

Cees Dekker, Curriculum Vitae

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Personal data

Full name Cornelis Dekker
Date and place of birth 7 april 1959, Haren, The Netherlands
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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 (UD) at the University of Utrecht
- 1990-1991 Visiting researcher at IBM Research, Yorktown Heights, USA
- 1993-1999 Associate professor (UHD) at Delft University of Technology
- Since 1999 Antoni van Leeuwenhoek full professor at Delft University of Technology.
- 2000 Visiting researcher at Technion – Israel Institute of Technology, Haifa, Israel
- Since 2000 Full professor of Molecular Biophysics, Delft University of Technology.
- Since 2001 Group leader of the Molecular Biophysics group
- Since 2006 Distinguished University Professor
- Since 2009 Department Chair of the new Department of Bionanoscience, TU Delft.

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 recent 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 now has become 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 have been 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. This was achieved 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. With these techniques, 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. 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 his 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. After quite some experiments it was concluded that DNA is an insulator. 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 In the past decade I shifted the main focus of my work towards the biophysics of single biomolecules, and more general towards nanobiology. This 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 briefly mention a few projects in this area:

- 2001-now DNA break repair through homologous recombination. By use of single-molecule techniques, in particular atomic force microscopy and magnetic tweezers, we study the structure, dynamics and function of DNA repair proteins. Specifically, we study filament formation and strand exchange and invasion mediated by the bacterial protein RecA as well as the human Rad50/15/54 proteins.
- 2001-now Translocation of DNA molecules through 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 is observed as transient dips in the ion current. The DNA-length dependence shows effects of the polymer blob size, the salt dependence indicates the DNA charge, and the current magnitude signals DNA folding. We discovered nanobubbles in studies of the noise properties of nanopores. We developed a new method where we use an optical tweezer to scan a single DNA molecule across a nanopore and measure local forces. Recently we extended our research to RNA and DNA-protein constructs.
- 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.
- 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 at low salt, streaming currents, charge inversion, and pressure-driven electrical power generation. Furthermore, we examined the size dependence of pressure-driven DNA transport in fluidic channels and the conformation and dynamics of DNA confined in slit-like nanofluidic channels.
- 2002-2008 Using 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. In fact, we demonstrated a fairly complete technology of motor-driven active nanofluidics.
- 2007-now Biophysics and evolution bacteria in nanofabricated structures. Using nanofabrication we literally make controlled landscapes for bacteria. Bacteria can populate islands and colonize neighboring ones. We study the biophysics of bacterial motion in narrow slits as well as a number of basic phenomena in the adaptation and evolution of bacterial populations.

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 which gave 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 slits

Awards and prizes

- 1999 Discover Award for Emerging Future Technologies
- 1999, appointment as Antoni van Leeuwenhoek professor.
- 2000 NWO Pionier Award for ‘Single-molecule electronics from nanotubes to DNA’
- 2001 Burgen scholar, Academia Europaea
- 2001 Agilent Europhysics Prize “for the discovery of multi and single walled carbon nanotubes and pioneering studies of their fundamental mechanical and electronic properties”.
- 2002 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 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 3) professors in recognition of outstanding achievements.
- 2006 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.'

Other honors

- 190+ publications, including 20+ in Nature and Science, see ceesdekker.net/publications.htm
- Our work has received over 17,000 citations.
- 3 publications have been cited more than 1000 times, 20+ papers got cited more than 100 times
- h-index of 48 (March 12, 2009).
- In 2001, our work was selected as ‘Breakthrough of the year’ by the journal Science
- The work was highlighted with a dozen covers on journals such as Nature, Science, PNAS, Molecular Cell, see http://www.mb.tn.tudelft.nl/cover_gallery.html
- 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 in independent external on-site reviews (5.0 out of 5.0).
- In 2007, I 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 will be formed which is aimed at fostering research at the interface between nanoscience and molecular, synthetic and cell biology.

