOM2015
Veldhoven, January 22

Nanotechnology for biology, from single molecules towards synthetic cells
Harvard/MIT Physical Chemistry Seminar, co-hosted by the Kavli Institute
Harvard University, February 5

Symmetry and Scale Orient Min Oscillation Patterns in Bacterial Shape Sculptures

Platform talk, Biophysical Society 59th Annual Meeting

Baltimore, February 11

Using the tools of nanotechnology for biology at the single-molecule and single-cell scale

LRBGE seminar NIH

Bethesda, February 12

The versatility of solid-state nanopores: from DNA knotting to plasmonics to biomimetic nuclear pore complexes

Workshop Selective transport through nanopores: physics meets biology

Lenzerheide, March 24

Nanotechnology for biophysics, from single molecules towards synthetic cells

Nordic Physics Days, plenary address

Trondheim, June 11

Towards division of synthetic cells

KNAW Academy Symposium Towards creating a minimal cell

Amsterdam, June 24

Bacteria with nanofabricated shapes reveal that Min patterns are directed by cell-shape symmetry and size

Academia Sinica seminar

Taipei, Taiwan, June 29

Nanofabrication as a tool to study the effects of cell shape on protein organization in bacteria

New Biological Frontiers Illuminated by Molecular Sensors and Actuators BPS meeting

Taipei, Taiwan, July 1

Nanofabrication as a tool to study the effects of cell shape on protein organization in bacteria

Workshop Nanotechnology meets life science – from trends to application

Frankfurt, September 22

Towards synthetic cells

Lorentz Workshop Emerging Technological and Societal Transition

Leiden, October 6

Using the tools of nanotechnology for biology at the single-molecule and single-cell scale

Kluyver Colloquium

Delft, October 23

DNA nanotechnology

Boston Consultancy Group Game Changer Event

Amsterdam, November 2

Using the tools of nanotechnology for biology at the single-molecule and single-cell scale

Seminar

Maastricht, November 13

Towards division of synthetic cells

Chains 2015

Veldhoven, November 30

Towards division of synthetic cells

Workshop Towards division of synthetic cells

Delft, 3 December 2015

Plasmonic nanopores for the detection of single DNA molecules
WE-Heraeus Workshop on DNA nanotechnology meets plasmonics
Bad Honnef, 8 December

2016

Towards creating life in the lab ?
PThU-workshop Transforming Life
Amsterdam, 28 January

From pattern formation of cell-division proteins in shaped bacteria towards bottom up assembly of a synthetic divisome
Seminar
University of Cambridge, 8 February

Using the tools of nanotechnology for biology at the single-molecule and single-cell scale
Seminar
University of Barcelona, April 29

Using the tools of nanotechnology for biology at the single-molecule and single-cell scale
Zurich Physics Colloquium
University of Zurich, May 11

Topological aspects of DNA, from single molecules to cells
Workshop on Polymers with spatial and mechanical constraints
Venice, July 8

The versatility of nanopores as a biophysics tool: from DNA knots to protein translocation
Workshop on Biophysics of ion Channels
Telluride, July 26

Nanotechnology for biophysics, from single molecules towards synthetic cells
JMC15
Bordeaux, August 24

From pattern formation of cell-division proteins in shaped bacteria towards bottom up assembly of a synthetic divisome
EMBO Workshop "Bacterial Cell Division: Orchestrating the Ring Cycle"
Prague, August 14

What is life? A journey from single molecules to synthetic cells
SeminBar Public Lecture
Basel, September 20

From pattern formation of cell-division proteins in shaped bacteria towards bottom up assembly of a synthetic divisome
Medical Sciences Faculty Lecture
Newcastle, October 6

Nanotechnology for single-molecule and single-cell biophysics
IEEE EMBS micro- and nanotechnology conference in medicine
Hawaii, December 14

