# Cees Dekker

## List of Publications by Year in Descending Order



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|---|---|---|---|
| 358 papers | 53,104 citations | 102 h-index | 228 g-index |
| 412 ext. papers | 58,852 ext. citations | 12.4 avg, IF | 7.9 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 358 | Single-Molecule Ionic and Optical Sensing with Nanoapertures. *Nanostructure Science and Technology*, **2022**, 367-387 | 0.9 | |
| 357 | Multiple rereads of single proteins at single-amino acid resolution using nanopores. *Science*, **2021**, eabl4381 | 353 | 48 |
| 356 | Condensin extrudes DNA loops in steps up to hundreds of base pairs that are generated by ATP binding events.. *Nucleic Acids Research*, **2021**, | 20.1 | 4 |
| 355 | Simultaneous orientation and 3D localization microscopy with a Vortex point spread function. *Nature Communications*, **2021**, 12, 5934 | 17.4 | 5 |
| 354 | FIB-milled plasmonic nanoapertures allow for long trapping times of individual proteins. *IScience*, **2021**, 24, 103237 | 6.1 | 3 |
| 353 | Genome-in-a-Box: Building a Chromosome from the Bottom Up. *ACS Nano*, **2021**, 15, 111-124 | 16.7 | 4 |
| 352 | A designer FG-Nup that reconstitutes the selective transport barrier of the nuclear pore complex. *Nature Communications*, **2021**, 12, 2010 | 17.4 | 7 |
| 351 | Nanopores: a versatile tool to study protein dynamics. *Essays in Biochemistry*, **2021**, 65, 93-107 | 7.6 | 12 |
| 350 | FtsZ treadmilling is essential for Z-ring condensation and septal constriction initiation in Bacillus subtilis cell division. *Nature Communications*, **2021**, 12, 2448 | 17.4 | 10 |
| 349 | Studying phase separation in confinement. *Current Opinion in Colloid and Interface Science*, **2021**, 52, 101419 | 7.6 | 6 |
| 348 | DNA sequence-directed cooperation between nucleoid-associated proteins. *IScience*, **2021**, 24, 102408 | 6.1 | 4 |
| 347 | : A fast and automated step detection method for single-molecule analysis. *Patterns*, **2021**, 2, 100256 | 5.1 | 8 |
| 346 | Mechanisms for Chromosome Segregation in Bacteria. *Frontiers in Microbiology*, **2021**, 12, 685687 | 5.7 | 6 |
| 345 | Reconstitution of Ultrawide DNA Origami Pores in Liposomes for Transmembrane Transport of Macromolecules. *ACS Nano*, **2021**, | 16.7 | 8 |
| 344 | Optimized cDICE for Efficient Reconstitution of Biological Systems in Giant Unilamellar Vesicles. *ACS Synthetic Biology*, **2021**, 10, 1690-1702 | 5.7 | 11 |
| 343 | The emerging landscape of single-molecule protein sequencing technologies. *Nature Methods*, **2021**, 18, 604-617 | 21.6 | 60 |
| 342 | Diagnosing point-of-care diagnostics for neglected tropical diseases. *PLoS Neglected Tropical Diseases*, **2021**, 15, e0009405 | 4.8 | 1 |

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| 341 | Bulk-surface coupling identifies the mechanistic connection between Min-protein patterns in vivo and in vitro. *Nature Communications*, **2021**, 12, 3312 | 17.4 | 4 |
| 340 | Towards a synthetic cell cycle. *Nature Communications*, **2021**, 12, 4531 | 17.4 | 7 |
| 339 | Translocation of DNA through Ultrathin Nanoslits. *Advanced Materials*, **2021**, 33, e2007682 | 24 | 6 |
| 338 | Bridging-induced phase separation induced by cohesin SMC protein complexes. *Science Advances*, **2021**, 7, | 14.3 | 38 |
| 337 | Palladium zero-mode waveguides for optical single-molecule detection with nanopores. *Nanotechnology*, **2021**, 32, 18LT01 | 3.4 | 4 |
| 336 | Nanopore electro-osmotic trap for the label-free study of single proteins and their conformations. *Nature Nanotechnology*, **2021**, 16, 1244-1250 | 28.7 | 13 |