Selected advisory committees, editorial boards, and other professional service

- Governing board (Raad van Bestuur) of FOM
- FOM Werkgemeenschap Fysica van Levensprocessen
- Commissie voor Biochemie en Biofysica of the Dutch Royal Academy of Sciences (KNAW)
- Raad voor Aard- en Levenswetenschappen of the Dutch Royal Academy of Sciences
- RGO/KNAW Commissie Synthetische Biologie
- Editorial Board of Small, a journal for nano and microscience and technology
- Editorial Board of NanoBiotechnology, a journal at the intersection of nanotechnology, molecular biology and biomedical sciences.
- Editorial Advisory board for the International Society for Nanoscale Science, Computation and Engineering
- Editorial Board of Nano Letters
- Editorial Board of Nanotechnology
- Editorial Advisory Board of Nano
- Editorial Board of Nano Research
- Wetenschappelijke Adviesraad van het Instituut voor CultuurEthiek
- Redactieraad tijdschrift Radix
- Scientific advisory board of NABsys, a startup nanobiotech company in Providence, US
- Scientific Advisory Board of GenoRx Inc, silicon valley startup company focused on DNA sensing applications
- Program committee International Conference on Biological Physics, Gotenborg, Sweden
- Advisory committee for the Conference “Images of Science. New Interactions between Science and Society” organized by the Rathenau Institute
- Commissie ‘Gevolgen nanotechnologie’ van de KNAW, 2004
- Program committee annual ALW/FOM/VvBF&BT meeting on Molecular and Cellular Biophysics, Lunteren
- Organizing committee workshop Synthetic Biology, Groningen 2008
- Scientific advisory committee for the NanoScience Center in Technion, Israel
- Organizer (together with P. McEuen) of the first Kavli futures symposium ‘The merging of bio and nano – towards cyborg cells’, Greenland, June 2007

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

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

2005 Delft

- Guest lecture in the course on Critical reflection on technology for honors track students

2006 VU Amsterdam

- Guest lecture on ‘Science and religion’ for the masters course on 'Christian Thinking, Contemporary Issues'.

2004-currently Delft

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

2005- currently Delft

- I developed and teach the course ‘Introduction to biophysics’ for physics freshmen (~130 students per year)

2009- currently Delft

- I participate in the course on ‘wetenschaps- en argumentatieleer’

Local organization at Delft University

- 2004-2006 Chairman faculty Department of NanoScience
- 2006 Co-organizer Kavli workshop for science journalists
- 2006-2007 Management team Department of NanoScience
- 2006-now Supplementary advisor to the Board of the University as Universiteitshoogleraar
- 2007 Co-initiator of a new Department of Bionanoscience
- 2008 Chairman of search committee for new faculty
- 2009 Head of Department of Bionanoscience

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

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
Bacterial devices
NNI, 2009, pending

C. Dekker
Single-molecule studies of DNA repair proteins acting on DNA
NNI, 2009, pending

J.E. Keymer & C. Dekker
Prisoners dilemma on a chip
NNI, 2009, pending

C. Dekker
Functionalization of hybrid bionanopores
NNI, 2009, pending

G. Schitter and C. Dekker
Development and application of fast AFM in liquid for real-time imaging of motor proteins acting
on DNA
NNI, 2009, pending

C. Dekker

Nanostructures for biology

ERC Advanced Grant, pending

P. Schwille, C. Dekker, D. Sherratt

Synthetic biology of the bacterial cell division

Eurocores proposal, pending

Patent

A. Bachtold and C. Dekker

'Electronic device using carbon nanotubes'