2017

DNA sequence can pin the position of supercoils

Single Molecule Biophysics 2017

Aspen, January 11

From pattern formation of cell-division proteins in shaped bacteria towards bottom up assembly of a synthetic divisome

Biology for Physics Conference

Barcelona, January 16

From pattern formation of cell-division proteins in shaped bacteria towards bottom up assembly of a synthetic divisome

SFB1032 Workshop

Tutzing, March 14

Nanotechnology for single-molecule and single-cell biophysics

Physics Colloquium

ENS Paris, March 23

Divided we stand, from bacterial cell division towards synthetic cells^[1]_{SEP}

NanoFront Winter Retreat

Courchevel, March 28

Nanotechnology for single-molecule and single-cell biophysics

CNB Senior Seminar Series

Madrid, May 12

Direct imaging of the circular chromosome in E. coli

GRC conference on the Cellular, Molecular and Physical Biology of Chromosomes

Il Chiocco, May 25

Synthetic biology

iGEM European Meetup

Delft, July 6

Towards synthetic cell division

2017 Future symposium on Building A Synthetic Cell

Ringberg, July 13

The versatility of nanopores as a single-molecule tool

WE-Heraeus-Seminar on Transport Mechanisms in Biological and Synthetic Nanopores and Channels, Keynote

Bremen, July 16

Shaping E. coli cells to study protein patterns and chromosome structure and dynamics

Quantitative Bioscience Munich Retreat

Venice, August 24

Divided we stand, from bacterial cell division towards synthetic cells^[1]_{SEP}

Fundamentals of Life in the Universe Symposium

Groningen, August 31

Nanotechnology for single-molecule biology

12th NANOSMAT Conference

Paris, September 11

DNA beyond the genome
Chains 2017
Veldhoven, December 6

2018

Shaping E. coli cells to study protein patterns and chromosome structure and dynamics
70th Mosbacher Kolloquium - "High-resolution imaging of cells and molecules"
Mosbach, March 22

Nanotechnology for studying biology at the single-molecule level
NHGRI Advanced Sequencing Technology development meeting
Boston, March 31

Real-time imaging of DNA loop extrusion by a single condensin complex
4DN Center meeting
MIT, Boston, July 1

Employing nanotech for unravelling the spatial organization of chromosomes
4th Biology and Physics of Bacterial Chromosomes meeting i
Leiden, July 4

Employing nanotech for unravelling the spatial organization of chromosomes
GRC Conference Biointerface science: surfaces and compartments in biology and medicine (keynote)
Il Ciocco, June 17

Solid state nanopores for manipulating single DNA and protein molecules
From Solid State To Biophysics IX
Cavtat, June 21

Solid state nanopores: From manipulating single biomolecules to mimicking natural pores
Workshop Nanofluidics in Physics and Biology
Lyon, July 10

Solid state nanopores: from detecting DNA and protein to mimicking the nuclear pore complex
Workshop: Nuclear Pore Complex/Smart Polymer
Telluride, July 30

Unravelling the spatial organization of chromosomes using biophysical techniques
EMBL Symposium: Principles of Chromosome Structure and Function
Heidelberg, September 6

Unravelling the spatial organization of chromosomes using biophysical techniques
EMBO Workshop on DNA replication, chromosome segregation and fate decisions
Kilini, September 17

Unravelling the spatial organization of chromosomes using biophysical techniques
CeNS Workshop Venice 2018: Celebrating NanoScience
Venice, September 27

Nanotechnology for single-molecule and single-cell biology
Nano Israel 2018
Jerusalem, October 11

Point-of-care diagnostics for neglected tropical diseases
KEMRI institute seminar
Nairobi, November 20

Real-time imaging of DNA loop extrusion by condensin SMC proteins
4DN-ASCB Meeting: bridging the 4D Genome with Cell Biology
San Diego, December 7

2019

Nanotechnology for single-molecule and single-cell biology
Seminar East China University of Science and Technology
Shanghai, February 1