| 335 | The NEOtrap - en route with a new single-molecule technique. *IScience*, **2021**, 24, 103007 | 6.1 | 0 |
| 334 | A Mechanically Tunable Quantum Dot in a Graphene Break Junction. *Nano Letters*, **2020**, 20, 4924-4931 | 11.5 | 4 |
| 333 | Direct observation of independently moving replisomes in Escherichia coli. *Nature Communications*, **2020**, 11, 3109 | 17.4 | 14 |
| 332 | Interplay between Confinement and Drag Forces Determine the Fate of Amyloid Fibrils. *Physical Review Letters*, **2020**, 124, 118102 | 7.4 | |
| 331 | pH-Controlled Coacervate-Membrane Interactions within Liposomes. *ACS Nano*, **2020**, 14, 4487-4498 | 16.7 | 43 |
| 330 | DNA-loop extruding condensin complexes can traverse one another. *Nature*, **2020**, 579, 438-442 | 50.4 | 55 |
| 329 | Comparing Current Noise in Biological and Solid-State Nanopores. *ACS Nano*, **2020**, 14, 1338-1349 | 16.7 | 63 |
| 328 | The condensin holocomplex cycles dynamically between open and collapsed states. *Nature Structural and Molecular Biology*, **2020**, 27, 1134-1141 | 17.6 | 29 |
| 327 | Resolving Chemical Modifications to a Single Amino Acid within a Peptide Using a Biological Nanopore. *ACS Nano*, **2019**, 13, 13668-13676 | 16.7 | 46 |
| 326 | Nano-Optical Tweezing of Single Proteins in Plasmonic Nanopores. *Small Methods*, **2019**, 3, 1800465 | 12.8 | 49 |
| 325 | A microfluidic platform for the characterisation of membrane active antimicrobials. *Lab on A Chip*, **2019**, 19, 837-844 | 7.2 | 31 |
| 324 | Electro-Mechanical Conductance Modulation of a Nanopore Using a Removable Gate. *ACS Nano*, **2019**, 13, 2398-2409 | 16.7 | 13 |

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| 323 | Cell Boundary Confinement Sets the Size and Position of the E.□coli Chromosome. *Current Biology*, **2019**, 29, 2131-2144.e4 | 6.3 | 22 |
| 322 | Shape and Size Control of Artificial Cells for Bottom-Up Biology. *ACS Nano*, **2019**, 13, 5439-5450 | 16.7 | 49 |
| 321 | Visualization of unstained DNA nanostructures with advanced in-focus phase contrast TEM techniques. *Scientific Reports*, **2019**, 9, 7218 | 4.9 | 6 |
| 320 | Bacteria-in-paper, a versatile platform to study bacterial ecology. *Ecology Letters*, **2019**, 22, 1316-1323 | 10 | 3 |
| 319 | Direct imaging of the circular chromosome in a live bacterium. *Nature Communications*, **2019**, 10, 2194 | 17.4 | 25 |
| 318 | An Integrated Microfluidic Platform for Quantifying Drug Permeation across Biomimetic Vesicle Membranes. *Molecular Pharmaceutics*, **2019**, 16, 2494-2501 | 5.6 | 22 |
| 317 | Spatiotemporal control of coacervate formation within liposomes. *Nature Communications*, **2019**, 10, 1800 | 17.4 | 87 |
| 316 | Movement dynamics of divisome proteins and PBP2x:FtsW in cells of. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 3211-3220 | 11.5 | 59 |
| 315 | Membrane Tension-Mediated Growth of Liposomes. *Small*, **2019**, 15, e1902898 | 11 | 23 |
| 314 | 1/f noise in solid-state nanopores is governed by access and surface regions. *Nanotechnology*, **2019**, 30, 395202 | 3.4 | 33 |
| 313 | Distinct Roles for Condensin's Two ATPase Sites in Chromosome Condensation. *Molecular Cell*, **2019**, 76, 724-737.e5 | 17.6 | 20 |
| 312 | Label-Free Detection of Post-translational Modifications with a Nanopore. *Nano Letters*, **2019**, 19, 7957-7964 | 11.5 | 48 |
| 311 | Synthetic life on a chip. *Emerging Topics in Life Sciences*, **2019**, 3, 559-566 | 3.5 | 6 |
| 310 | Label-Free Optical Detection of DNA Translocations through Plasmonic Nanopores. *ACS Nano*, **2019**, 13, 61-70 | 16.7 | 74 |
