# Erwin J G Peterman

List of Publications by Year
in descending order



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|---|---|---|---|
| 122 papers | 7,860 citations | 43973 48 h-index | 56606 83 g-index |
| 131 all docs | 131 docs citations | 131 times ranked | 7364 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Duplex DNA and BLM regulate gate opening by the human TopoIIIÎ±-RMI1-RMI2 complex. Nature Communications, 2022, 13, 584. | 5.8 | 8 |
| 2 | Extreme mechanics of colloidal polymers under compression: Buckling, creep, and break-up. Physical Review Materials, 2022, 6, . | 0.9 | 2 |
| 3 | Nonlinear mechanics of human mitotic chromosomes. Nature, 2022, 605, 545-550. | 13.7 | 30 |
| 4 | Quantitative Acoustophoresis. ACS Nanoscience Au, 2022, 2, 341-354. | 2.0 | 4 |
| 5 | Imaging adult C. elegans live using lightâ€sheet microscopy. Journal of Microscopy, 2021, 281, 214-223. | 0.8 | 8 |
| 6 | Unravelling the mechanisms of Type 1A topoisomerases using single-molecule approaches. Nucleic Acids Research, 2021, 49, 5470-5492. | 6.5 | 12 |
| 7 | Elucidating the Role of Topological Constraint on the Structure of Overstretched DNA Using Fluorescence Polarization Microscopy. Journal of Physical Chemistry B, 2021, 125, 8351-8361. | 1.2 | 4 |
| 8 | The Mechanics of Mitotic Chromosomes. Quarterly Reviews of Biophysics, 2021, 54, 1-41. | 2.4 | 8 |
| 9 | Direct imaging of intraflagellar-transport turnarounds reveals that motors detach, diffuse, and reattach to opposite-direction trains. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, . | 3.3 | 12 |
| 10 | Constructing arrays of nucleosome positioning sequences using Gibson Assembly for single-molecule studies. Scientific Reports, 2020, 10, 9903. | 1.6 | 20 |
| 11 | The temperature dependence of kinesin motor-protein mechanochemistry. Biochemical and Biophysical Research Communications, 2020, 529, 812-818. | 1.0 | 5 |
| 12 | Imaging unlabeled proteins on DNA with super-resolution. Nucleic Acids Research, 2020, 48, e34-e34. | 6.5 | 10 |
| 13 | The crowding dynamics of the motor protein kinesin-II. PLoS ONE, 2020, 15, e0228930. | 1.1 | 8 |
| 14 | Cutting off ciliary protein import: intraflagellar transport after dendritic femtosecond-laser ablation. Molecular Biology of the Cell, 2020, 31, 324-334. | 0.9 | 5 |
| 15 | Motor Proteins: It Runs in the Family, but at Different Speeds. Current Biology, 2020, 30, R282-R285. | 1.8 | 0 |
| 16 | Single-molecule polarization microscopy of DNA intercalators sheds light on the structure of S-DNA. Science Advances, 2019, 5, eaav1083. | 4.7 | 42 |
| 17 | Supercoiling DNA optically. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 26534-26539. | 3.3 | 23 |
| 18 | Two distinct conformational states define the interaction of human <scp>RAD</scp> 51â€• <scp>ATP</scp> with singleâ€stranded <scp>DNA</scp>. EMBO Journal, 2018, 37, . | 3.5 | 58 |