Nanotechnology for single-molecule and single-cell biology
Seminar Australian Institute for Bioengineering and Nanotechnology
Brisbane, February 14

Nanotechnology for single-molecule and single-cell biology
Molecular Horizons seminar
Wollongong, February 20

Nanotechnology for single-molecule and single-cell biology
Seminar Australian Institute for Innovative Materials
Wollongong, March 19

Nanotechnology for single-molecule and single-cell biology
Seminar Hong Kong University of Science and Technology
Hong Kong, March 29

Spatial organization of proteins and DNA in cells
Conference on the Cell Biology of Prokaryotes
Kloster Banz, April 10

Biophysics studies on the shaping of chromosomes
Seminar Max Planck Institute for Biophysical Chemistry
Göttingen, June 6

Biophysics studies of the spatial structure of chromosomes
Genome Architecture and Dynamics Workshop
Varna, Bulgaria, July 17

Condensin is a versatile SMC that can produce a variety of DNA loop structures
EMBO Workshop on Organization of bacterial and eukaryotic genomes by SMC complexes
Vienna, September 12

Towards fingerprinting proteins using nanopore ionic currents
2nd international conference on Single Molecule Protein Sequencing
Jerusalem, September 17

Condensin is a versatile SMC that can produce a variety of DNA loop structures
4D Epigenome meeting
Venice, October 4

2020

Biophysics studies on the shaping of chromosomes

3rd Bacterial Cell Biology conference

Nassau, Bahamas, February 25

SMC proteins for DNA loop extrusion and phase separation

KITP program Biological Physics of Chromosomes

Santa Barbara (online), June 16

Nanopores as the ultimate Coulter counters for single-molecule sequencing

XXXIII International Symposium on Technological Innovations in Laboratory Hematology

Melbourne (online), September 25

Recent findings on SMC proteins: from phase separation to a scrunching model for DNA loop extrusion

Boehringer Ingelheim virtual International Titisee Conference (ITC) “Genome folding: physics and function”

Titisee (online), October 15

Nanopores for probing proteins at the single-molecule level

2nd Single-Molecule Sensors and Nanosystems international conference

Barcelona (online), November 11

The next BIG thing in nanobiology

Public seminar

NRC/University of Amsterdam (online), November 16

2021

Biophysics studies on the shaping of chromosomes

Rudolf Mößbauer Colloquium

Heidelberg (online), March 1

Recent findings on SMC proteins: from DNA loop extrusion to phase separation

BioPhyChrom2021 : The Biology and Physics of Bacterial Chromosome Organization

Leiden (online), March 18

What is Life? The bottom-up route

‘The future of engineering life’ Virtual Kick-Off Event Engineering Life Initiative @ LMU Munich

Munich (online), April 8

Studying import and export through the nuclear pore complex using bottom up biomimetic approaches

13th EBSA European Biophysics Conference

Vienna, July 26

Employing nanotech for single-molecule biology: from protein sequencing to SMC-driven DNA loop extrusion

Johns Hopkins University Biophysics and Biophysical Chemistry Department seminar

Baltimore (online), October 6

2022

Single-molecule imaging of DNA loop extrusion by SMC complexes

Single Molecule Biophysics Les Houches, Ecole de Physique des Houches
Les Houches, March 1

Employing nanotech for single-molecule biology: from protein sequencing to SMC-driven DNA loop extrusion

Department seminar, University of Lausanne
Lausanne, April 1

Employing nanopores for studying single molecules: from motors to nuclear transport to protein sequencing

7th Annual Meeting of the Biophysical Society of Canada, Keynote Lecture
Ottawa (online), April 1

From milli to micro to nano & from imaging to building at that scale

Symposium *Onzichtbaar leven. Antoni van Leeuwenhoek en de wondere wereld van de microbiologie*
Prinsenhof Delft