| 309 | Intercalating Electron Dyes for TEM Visualization of DNA at the Single-Molecule Level. *ChemBioChem*, **2019**, 20, 822-830 | 3.8 | 4 |
| 308 | Real-time imaging of DNA loop extrusion by condensin. *Science*, **2018**, 360, 102-105 | 33.3 | 357 |
| 307 | Probing DNA Translocations with Inplane Current Signals in a Graphene Nanoribbon with a Nanopore. *ACS Nano*, **2018**, 12, 2623-2633 | 16.7 | 76 |
| 306 | DNA origami scaffold for studying intrinsically disordered proteins of the nuclear pore complex. *Nature Communications*, **2018**, 9, 902 | 17.4 | 66 |

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| 305 | Reversible Immobilization of Proteins in Sensors and Solid-State Nanopores. *Small*, **2018**, 14, e1703357 | 11 | 22 |
| 304 | Mechanical Division of Cell-Sized Liposomes. *ACS Nano*, **2018**, 12, 2560-2568 | 16.7 | 55 |
| 303 | Lithography-based fabrication of nanopore arrays in freestanding SiN and graphene membranes. *Nanotechnology*, **2018**, 29, 145302 | 3.4 | 42 |
| 302 | Integrating Sub-3 nm Plasmonic Gaps into Solid-State Nanopores. *Small*, **2018**, 14, e1703307 | 11 | 22 |
| 301 | Direct observation of end resection by RecBCD during double-stranded DNA break repair in vivo. *Nucleic Acids Research*, **2018**, 46, 1821-1833 | 20.1 | 19 |
| 300 | On-chip microfluidic production of cell-sized liposomes. *Nature Protocols*, **2018**, 13, 856-874 | 18.8 | 73 |
| 299 | Double Barrel Nanopores as a New Tool for Controlling Single-Molecule Transport. *Nano Letters*, **2018**, 18, 2738-2745 | 11.5 | 50 |
| 298 | Dividing the Archaeal Way: The Ancient Cdv Cell-Division Machinery. *Frontiers in Microbiology*, **2018**, 9, 174 | 5.7 | 26 |
| 297 | FtsZ-Induced Shape Transformation of Coacervates. *Advanced Biology*, **2018**, 2, 1800136 | 3.5 | 14 |
| 296 | DNA sequence encodes the position of DNA supercoils. *ELife*, **2018**, 7, | 8.9 | 31 |
| 295 | Tailoring the appearance: what will synthetic cells look like?. *Current Opinion in Biotechnology*, **2018**, 51, 47-56 | 11.4 | 56 |
| 294 | Active Delivery of Single DNA Molecules into a Plasmonic Nanopore for Label-Free Optical Sensing. *Nano Letters*, **2018**, 18, 8003-8010 | 11.5 | 49 |
| 293 | Mechanically controlled quantum interference in graphene break junctions. *Nature Nanotechnology* , **2018**, 13, 1126-1131 | 28.7 | 43 |
| 292 | Detection of CRISPR-dCas9 on DNA with Solid-State Nanopores. *Nano Letters*, **2018**, 18, 6469-6474 | 11.5 | 52 |
| 291 | Paving the way to single-molecule protein sequencing. *Nature Nanotechnology*, **2018**, 13, 786-796 | 28.7 | 172 |
| 290 | Spatial structure of disordered proteins dictates conductance and selectivity in nuclear pore complex mimics. *ELife*, **2018**, 7, | 8.9 | 15 |
| 289 | The supercoiling state of DNA determines the handedness of both H3 and CENP-A nucleosomes. *Nanoscale*, **2017**, 9, 1862-1870 | 7.7 | 14 |
| 288 | Treadmilling by FtsZ filaments drives peptidoglycan synthesis and bacterial cell division. *Science*, **2017**, 355, 739-743 | 33.3 | 335 |

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|---|---|---|---|
| 287 | Human centromeric CENP-A chromatin is a homotypic, octameric nucleosome at all cell cycle points. *Journal of Cell Biology*, **2017**, 216, 607-621 | 7.3 | 44 |
| 286 | Nanoscience and Nanotechnology Cross Borders. *ACS Nano*, **2017**, 11, 1123-1126 | 16.7 | 3 |
| 285 | Annealing helicase HARP closes RPA-stabilized DNA bubbles non-processively. *Nucleic Acids Research*, **2017**, 45, 4687-4695 | 20.1 | 1 |
| 284 | Distortion of DNA Origami on Graphene Imaged with Advanced TEM Techniques. *Small*, **2017**, 13, 1700876 | 13.3 | 12 |
| 283 | On-chip density-based purification of liposomes. *Biomicrofluidics*, **2017**, 11, 034106 | 3.2 | 16 |