US patent 7211853 B2

Full list of publications

193. I. Heller, S. Chatoor, J. Männik, M. A. G. Zevenbergen, C. Dekker, S. G. Lemay
Comparing the weak and strong gate-coupling regimes for nanotube and graphene transistors
Physica Status Solidi - Rapid Research Letters, Focus Issue on Carbon Electronics, in print
192. G.M. Skinner, M. van den Hout, O. Broekmans, C. Dekker, N.H. Dekker
Distinguishing single and double-stranded nucleic acid molecules using solid-state nanopores
Nano Lett, publication Date (Web): June 19, 2009, Article ASAP DOI: 10.1021/nl901370w
191. J. Mannik, R. Driessen, P. Galajda, J.E. Keymer, C. Dekker
Swimming and squeezing through: Bacterial penetration of sub-micron constrictions
Proc. Natl. Acad. Sci (USA), under review
190. I. Heller, W.T.T. Smaal, S.G. Lemay, C. Dekker
Probing macrophage activity with carbon nanotube sensors
Small, under review
189. S.W. Kowalczyk, A.R. Hall, and C. Dekker
Detection of local protein structures along DNA using solid-state nanopores
Nature Biotechnology, under review
188. I. Heller, J. Männik, S.G. Lemay, C. Dekker
Optimizing the signal-to-noise ratio for biosensing with carbon nanotube transistors
Nano Lett. 9, 377–382 (2009)
187. R.M.M. Smeets, S.W. Kowalczyk, A.R. Hall, N.H. Dekker, and C. Dekker
Translocation of RecA-coated dsDNA through solid-state nanopores
Nano Lett., 10.1021/nl803189k, Article ASAP Publication Date (Web): December 3, 2008
186. M.T.J. van Loenhout, T. van der Heijden, R. Kanaar, C. Wyman, C. Dekker
Dynamics of RecA filaments on single strand DNA
Nucleic Acids Research, Advance Access published May 8, 2009; doi:10.1093/nar/gkp326, p. 1–11
185. S. van Dorp, U. F. Keyser, N. H. Dekker, C. Dekker, and S. G. Lemay
Origin of the Electrophoretic Force on DNA in Solid-State Nanopores
Nature Phys. 5, 347 - 351 (2009)
184. R.M.M. Smeets, N.H. Dekker, C. Dekker
Low-frequency noise in solid-state nanopores
Nanotechnology 20, 095501 (2009)
183. I. Dujovne, J. Kerssemakers, G. Cappello, C. Dekker
Interference technique for minimally invasive, subnanometer, microsecond measurements of displacements
submitted
182. E. Šišáková, M. Weiserová, C. Dekker, R. Seidel, and M. D. Szczelkun
The Interrelationship of Helicase and Nuclease Domains during DNA Translocation by the Molecular Motor EcoR124I
J. Mol. Biol. 384, 1273–1286 (2008)

181. I. Dujovne, M. van den Heuvel, Y. Shen, M. de Graaff, C. Dekker
Velocity modulation of microtubules in electric fields
Nano Lett. 8, 4217–4220 (2008)
180. F.J.M. Hoeven, F.S. Meijer, C. Dekker, S.P.J. Albracht, H.A. Heering, S.J. Lemay
Towards single-enzyme voltammetry: [NiFe]-hydrogenase protein film voltammetry at nanoelectrodes
ACS Nano 2, 2497–2504 (2008)
179. D. Stein, M.G.L. van den Heuvel, and C. Dekker
Transport of ions, DNA polymers, and microtubules in the nanofluidic regime
Book chapter in 'Nanofluidics: nanoscience and nanotechnology', edited by J.B. Edel and A.J. deMello
(RSC Publ, Cambridge, 2009), p. 1-30
178. M.G.L. van den Heuvel, R. Bondesan, M. Cosentino Lagomarsino, and C. Dekker
Single-molecule observation of anomalous electro-hydrodynamic orientation of microtubules
Phys. Rev. Lett. 101, 118301 (2008)
177. M.-Y. Wu, R.M.M. Smeets, M. Zandbergen, D. Krapf, P.E. Batson, C. Dekker, N.H. Dekker, and H.W. Zandbergen
Control of shape and material composition of solid-state nanopores
Nano Lett. 9, 479-484, 2009)
176. M. van den Hout, S. Hage, C. Dekker, and N.H. Dekker
End-joining two nucleic acid polymers for single-molecule studies
Nucl. Acid. Research 36, e104 (2008)
175. F. J. M. Hoeben, I. Heller, S. P. J. Albracht, C. Dekker, S. G. Lemay, H. A. Heering
Polymyxin-Coated Au and Carbon Nanotube Electrodes for Stable [NiFe]-Hydrogenase Film Voltammetry
Langmuir 24, 5925–5931 (2008)
174. J. Männik, I. Heller, A. M. Janssens, S. G. Lemay and C. Dekker
Charge noise in liquid-gated single-wall carbon nanotube transistors
Nano Lett. 8, 685-688 (2008)
173. P. McEuen and C. Dekker
Synthesizing the future
ACS Chemical Biology 3, 10–12 (2008)
172. C. Dekker
Carbon nanotubes as molecular quantum wires
Book chapter for 'Nanotechnologie, Gentechnologie, moderne Hirnforschung - Machbarkeit und Verantwortung' (Eds. N. Boeing, P. Wolf, D. Herdt; Leipziger Universitätsverlag 2007), p. 25-40.
171. I. Heller, A.M. Janssens, J. Männik, E.D. Minot, S.G. Lemay, C. Dekker
Identifying the mechanism of biosensing with carbon nanotube transistors
Nano Letters 8, 591-595 (2008)
170. R. Seidel, J.P.G. Bloom, C. Dekker, and M.D. Szczelkun
Motor step size and ATP coupling efficiency of the dsDNA translocase EcoR124I
EMBO J. 27, 1388–1398 (2008)