The power of single-molecule approaches to biology

Conference From Solid state to Biophysics, plenary talk
Cavtat Croatia, June 12

Tiny gatekeepers of the nano universe

Town talk
Telluride, June 21

Biomimetic nuclear pores as a toolbox for studying nuclear transport

Workshop on Nuclear Pore Complexes and Smart Polymers
Telluride Science Research Center , June 22

Single-molecule imaging of DNA loop extrusion by SMC complexes

Single Molecule Approaches to Biology Gordon Research Conference
Barcelona, July 5

Single-molecule studies of chromosome organization

87th Harden Conference: Single-molecule bacteriology II
Oxford, July 12

Biomimetic nuclear pores as a toolbox for studying nuclear transport

14th International Conference on Nucleocytoplasmic Transport
Esterel, Canada, September 21

Single-molecule studies of chromosome organization

University-wide Friday seminar
Rockefeller University, September 23

Single-molecule studies of chromosome organization

Biochemical Society conference on Genome organisation by SMC complexes
Edinburgh, September 29

Single-molecule studies of chromosome organization

125th International Titisee Conference on Genome folding: physics and function
Titisee, Germany, October 17

Single-molecule studies of chromosome organization

EMBO Workshop

Bacterial cell biophysics: DNA replication, growth, division, size and shape

Ein Gedi, Israel

2023

List of supervised PhD students

Wöltgens, P.J.M.

University of Utrecht

Nationality: Dutch

Year of PhD-degree: 1993

Title dissertation: Vortex-glass dynamics in high-T_c superconducting films

Current position: Senior Principal Architect, ASML

Liefrink, F.

University of Utrecht

Nationality: Dutch

Year of PhD-degree: 1993

Title dissertation: Noise spectroscopy of semiconductor nanostructures

Current position: Examiner, European patent office

Tans, S.J.

TU Delft

Nationality: Dutch

Year of PhD-degree: 1998 (cum laude)

Title dissertation: Electron transport in single molecular wires

Current position: Full professor Amolf, Amsterdam

Mantel, O.C.

TU Delft

Nationality: Dutch

Year of PhD-degree: 1999

Title dissertation: Mesoscopic charge density wave wires

Current position: Consultant, TNO

Venema, L.C.

TU Delft

Nationality: Dutch

Year of PhD-degree: 2000

Title dissertation: Electronic structure of carbon nanotubes

Current position: Senior editor, Nature London

Postma, H.W.Ch.

TU Delft

Nationality: Dutch

Year of PhD-degree: 2001

Title dissertation: Carbon nanotube functions and devices

Current position: Professor, California State University Northridge

Storm, A.J.
TU Delft
Nationality: Dutch
Year of PhD-degree: 2004
Title dissertation: Single molecule experiments on DNA with novel nanostructures
Current position: Senior scientist, TNO

Janssen, J.W.
TU Delft
Nationality: Dutch
Year of PhD-degree: 2001
Title dissertation: Spatially resolved spectroscopy on carbon nanotubes
Current position: Managing director, Regiegroep Life Sciences & Health

Van der Heyden, F.H.J.
TU Delft
Nationality: Dutch
Year of PhD-degree: 2006
Title dissertation: Pressure Driven Transport in Nanofluidic Channels
Current position: EOR Engineer, Shell

Besteman, K.
TU Delft
Nationality: Dutch
Year of PhD-degree: 2006
Title dissertation: Charge inversion and DNA condensation by multivalent ions
Current position: Consultant, Roland Berger Strategy Consultants

Koster, D.A.
TU Delft
Nationality: Dutch
Year of PhD-degree: 2007 (cum laude)
Title dissertation: Topoisomerase and the unwinding of stressed DNA
Current position: Professor, Hebrew University

Van den Heuvel, M.G.L.
TU Delft
Nationality: Dutch
Year of PhD-degree: 2007 (cum laude)
Title dissertation: Exploiting and exploring microtubules and kinesin motor proteins in nanofabricated devices
Current position: Project Leader, The Boston Consulting Group

Van der Heijden, A.H.