| 282 | The condensin complex is a mechanochemical motor that translocates along DNA. *Science*, **2017**, 358, 672-676 | 33.3 | 197 |
| 281 | SDS-assisted protein transport through solid-state nanopores. *Nanoscale*, **2017**, 9, 11685-11693 | 7.7 | 43 |
| 280 | Through-membrane electron-beam lithography for ultrathin membrane applications. *Applied Physics Letters*, **2017**, 111, 063105 | 3.4 | 10 |
| 279 | Catching DNA with hoops-biophysical approaches to clarify the mechanism of SMC proteins. *Nature Structural and Molecular Biology*, **2017**, 24, 1012-1020 | 17.6 | 9 |
| 278 | Real-time detection of condensin-driven DNA compaction reveals a multistep binding mechanism. *EMBO Journal*, **2017**, 36, 3448-3457 | 13 | 55 |
| 277 | Nanofabricated structures and microfluidic devices for bacteria: from techniques to biology. *Chemical Society Reviews*, **2016**, 45, 268-80 | 58.5 | 57 |
| 276 | Density-dependent adaptive resistance allows swimming bacteria to colonize an antibiotic gradient. *ISME Journal*, **2016**, 10, 30-8 | 11.9 | 25 |
| 275 | Direct observation of DNA knots using a solid-state nanopore. *Nature Nanotechnology*, **2016**, 11, 1093-1097 | 28.7 | 155 |
| 274 | Mechanical Trapping of DNA in a Double-Nanopore System. *Nano Letters*, **2016**, 16, 8021-8028 | 11.5 | 47 |
| 273 | In-situ electrical measurements of Graphene Nanoribbons fabricated through Scanning Transmission Electron Microscopy **2016**, 411-412 | | |
| 272 | Condensin Smc2-Smc4 Dimers Are Flexible and Dynamic. *Cell Reports*, **2016**, 14, 1813-8 | 10.6 | 69 |
| 271 | Intercalation-Based Single-Molecule Fluorescence Assay To Study DNA Supercoil Dynamics. *Nano Letters*, **2016**, 16, 4699-707 | 11.5 | 35 |
| 270 | Octanol-assisted liposome assembly on chip. *Nature Communications*, **2016**, 7, 10447 | 17.4 | 186 |

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| 269 | Bacterial predator-prey dynamics in microscale patchy landscapes. *Proceedings of the Royal Society B: Biological Sciences*, **2016**, 283, | 4.4 | 38 |
| 268 | Graphene nanodevices for DNA sequencing. *Nature Nanotechnology*, **2016**, 11, 127-36 | 28.7 | 398 |
| 267 | New technologies for DNA analysis--a review of the READNA Project. *New Biotechnology*, **2016**, 33, 311-30 | 3.4 | 10 |
| 266 | CENP-A and H3 Nucleosomes Display a Similar Stability to Force-Mediated Disassembly. *PLoS ONE*, **2016**, 11, e0165078 | 3.7 | 9 |
| 265 | Mapping out Min protein patterns in fully confined fluidic chambers. *ELife*, **2016**, 5, | 8.9 | 46 |
| 264 | Multistability and dynamic transitions of intracellular Min protein patterns. *Molecular Systems Biology*, **2016**, 12, 873 | 12.2 | 44 |
| 263 | CRISPR-mediated control of the bacterial initiation of replication. *Nucleic Acids Research*, **2016**, 44, 3801-10 | 10.1 | 30 |
| 262 | Data analysis methods for solid-state nanopores. *Nanotechnology*, **2015**, 26, 084003 | 3.4 | 92 |
| 261 | Two distinct DNA binding modes guide dual roles of a CRISPR-Cas protein complex. *Molecular Cell*, **2015**, 58, 60-70 | 17.6 | 85 |
| 260 | DNA nanopore translocation in glutamate solutions. *Nanoscale*, **2015**, 7, 13605-9 | 7.7 | 14 |
| 259 | Symmetry and scale orient Min protein patterns in shaped bacterial sculptures. *Nature Nanotechnology*, **2015**, 10, 719-26 | 28.7 | 76 |
| 258 | Controlling defects in graphene for optimizing the electrical properties of graphene nanodevices. *ACS Nano*, **2015**, 9, 3428-35 | 16.7 | 179 |
| 257 | Detection of Individual Proteins Bound along DNA Using Solid-State Nanopores. *Nano Letters*, **2015** , 15, 3153-8 | 11.5 | 103 |