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| --- | --- | --- | --- |
| 19 | Quantifying Local Molecular Tension Using Intercalated DNA Fluorescence. Nano Letters, 2018, 18, 2274-2281. | 4.5 | 17 |
| 20 | A Brief Introduction to Single-Molecule Fluorescence Methods. Methods in Molecular Biology, 2018, 1665, 93-113. | 0.4 | 8 |
| 21 | Single-Molecule Fluorescence Microscopy in Living Caenorhabditis elegans. Methods in Molecular Biology, 2018, 1665, 145-154. | 0.4 | 11 |
| 22 | Single-Molecule Turnarounds of Intraflagellar Transport at the C.Âelegans Ciliary Tip. Cell Reports, 2018, 25, 1701-1707.e2. | 2.9 | 35 |
| 23 | Interplay between Ciliary Ultrastructure and IFT-Train Dynamics Revealed by Single-Molecule Super-resolution Imaging. Cell Reports, 2018, 25, 224-235. | 2.9 | 22 |
| 24 | Single-Cell Acoustic Force Spectroscopy: Resolving Kinetics and Strength of T Cell Adhesion to Fibronectin. Cell Reports, 2018, 24, 3008-3016. | 2.9 | 33 |
| 25 | Reconstitution of anaphase DNA bridge recognition and disjunction. Nature Structural and Molecular Biology, 2018, 25, 868-876. | 3.6 | 38 |
| 26 | Adaptive optics via self-interference digital holography for non-scanning three-dimensional imaging in biological samples. Biomedical Optics Express, 2018, 9, 2614. | 1.5 | 11 |
| 27 | A polarized view on DNA under tension. Journal of Chemical Physics, 2018, 148, 123306. | 1.2 | 13 |
| 28 | Viscoelastic properties of vimentin originate from nonequilibrium conformational changes. Science Advances, 2018, 4, eaat1161. | 4.7 | 52 |
| 29 | Recent Advances in Biological Single-Molecule Applications of Optical Tweezers and Fluorescence Microscopy. Methods in Enzymology, 2017, 582, 85-119. | 0.4 | 66 |
| 30 | Ensemble and single-molecule dynamics of IFT dynein in Caenorhabditis elegans cilia. Nature Communications, 2017, 8, 14591. | 5.8 | 48 |
| 31 | Nonlinear Loading-Rate-Dependent Force Response of Individual Vimentin Intermediate Filaments to Applied Strain. Physical Review Letters, 2017, 118, 048101. | 2.9 | 84 |
| 32 | Switching between Exonucleolysis and Replication by T7 DNA Polymerase Ensures High Fidelity. Biophysical Journal, 2017, 112, 575-583. | 0.2 | 32 |
| 33 | Human RAD52 Captures and Holds DNA Strands, Increases DNA Flexibility, and Prevents Melting of Duplex DNA: Implications for DNA Recombination. Cell Reports, 2017, 18, 2845-2853. | 2.9 | 31 |
| 34 | Intraflagellar transport: mechanisms of motor action, cooperation, and cargo delivery. FEBS Journal, 2017, 284, 2905-2931. | 2.2 | 173 |
| 35 | Programming the mechanics of cohesive fiber networks by compression. Soft Matter, 2017, 13, 8886-8893. | 1.2 | 23 |
| 36 | Correlation Imaging Reveals Specific Crowding Dynamics of Kinesin Motor Proteins. Physical Review X, 2017, 7, . | 2.8 | 12 |

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| 37 | Hyperstretching DNA. Nature Communications, 2017, 8, 2197. | 5.8 | 28 |
| 38 | Probing DNAâ€"DNA Interactions with a Combination of Quadruple-Trap Optical Tweezers and Microfluidics. Methods in Molecular Biology, 2017, 1486, 275-293. | 0.4 | 7 |
| 39 | Versatile Quadruple-Trap Optical Tweezers for Dual DNA Experiments. Methods in Molecular Biology, 2017, 1486, 257-272. | 0.4 | 10 |
| 40 | Single-molecule observation of DNA compaction by meiotic protein SYCP3. ELife, 2017, 6, . | 2.8 | 36 |
| 41 | Unravelling the structural plasticity of stretched DNA under torsional constraint. Nature Communications, 2016, 7, 11810. | 5.8 | 22 |
| 42 | Why motor proteins team up - Intraflagellar transport inC. eleganscilia. Worm, 2016, 5, e1170275. | 1.0 | 4 |
| 43 | Tuning the Music: Acoustic Force Spectroscopy (AFS) 2.0. Methods, 2016, 105, 26-33. | 1.9 | 51 |
| 44 | High-resolution real-time dual-view imaging with multiple point of view microscopy. Biomedical Optics Express, 2016, 7, 3631. | 1.5 | 10 |
| 45 | Fibrin Networks Support Recurring Mechanical Loads by Adapting their Structure across Multiple Scales. Biophysical Journal, 2016, 111, 1026-1034. | 0.2 | 51 |
| 46 | Sliding sleeves of XRCC4â€"XLF bridge DNA and connect fragments of broken DNA. Nature, 2016, 535, 566-569. | 13.7 | 137 |
| 47 | <i>KymographClear</i> and <i>KymographDirect</i>: two tools for the automated quantitative analysis of molecular and cellular dynamics using kymographs. Molecular Biology of the Cell, 2016, 27, 1948-1957. | 0.9 | 172 |
| 48 | Kinesin's gait captured. Nature Chemical Biology, 2016, 12, 206-207. | 3.9 | 1 |
| 49 | MreB-Dependent Organization of the E.Âcoli Cytoplasmic Membrane Controls Membrane Protein Diffusion. Biophysical Journal, 2016, 110, 1139-1149. | 0.2 | 72 |
| 50 | Optical Pushing: A Tool for Parallelized Biomolecule Manipulation. Biophysical Journal, 2016, 110, 44-50. | 0.2 | 10 |
| 51 | The impact of DNA intercalators on DNA and DNA-processing enzymes elucidated through force-dependent binding kinetics. Nature Communications, 2015, 6, 7304. | 5.8 | 157 |
| 52 | Functional differentiation of cooperating kinesin-2 motors orchestrates cargo import and transport in C.Âelegans cilia. Nature Cell Biology, 2015, 17, 1536-1545. | 4.6 | 146 |
| 53 | Acoustic force spectroscopy. Nature Methods, 2015, 12, 47-50. | 9.0 | 185 |
| 54 | Small steps and giant leaps. ELife, 2015, 4, . | 2.8 | 1 |