TU Delft

Nationality: Dutch

Year of PhD-degree: 2007

Title dissertation: Dynamic protein assemblies in homologous recombination with single DNA molecules

Current position: Researcher/Entrepreneur, Boston

Smeets, R.M.M.

TU Delft

Nationality: Dutch

Year of PhD-degree: 2008

Title dissertation: DNA and ion transport through solid-state nanopores

Current position: Organizational advisor, Turner

Wiertz, F.G.M.

TU Delft

Nationality: Dutch

Year of PhD-degree: 2008

Title dissertation: Electron Transfer and Proton Pumping Pathways in Cytochrome aa₃

Current position: Project leader, Groen Agro Control

Heller, I.

TU Delft

Nationality: Dutch

Year of PhD-degree: 2009

Title dissertation: Electrostatic sensing and electrochemistry with single carbon nanotubes

Current position: Associate professor, VU University Amsterdam

Van den Hout, M.

TU Delft

Nationality: Dutch

Year of PhD-degree: 2010

Title dissertation: Forcing DNA and RNA through artificial nanopores

Current position: Head of Strategic Support NWO

Kowalczyk, S.W.

TU Delft

Nationality: Dutch

Year of PhD-degree: 2011

Title dissertation: Solid-state nanopores for scanning single molecules and mimicking biology

Current position: Patent examiner, European patent office

Loenhout, M.T.J.

TU Delft

Nationality: Dutch

Year of PhD-degree: 2012 (cum laude)

Title dissertation: Single-molecule studies of the twisted, knotted, and broken genome

Current position: Postdoc, Utrecht

Hol, F.J.H.

TU Delft

Nationality: Dutch

Year of PhD-degree: 2014 (cum laude)

Title dissertation: Bacterial Societies: cooperation, colonization and competition in micro-scale ecosystems

Current position: assistant professor, Radboud Universiteit Nijmegen

Hoogeboom-Vlijm, R.

TU Delft

Nationality: Dutch

Year of PhD-degree: 2014

Title dissertation: Assembling a single-molecule view on nucleosome dynamics

Current position: Assistant professor Groningen

Plesa, C.

TU Delft

Nationality: Canadian

Year of PhD-degree: 2015 (cum laude)

Title dissertation: Solid-state nanopores for probing DNA and protein

Current position: Assistant professor Oregon

Wu, F.

TU Delft

Nationality: Chinese

Year of PhD-degree: 2016 (cum laude)

Title dissertation: Spatial Organization in Nano-sculptured Bacteria, a tale of shape, scale, patterns, and genomes

Current position: Postdoc Caltech

Wiktor, J.

TU Delft

Nationality: Polish

Year of PhD-degree: 2017

Title dissertation: Live cell studies of bacterial DNA replication, recombination, and degradation

Current position: Postdoc Uppsala

Eeftens, J
TU Delft
Nationality: Dutch
Year of PhD-degree: 2017 (cum laude)
Title dissertation: Single-molecule approaches to unravel the mechanism of SMC proteins
Current position: Assistant Professor Nijmegen

Ananth, A.N.
TU Delft
Nationality: Indian
Year of PhD-degree: 2018
Title dissertation: Mimicking the nuclear pore complex using nanopores
Current position: Research scientist TNO

Heerema, S.J.
TU Delft
Nationality: Dutch
Year of PhD-degree: 2018
Title dissertation: DNA sensing with nanopores in graphene nanoribbons
Current position: Consultant, McKinsey

Verschueren, D.M.
TU Delft
Nationality: Dutch
Year of PhD-degree: 2018 (cum laude)
Title dissertation: Plasmonic nanopores for single molecule sensing
Current position: Postdoc London

Laura Restrepo Perez
TU Delft
Nationality: Colombian
Year of PhD-degree: 2019
Title dissertation: Unraveling proteins at the single molecule level using nanopores
Current position: Consultant, Vintura