| 256 | Plasmonic Nanopores for Trapping, Controlling Displacement, and Sequencing of DNA. *ACS Nano*, **2015**, 9, 10598-611 | 16.7 | 117 |
| 255 | The idiosyncrasy of spatial structure in bacterial competition. *BMC Research Notes*, **2015**, 8, 245 | 2.3 | 19 |
| 254 | Self-Aligned Plasmonic Nanopores by Optically Controlled Dielectric Breakdown. *Nano Letters*, **2015**, 15, 7112-7 | 11.5 | 49 |
| 253 | Dynamics of nucleosomal structures measured by high-speed atomic force microscopy. *Small*, **2015**, 11, 976-84 | 11 | 29 |
| 252 | Science and technology roadmap for graphene, related two-dimensional crystals, and hybrid systems. *Nanoscale*, **2015**, 7, 4598-810 | 7.7 | 2015 |

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| 251 | Copper-free click chemistry for attachment of biomolecules in magnetic tweezers. *BMC Biophysics*, **2015**, 8, 9 | 0 | 22 |
| 250 | Single-molecule sensing with nanopores. *Physics Today*, **2015**, 68, 40-46 | 0.9 | 47 |
| 249 | Multi-color imaging of the bacterial nucleoid and division proteins with blue, orange, and near-infrared fluorescent proteins. *Frontiers in Microbiology*, **2015**, 6, 607 | 5.7 | 20 |
| 248 | Comparing the Assembly and Handedness Dynamics of (H3.3-H4)2 Tetrasomes to Canonical Tetrasomes. *PLoS ONE*, **2015**, 10, e0141267 | 3.7 | 11 |
| 247 | Counterintuitive DNA Sequence Dependence in Supercoiling-Induced DNA Melting. *PLoS ONE*, **2015** , 10, e0141576 | 3.7 | 17 |
| 246 | Temperature dependence of DNA translocations through solid-state nanopores. *Nanotechnology*, **2015**, 26, 234004 | 3.4 | 30 |
| 245 | Photoresistance switching of plasmonic nanopores. *Nano Letters*, **2015**, 15, 776-82 | 11.5 | 35 |
| 244 | Velocity of DNA during translocation through a solid-state nanopore. *Nano Letters*, **2015**, 15, 732-7 | 11.5 | 78 |
| 243 | 1/f noise in graphene nanopores. *Nanotechnology*, **2015**, 26, 074001 | 3.4 | 82 |
| 242 | Nucleosome assembly dynamics involve spontaneous fluctuations in the handedness of tetrasomes. *Cell Reports*, **2015**, 10, 216-25 | 10.6 | 33 |
| 241 | Experimental phase diagram of negatively supercoiled DNA measured by magnetic tweezers and fluorescence. *Nanoscale*, **2015**, 7, 3205-16 | 7.7 | 19 |
| 240 | Systems and synthetic biology approaches to cell division. *Systems and Synthetic Biology*, **2014**, 8, 173-8 | | 4 |
| 239 | Ionic permeability and mechanical properties of DNA origami nanoplates on solid-state nanopores. *ACS Nano*, **2014**, 8, 35-43 | 16.7 | 68 |
| 238 | A simple self-calibrating method to measure the height of fluorescent molecules and beads at nanoscale resolution. *Nano Letters*, **2014**, 14, 4469-75 | 11.5 | 3 |
| 237 | Divided we stand: splitting synthetic cells for their proliferation. *Systems and Synthetic Biology*, **2014**, 8, 249-69 | | 33 |
| 236 | Nutrient-responsive regulation determines biodiversity in a colicin-mediated bacterial community. *BMC Biology*, **2014**, 12, 68 | 7.3 | 25 |
| 235 | Skewed brownian fluctuations in single-molecule magnetic tweezers. *PLoS ONE*, **2014**, 9, e108271 | 3.7 | 8 |
| 234 | Zooming in to see the bigger picture: microfluidic and nanofabrication tools to study bacteria. *Science*, **2014**, 346, 1251821 | 33.3 | 132 |

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| 233 | DNA translocations through solid-state plasmonic nanopores. *Nano Letters*, **2014**, 14, 6917-25 | 11.5 | 110 |
| 232 | Fast translocation of proteins through solid state nanopores. *Nano Letters*, **2013**, 13, 658-63 | 11.5 | 256 |
| 231 | Tailoring the hydrophobicity of graphene for its use as nanopores for DNA translocation. *Nature Communications*, **2013**, 4, 2619 | 17.4 | 142 |