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| 55 | FÃ¶rster resonance energy transfer and kinesin motor proteins. Chemical Society Reviews, 2014, 43, 1144-1155. | 18.7 | 52 |
| 56 | Optical Tweezers Analysis of DNAâ€"Protein Complexes. Chemical Reviews, 2014, 114, 3087-3119. | 23.0 | 160 |
| 57 | Imaging and quantification of trans-membrane protein diffusion in living bacteria. Physical Chemistry Chemical Physics, 2014, 16, 12625-12634. | 1.3 | 43 |
| 58 | Visualization and quantification of nascent RAD51 filament formation at single-monomer resolution. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 15090-15095. | 3.3 | 81 |
| 59 | Mobility Analysis of Superâ€Resolved Proteins on Optically Stretched DNA: Comparing Imaging Techniques and Parameters. ChemPhysChem, 2014, 15, 727-733. | 1.0 | 22 |
| 60 | STED nanoscopy combined with optical tweezers reveals protein dynamics on densely covered DNA. Nature Methods, 2013, 10, 910-916. | 9.0 | 203 |
| 61 | PICH: A DNA Translocase Specially Adapted for Processing Anaphase Bridge DNA. Molecular Cell, 2013, 51, 691-701. | 4.5 | 86 |
| 62 | A toolbox for generating singleâ€stranded DNA in optical tweezers experiments. Biopolymers, 2013, 99, 611-620. | 1.2 | 48 |
| 63 | Single-molecule views on homologous recombination. Quarterly Reviews of Biophysics, 2013, 46, 323-348. | 2.4 | 20 |
| 64 | Revealing the competition between peeled ssDNA, melting bubbles, and S-DNA during DNA overstretching using fluorescence microscopy. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 3859-3864. | 3.3 | 147 |
| 65 | Protein sliding and DNA denaturation are essential for DNA organization by human mitochondrial transcription factor A. Nature Communications, 2012, 3, 1013. | 5.8 | 101 |
| 66 | Combining optical trapping, fluorescence microscopy and micro-fluidics for single molecule studies of DNAâ€"protein interactions. Physical Chemistry Chemical Physics, 2011, 13, 7263. | 1.3 | 83 |
| 67 | A Brief Introduction to Single-Molecule Fluorescence Methods. Methods in Molecular Biology, 2011, 783, 81-99. | 0.4 | 12 |
| 68 | Studying Kinesinâ€™s Enzymatic Cycle Using a Single-Motor Confocal Motility Assay, Employing FÃ¶rster Resonance Energy Transfer. Methods in Molecular Biology, 2011, 778, 19-32. | 0.4 | 1 |
| 69 | Quantifying how DNA stretches, melts and changes twist under tension. Nature Physics, 2011, 7, 731-736. | 6.5 | 217 |
| 70 | How to quantify protein diffusion in the bacterial membrane. Biopolymers, 2011, 95, 312-321. | 1.2 | 35 |
| 71 | Experimental demonstration of an intensity minimum at the focus of a laser beam created by spatial coherence. , 2011, , . | | 0 |
| 72 | Biophysics of DNAâ€"ligand interactions resolved by force. Physics of Life Reviews, 2010, 7, 344-345. | 1.5 | 1 |