Yoon Kabiri
TU Delft
Nationality: Iranian
Year of PhD-degree: 2019
Title dissertation: Imaging DNA nanostructures with advanced TEM techniques
Current position: Research scientist ASML

Xin Shi
East China University of Science and Technology
Nationality: Chinese
Year of PhD-degree: 2019
Title dissertation: Optical and electrical sensing at nanointerfaces
Current position: postdoc TU Delft

Federico Fanalista
TU Delft
Nationality: Italian
Year of PhD-degree: 2020
Title dissertation: On-chip reconstitution of an FtsZ-based divisome for synthetic cells
Current position: Journal Development Specialist, Geneva

Michel Bengtson
TU Delft
Nationality: South Africa
Year of PhD-degree: 2020
Title dissertation: Development of DNA diagnostics of Neglected Tropical Diseases in resource limited settings
Current position: postdoc Leiden

Wayne Yang
TU Delft
Nationality: Singapore
Year of PhD-degree: 2021
Title dissertation: Single-molecule sensing with nanopores and nanoslits
Current position: postdoc EPFL Lausanne

Alessio Fragasso
TU Delft
Nationality: Italian
Year of PhD-degree: 2021
Title dissertation: Towards a bottom up reconstruction of the nuclear pore complex
Current position: postdoc Stanford

Alberto Blanch Jover
TU Delft
Nationality: Spanish
Year of PhD-degree: 2022
Title dissertation: Looking back to move forward - studying the ancient archaeal Cdv cell division machinery for synthetic cells
Current position: Researcher genomics company

Current PhD students:

Anthony Birnie
Nationality: Irish/Dutch
Expected year of PhD-degree: 2022

Nils Klughammer
Nationality: German
Expected year of PhD-degree: 2023

Pinyao He
Nationality: Chinese
Expected year of PhD-degree: 2023

Sabrina Meindlhumer
Nationality: Austrian
Expected year of PhD-degree: 2023

Martin Holub
Nationality: Czech
Expected year of PhD-degree: 2023

Milos Tisma
Nationality: Serbian
Expected year of PhD-degree: 2023

Roman Barth
Nationality: German
Expected year of PhD-degree: 2024

Justas Ritmejeris
Nationality: Lithuanian
Expected year of PhD-degree: 2025

Bert van Heck
Nationality: Belgian
Expected year of PhD-degree: 2026

Brian Analikwu
Nationality: Nigerian/Dutch
Expected year of PhD-degree: 2026

Minco Polinder
Nationality: Dutch
Expected year of PhD-degree: 2026

List of supervised postdoctoral fellows and visiting professors

Bezryadin, A.

Nationality: Russian

Period 1995-1997

Current position: Full professor, University of Illinois

Van der Zant, H.S.J.

Nationality: Dutch

Period: 1995-1998

Current position: Full professor, TU Delft

Devoret, M.H.

Nationality: French

Period: 1995

Current position: Full professor, Yale University

Yao, Z.

Nationality: Chinese

Period: 1997-2000

Current position: Professor, University of Austin

Porath, D.

Nationality: Israeli

Period: 1997-2000

Current position: Professor, Hebrew University

Wildoer, J.W.G.

Nationality: Dutch

Period: 1998-1999

Current position: Manager, NXP Semiconductors

Dunn, A.W.

Nationality: British

Period: 1998-2000

Current position: Financial sector, London

Lemay, S.G.

Nationality: Canadian

Period: 1998-2001

Current position: Full professor, University of Twente

Mantel, O.C.