| 230 | Periodic modulations of optical tweezers near solid-state membranes. *Small*, **2013**, 9, 679-84 | 11 | 5 |
| 229 | Plasmonic nanopore for electrical profiling of optical intensity landscapes. *Nano Letters*, **2013**, 13, 1029-33 | 11.5 | 81 |
| 228 | Controllable atomic scale patterning of freestanding monolayer graphene at elevated temperature. *ACS Nano*, **2013**, 7, 1566-72 | 16.7 | 90 |
| 227 | Non-equilibrium folding of individual DNA molecules recaptured up to 1000 times in a solid state nanopore. *Nanotechnology*, **2013**, 24, 475101 | 3.4 | 27 |
| 226 | Scanning a DNA molecule for bound proteins using hybrid magnetic and optical tweezers. *PLoS ONE*, **2013**, 8, e65329 | 3.7 | 17 |
| 225 | Spatial structure facilitates cooperation in a social dilemma: empirical evidence from a bacterial community. *PLoS ONE*, **2013**, 8, e77042 | 3.7 | 43 |
| 224 | Detection of nucleosomal substructures using solid-state nanopores. *Nano Letters*, **2012**, 12, 3180-6 | 11.5 | 55 |
| 223 | Recent advances in magnetic tweezers. *Annual Review of Biophysics*, **2012**, 41, 453-72 | 21.1 | 244 |
| 222 | Mechanism of homology recognition in DNA recombination from dual-molecule experiments. *Molecular Cell*, **2012**, 46, 616-24 | 17.6 | 66 |
| 221 | Formation and control of wrinkles in graphene by the wedging transfer method. *Applied Physics Letters*, **2012**, 101, 103116 | 3.4 | 102 |
| 220 | Non-bias-limited tracking of spherical particles, enabling nanometer resolution at low magnification. *Biophysical Journal*, **2012**, 102, 2362-71 | 2.9 | 74 |
| 219 | Measuring single-wall carbon nanotubes with solid-state nanopores. *Methods in Molecular Biology*, **2012**, 870, 227-39 | 1.4 | 3 |
| 218 | Measurement of the docking time of a DNA molecule onto a solid-state nanopore. *Nano Letters*, **2012**, 12, 4159-63 | 11.5 | 52 |
| 217 | Slowing down DNA translocation through a nanopore in lithium chloride. *Nano Letters*, **2012**, 12, 1038-44 | 11.5 | 278 |
| 216 | Rapid manufacturing of low-noise membranes for nanopore sensors by trans-chip illumination lithography. *Nanotechnology*, **2012**, 23, 475302 | 3.4 | 24 |

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| 215 | Reply to Comment on 'Modeling the conductance and DNA blockade of solid-state nanopores'. *Nanotechnology*, **2012**, 23, 088002 | 3.4 | 3 |
| 214 | Dynamics of DNA supercoils. *Science*, **2012**, 338, 94-7 | 33.3 | 140 |
| 213 | Robustness and accuracy of cell division in Escherichia coli in diverse cell shapes. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 6957-62 | 11.5 | 82 |
| 212 | Magnetic forces and DNA mechanics in multiplexed magnetic tweezers. *PLoS ONE*, **2012**, 7, e41432 | 3.7 | 55 |
| 211 | NAP1-assisted nucleosome assembly on DNA measured in real time by single-molecule magnetic tweezers. *PLoS ONE*, **2012**, 7, e46306 | 3.7 | 26 |
| 210 | Molecular Detection and Force Spectroscopy in Solid-State Nanopores with Integrated Optical Tweezers **2011**, 35-49 | | |
| 209 | Modeling the conductance and DNA blockade of solid-state nanopores. *Nanotechnology*, **2011**, 22, 315101 | 3.4 | 301 |
| 208 | Single-molecule transport across an individual biomimetic nuclear pore complex. *Nature Nanotechnology*, **2011**, 6, 433-8 | 28.7 | 190 |
| 207 | High-speed AFM reveals the dynamics of single biomolecules at the nanometer scale. *Cell*, **2011**, 147, 979-82 | 56.2 | 66 |
| 206 | Biomimetic nanopores: learning from and about nature. *Trends in Biotechnology*, **2011**, 29, 607-14 | 15.1 | 140 |