169. R.M.M. Smeets, U.F. Keyser, N.H. Dekker, C. Dekker
Noise in solid-state nanopores
Proc. Natl. Acad. Sci. (USA) 105, 417-421 (2008)
168. U.F. Keyser, J. van der Does, N.H. Dekker, C. Dekker
Inserting and manipulating DNA in a nanopore with optical tweezers
Book chapter for 'Micro and Nano Technologies in Bioanalysis Methods and Protocols Series: Methods in Molecular Biology , Vol. 544 ' (Ed: James W. Lee and Robert S. Foote; Humana Press, USA, 2009) in print (July 2009)
167. D.J. Bonthuis, C. Meyer, D. Stein, C. Dekker
Conformation and dynamics of DNA confined in slit-like nanofluidic channels
Phys. Rev. Lett. 101, 108303 (2008)
166. D. Stein, Z. Deurvorst, F.H.J. van der Heyden, W.J.A. Koopmans, C. Dekker
Electrokinetic DNA Concentration in Nanofluidic Channels
Proc. Natl. Acad. Sci. (USA), under review
165. T. van der Heijden and C. Dekker
Monte Carlo simulations of protein assembly, disassembly and linear motion on DNA
Biophys. J. 95, 4560-4569 (2008)
164. M.G.L. van den Heuvel, S. Bolhuis, C. Dekker
Persistence length measurements from stochastic single-microtubule trajectories
Nano Lett. 7, 3138 -3144, 2007
163. C. Meyer, M. Zuiddam, V. Merani, S. G. Lemay, C. Dekker
Ionic currents in metal-gated nanochannels and carbon nanotubes
Proceedings of Micro Total Analysis Systems 2007, p 385 (2007)
162. E. D. Minot, A. M. Janssens, I. Heller, H. A. Heering, C. Dekker, S. G. Lemay
Carbon nanotube biosensors: the critical role of the reference electrode
Appl. Phys. Lett. 91, 093507 (2007)
161. M.G.L. van den Heuvel, M.P. de Graaff, C. Dekker
Microtubule curvatures under perpendicular electric forces reveal a low persistence length
Proc. Natl. Acad. Sci. (USA) 105, 7941-7946 (2008)
160. M.G.L. van den Heuvel and C. Dekker
Motor proteins at work for nanotechnology
Science 317, 333-336 (2007)
159. B. J. LeRoy, I. Heller, V. K. Pahilwani, C. Dekker and S. G. Lemay
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Activated dynamics in a two-dimensional Ising spin-glass $Rb_2Cu_{1-x}Co_xF_4$
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Magnetic order in the two-dimensional randomly mixed ferromagnet-antiferromagnet $Rb_2Cu_{1-x}Co_xF_4$
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Static critical behavior of the two-dimensional Ising spin glass $Rb_2Cu_{1-x}Co_xF_4$
Phys. Rev. B 38, 8985 (1988).
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Activated dynamics in the two-dimensional Ising spin-glass $Rb_2Cu_{1-x}Co_xF_4$
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Breakup of long-range order in the diluted antiferromagnet K₂Mn_xZn_{1-x}F₄ in zero magnetic field
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Monte Carlo investigation of diluted antiferromagnets in high magnetic fields
Solid State Commun. 54, 887 (1985)
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NMR study of local magnetizations in diluted two-dimensional antiferromagnets
Phys. Rev. B 32, 5787 (1985)

Invited talks

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

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

Kenniscleidoscoop 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

Marel 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

Nanotechnologie

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 conference / DPG Frühjahrstagung, 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

Illulissat, 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 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 (as a series) 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