Nationality: Dutch

Period: 1999

Current position: Consultant, TNO

Tans, S.J.
Nationality: Dutch
Period: 1999-2001
Current position: Full professor TU Delft, AMOLF

Bachtold, A.
Nationality: French
Period: 2000-2001
Current position: Professor, ICFO Spain

Van Noort, J.
Nationality: Dutch
Period: 2000-2003
Current position: Full Professor, Leiden University

Van Brederode, M.E.
Nationality: Dutch
Period: 2001-2003
Current position: Chemistry teacher

Williams, K.A.
Nationality: American
Period: 2001-2004
Current position: Program Manager and CTO based at Naval Research Laboratory & Visiting Professor University of Virginia

Lee, J.O.
Nationality: Korean
Period: 2001-2002
Current position: Principal researcher, Korea Research Institute of Chemical Technology

Gaudin, G.
Nationality: French
Period: 2002
Current position: Researcher, Spintec Grenoble

Postma, H.W.C.
Nationality: Dutch
Period: 2002
Current position: Professor, California State University Northridge

Ling, X.S.
Nationality: American
Period: 2003
Current position: Full professor, University of Brown

Lientschnig, G.

Nationality: Austrian

Period: 2003

Current position: University Assistant, Vienna University of Technology

Leroy, B.J.

Nationality: American

Period: 2003-2006

Current position: Professor, University of Arizona

Moreno Herrero, F.

Nationality: Spanish

Period: 2003-2006

Current position: Professor, National Center of Biotechnology, CSIC, Madrid

Seidel, R.

Nationality: German

Period: 2003-2006

Current position: Full Professor, University of Münster

Kong, J.

Nationality: Chinese

Period: 2003-2004

Current position: professor, MIT

Keyser, U.F.

Nationality: German

Period: 2003-2006

Current position: Full Professor, University of Cambridge

Stein, D.M.

Nationality: Canadian

Period: 2003-2006

Current position: Professor, Brown University

Storm, A.J.

Nationality: Dutch

Period: 2004

Current position: Senior scientist, TNO

Dujovne, I.

Nationality: Argentinian

Period: 2004-2007

Current position: Research Scientist, University Massachusetts

Meyer, C.
Nationality: German
Period: 2005-2008
Current position: Group leader, SEW company

Heering, H.A.
Nationality: Dutch
Period: 2005-2009
Current position: Teacher, University of Wageningen

Minot, E.D.
Nationality: UK
Period: 2006
Current position: Professor, Oregon State University

Krapf, D.
Nationality: Argentinian
Period: 2006-2007
Current position: Professor, Colorado State University

Hoeben, F.J.M.
Nationality: Dutch
Period: 2006-2008
Current position: Scientist, Symo-Chem

Besteman, K.
Nationality: Dutch
Period: 2007
Current position: Consultant, Roland Berger Strategy Consultants

Van der Heyden, F.H.J.
Nationality: Dutch
Period: 2007
Current position: Research engineer, Shell

Hall, A.R.
Nationality: American
Period: 2007-2010
Current position: Professor, Virginia Tech-Wake Forest School of Biomedical Engineering and Sciences

Van der Heijden, A.H.
Nationality: Dutch
Period: 2008
Current position: Entrepreneur, Boston

Koster, D.A.

Nationality: Dutch

Period: 2008

Current position: Professor, Hebrew University

Van den Heuvel, M.G.L.

Nationality: Dutch

Period: 2008

Current position: Consultant, Boston Consulting Group

Mannik, J.

Nationality: Estonian

Period: 2008-2011

Current position: Professor, University of Tennessee, Knoxville

Galajda, P.J.

Nationality: Hungarian

Period: 2008-2010

Current position: Professor, Hungarian Academy of Sciences

Smeets, R.M.M.

Nationality: Dutch

Period: 2008

Current position: Consultant, Turner

Schneider, G.F.

Nationality: French

Period: 2009-2013

Current position: Professor, Leiden University

De Vlaminck, I.

Nationality: Belgian

Period: 2009-2012

Current position: Professor, Cornell University

Heller, I.

Nationality: Dutch

Period: 2010

Current position: Assistant Professor, VU University Amsterdam

Snippert, H.J.G.