| 205 | Highly parallel magnetic tweezers by targeted DNA tethering. *Nano Letters*, **2011**, 11, 5489-93 | 11.5 | 89 |
| 204 | Translocation of single-wall carbon nanotubes through solid-state nanopores. *Nano Letters*, **2011**, 11, 2446-50 | 11.5 | 24 |
| 203 | Atomic-scale electron-beam sculpting of near-defect-free graphene nanostructures. *Nano Letters*, **2011**, 11, 2247-50 | 11.5 | 217 |
| 202 | Effect of the BRCA2 CTRD domain on RAD51 filaments analyzed by an ensemble of single molecule techniques. *Nucleic Acids Research*, **2011**, 39, 6558-67 | 20.1 | 10 |
| 201 | Hybrid pore formation by directed insertion of 'haemolysin into solid-state nanopores. *Nature Nanotechnology*, **2010**, 5, 874-7 | 28.7 | 231 |
| 200 | Torsional regulation of hRPA-induced unwinding of double-stranded DNA. *Nucleic Acids Research*, **2010**, 38, 4133-42 | 20.1 | 38 |
| 199 | Controlling nanopore size, shape and stability. *Nanotechnology*, **2010**, 21, 115304 | 3.4 | 100 |
| 198 | Detection of local protein structures along DNA using solid-state nanopores. *Nano Letters*, **2010**, 10, 324-8 | 11.5 | 197 |

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| 197 | Unraveling single-stranded DNA in a solid-state nanopore. *Nano Letters*, **2010**, 10, 1414-20 | 11.5 | 88 |
| 196 | Influence of electrolyte composition on liquid-gated carbon nanotube and graphene transistors. *Journal of the American Chemical Society*, **2010**, 132, 17149-56 | 16.4 | 139 |
| 195 | Wedging transfer of nanostructures. *Nano Letters*, **2010**, 10, 1912-6 | 11.5 | 153 |
| 194 | Charge noise in graphene transistors. *Nano Letters*, **2010**, 10, 1563-7 | 11.5 | 94 |
| 193 | Electrokinetic concentration of DNA polymers in nanofluidic channels. *Nano Letters*, **2010**, 10, 765-72 | 11.5 | 65 |
| 192 | Note: Interference technique for minimally invasive, subnanometer, microsecond measurements of displacements. *Review of Scientific Instruments*, **2010**, 81, 016103 | 1.7 | |
| 191 | DNA translocation through graphene nanopores. *Nano Letters*, **2010**, 10, 3163-7 | 11.5 | 782 |
| 190 | Bacterial growth and motility in sub-micron constrictions. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 14861-6 | 11.5 | 195 |
| 189 | Electrophoretic force on a protein-coated DNA molecule in a solid-state nanopore. *Nano Letters*, **2009**, 9, 4441-5 | 11.5 | 59 |
| 188 | Dynamics of RecA filaments on single-stranded DNA. *Nucleic Acids Research*, **2009**, 37, 4089-99 | 20.1 | 66 |
| 187 | Low-frequency noise in solid-state nanopores. *Nanotechnology*, **2009**, 20, 095501 | 3.4 | 73 |
| 186 | Probing macrophage activity with carbon-nanotube sensors. *Small*, **2009**, 5, 2528-32 | 11 | 23 |
| 185 | Origin of the electrophoretic force on DNA in solid-state nanopores. *Nature Physics*, **2009**, 5, 347-351 | 16.2 | 287 |
| 184 | Comparing the weak and strong gate-coupling regimes for nanotube and graphene transistors. *Physica Status Solidi - Rapid Research Letters*, **2009**, 3, 190-192 | 2.5 | 10 |
| 183 | Translocation of RecA-coated double-stranded DNA through solid-state nanopores. *Nano Letters*, **2009**, 9, 3089-96 | 11.5 | 118 |
| 182 | Distinguishing single- and double-stranded nucleic acid molecules using solid-state nanopores. *Nano Letters*, **2009**, 9, 2953-60 | 11.5 | 127 |
| 181 | Control of shape and material composition of solid-state nanopores. *Nano Letters*, **2009**, 9, 479-84 | 11.5 | 88 |
| 180 | Optimizing the signal-to-noise ratio for biosensing with carbon nanotube transistors. *Nano Letters*, **2009**, 9, 377-82 | 11.5 | 68 |

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| 179 | Solid-state nanopores **2009**, 60-66 | | 1 |
| 178 | Inserting and manipulating DNA in a nanopore with optical tweezers. *Methods in Molecular Biology*, **2009**, 544, 95-112 | 1.4 | 7 |
| 177 | Motor step size and ATP coupling efficiency of the dsDNA translocase EcoR124I. *EMBO Journal*, **2008**, 27, 1388-98 | 13 | 58 |
| 176 | Monte carlo simulations of protein assembly, disassembly, and linear motion on DNA. *Biophysical Journal*, **2008**, 95, 4560-9 | 2.9 | 7 |
| 175 | Toward single-enzyme molecule electrochemistry: [NiFe]-hydrogenase protein film voltammetry at nanoelectrodes. *ACS Nano*, **2008**, 2, 2497-504 | 16.7 | 85 |
| 174 | The interrelationship of helicase and nuclease domains during DNA translocation by the molecular motor EcoR124I. *Journal of Molecular Biology*, **2008**, 384, 1273-86 | 6.5 | 16 |
| 173 | Homologous recombination in real time: DNA strand exchange by RecA. *Molecular Cell*, **2008**, 30, 530-8 | 17.6 | 77 |
| 172 | Identifying the mechanism of biosensing with carbon nanotube transistors. *Nano Letters*, **2008**, 8, 591-5 | 11.5 | 355 |
| 171 | Synthesizing the future. *ACS Chemical Biology*, **2008**, 3, 10-2 | 4.9 | 3 |
| 170 | Polymyxin-coated Au and carbon nanotube electrodes for stable [NiFe]-hydrogenase film voltammetry. *Langmuir*, **2008**, 24, 5925-31 | 4 | 34 |
| 169 | Charge noise in liquid-gated single-wall carbon nanotube transistors. *Nano Letters*, **2008**, 8, 685-8 | 11.5 | 47 |
| 168 | Microtubule curvatures under perpendicular electric forces reveal a low persistence length. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 7941-6 | 11.5 | 58 |
| 167 | Noise in solid-state nanopores. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 417-21 | 11.5 | 265 |
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| 19 | Treadmilling by FtsZ filaments drives peptidoglycan synthesis and bacterial cell division | | 4 |
| 18 | The condensin complex is a mechanochemical motor that translocates along DNA | | 6 |

# List of Publications

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| 17 | Real-time detection of condensin-driven DNA compaction reveals a multistep binding mechanism | 3 |
| 16 | DNA sequence encodes the position of DNA supercoils | 2 |
| 15 | AFM images of open and collapsed states of yeast condensin suggest a scrunching model for DNA loop extrusion | 4 |
| 14 | Bulk-surface coupling reconciles Min-protein pattern formation in vitro and in vivo | 5 |
| 13 | Phase separation induced by cohesin SMC protein complexes | 8 |
| 12 | FtsZ treadmilling is essential for Z-ring condensation and septal constriction initiation in Bacillus subtilis cell division | 5 |
| 11 | Resolving the step size in condensin-driven DNA loop extrusion identifies ATP binding as the step-generating process | 8 |
| 10 | Direct imaging of the circular chromosome in a live bacterium | 2 |
| 9 | Cell boundary confinement sets the size and position of theE. colichromosome | 4 |
| 8 | DNA-loop extruding condensin complexes can traverse one another | 4 |
| 7 | Nanopore electro-osmotic trap for the label-free study of single proteins and their conformations | 4 |
| 6 | Condensin-driven loop extrusion on supercoiled DNA | 1 |
| 5 | Infinite re-reading of single proteins at single-amino-acid resolution using nanopore sequencing | 3 |
| 4 | Optimized cDICE for efficient reconstitution of biological systems in giant unilamellar vesicles | 2 |
| 3 | Reconstitution of ultrawide DNA origami pores in liposomes for transmembrane transport of macromolecules | 1 |
| 2 | SMC complexes can traverse physical roadblocks bigger than their ring size | 10 |
| 1 | Probing nanomotion of single bacteria with graphene drums | 1 |