Nationality: Dutch

Period: 2011-2012

Current position: Assistant Professor, AZU, University of Utrecht

Kowalczyk, S.W.
Nationality: Polish/Dutch
Period: 2012
Current position: Patent examiner, European Patent Office

Blosser, T.
Nationality: American
Period: 2011-2013
Current position: Research scientist, Harvard University

Hermesen, R.
Nationality: Dutch
Period: 2012-2013
Current position: Professor, University of Utrecht

Burnham, D.R.
Nationality: British
Period: 2012-2014
Current position: Postdoc, Cancer Research UK - London Research Institute

Jonsson, P.M.
Nationality: Swedish
Period: 2011-2014
Current position: Professor, University of Linköping

Katan, A.J.
Nationality: Dutch
Period: 2011-2014
Current position: Research scientist, TU Delft

Mashaghi, A.
Period: 2013
Nationality: Iranian
Current position: Assistant professor Leiden University

Soni, G.V.
Nationality: Indian
Period: 2011-2014
Current position: Professor Raman Research Institute

Albrecht, T.
Nationality: Danish
Period 2013
Current position: Professor, University of Birmingham

Vlijm, R.
Nationality: Dutch
Period 2014-2015
Current position: Assistant professor Groningen

Hol, F.
Nationality: Dutch
Period 2014-2015
Current position: Assistant professor, Paris

Caspi, Y.
Nationality: Israeli
Period 2012-2016
Current position: Research scientist, University Utrecht

Kim, S.H.
Nationality: Korean
Period 2014-2016
Current position: Postdoc, KAIST Korea

Wu, F.
Nationality: Chinese
Period 2015-2016
Current position: Postdoc, Caltech University

Ganji, M.
Nationality: Indian
Period 2017-2018
Current position: Assistant professor, Indian Institute of Science Bangalore

Pud, S.
Nationality: Ukrainian
Period 2017-2019
Current position: Assistant professor University Twente

Pawlik, G.
Nationality: Polish
Period 2017-2019
Current position: Research scientist SME company

Desphande, S.
Nationality: Indian
Period 2012-2019
Current position: Assistant professor Wageningen

Whitley, K
Nationality: American
Period 2017-2019
Current position: Assistant professor Newcastle

Rye, J.
Nationality: Korean
Period 2017-2021
Current position: Assistant professor Seoul National University Korea

Japaridze, A.
Nationality: Georgian
Period 2017-2021
Current position: Research scientist startup company Delft

Caneva, S.
Nationality: Luxembourg/Italian
Period 2018-2020
Current position: Assistant professor TU Delft

Schmid, S.
Nationality: Austrian/Swiss
Period 2018-2020
Current position: Assistant professor Wageningen

Kim, E.
Nationality: Korean
Period 2018-2020
Current position: Group leader MPI Frankfurt

Bharadwaj, M.
Nationality: Indian
Period 2018-2020
Current position: CEO startup company

Pradhan, B.
Nationality: Indian
Period 2018-2020
Current position: Postdoc MPI Frankfurt

Kim, S.H.
Nationality: Korean
Period 2020
Current position: postdoc Korea

Franch, O.
Nationality: Danish
Period 2020-2021
Current position: Department head Eurofins

de Franceschi, N.
Nationality: Italian
Period 2019-2021
Current position: Assistant professor IMOL Polish Academy of Sciences, Warsaw

Brinkerhoff, H.
Nationality: American
Period 2020-2021
Current position: Postdoc Seattle

Current postdocs:

- | | |
|------------------------|----------|
| 1. de Magistris, P. | Italian |
| 2. Shi, X. | Chinese |
| 3. Janissen, R. | German |
| 4. Martin Gonzalez, A. | Spanish |
| 5. Bart, A. | German |
| 6. Joesaar, A. | Estonian |
| 7. Bertosin, E. | Italian |
| 8. Nova, I | American |
| 9. Wen, C. | Chinese |