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| 73 | Structure and Dynamics of the Kinesinâ€“Microtubule Interaction Revealed by Fluorescence Polarization Microscopy. Methods in Cell Biology, 2010, 95, 505-519. | 0.5 | 8 |
| 74 | Combining Optical Tweezers, Single-Molecule Fluorescence Microscopy, and Microfluidics for Studies of DNAâ€“Protein Interactions. Methods in Enzymology, 2010, 475, 427-453. | 0.4 | 84 |
| 75 | Experimental demonstration of an intensity minimum at the focus of a laser beam created by spatial coherence: application to the optical trapping of dielectric particles. Optics Letters, 2010, 35, 4166. | 1.7 | 30 |
| 76 | The Effect of Monastrol on the Processive Motility of a Dimeric Kinesin-5 Head/Kinesin-1 Stalk Chimera. Journal of Molecular Biology, 2010, 399, 1-8. | 2.0 | 23 |
| 77 | Single Molecule Experiments and the Kinesin Motor Protein Superfamily. , 2009, , 35-60. | | 5 |
| 78 | Unraveling the structure of DNA during overstretching by using multicolor, single-molecule fluorescence imaging. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 18231-18236. | 3.3 | 258 |
| 79 | Kinesin's step dissected with single-motor FRET. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 17741-17746. | 3.3 | 33 |
| 80 | Mitotic Microtubule Crosslinkers: Insights from Mechanistic Studies. Current Biology, 2009, 19, R1089-R1094. | 1.8 | 75 |
| 81 | Counting RAD51 proteins disassembling from nucleoprotein filaments under tension. Nature, 2009, 457, 745-748. | 13.7 | 162 |
| 82 | Dissociation Kinetics of the GroELâ^'gp31 Chaperonin Complex Studied with FÃ¶rster Resonance Energy Transfer. Biochemistry, 2009, 48, 11692-11698. | 1.2 | 2 |
| 83 | Single-shot two-dimensional full-range optical coherence tomography achieved by dispersion control. Optics Express, 2009, 17, 11335. | 1.7 | 23 |
| 84 | Alternating-Site Mechanism of Kinesin-1 Characterized by Single-Molecule FRET Using Fluorescent ATP Analogues. Biophysical Journal, 2009, 97, 173-182. | 0.2 | 16 |
| 85 | Novel Ways to Determine Kinesin-1's Run Length and Randomness Using Fluorescence Microscopy. Biophysical Journal, 2009, 97, 2287-2294. | 0.2 | 22 |
| 86 | Microtubule-Driven Multimerization Recruits ase1p onto Overlapping Microtubules. Current Biology, 2008, 18, 1713-1717. | 1.8 | 89 |
| 87 | The Homotetrameric Kinesin-5 KLP61F Preferentially Crosslinks Microtubules into Antiparallel Orientations. Current Biology, 2008, 18, 1860-1864. | 1.8 | 113 |
| 88 | See me, feel me: methods to concurrently visualize and manipulate single DNA molecules and associated proteins. Nucleic Acids Research, 2008, 36, 4381-4389. | 6.5 | 88 |
| 89 | Microtubule cross-linking triggers the directional motility of kinesin-5. Journal of Cell Biology, 2008, 182, 421-428. | 2.3 | 138 |
| 90 | Manipulating and imaging molecular motors with optical traps, single-molecule fluorescence and atomic force microscopy. , 2008, , 217-218. | | 0 |

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| 91 | The dynamics of the GroELâ€gp31 chaperonin complex studied with fluorescence spectroscopy. FASEB Journal, 2008, 22, 1001.5. | 0.2 | 0 |
| 92 | Kinesin Moving through the Spotlight: Single-Motor Fluorescence Microscopy with Submillisecond Time Resolution. Biophysical Journal, 2007, 92, 2536-2545. | 0.2 | 30 |
| 93 | Fluorescent Human RAD51 Reveals Multiple Nucleation Sites and Filament Segments Tightly Associated along a Single DNA Molecule. Structure, 2007, 15, 599-609. | 1.6 | 73 |
| 94 | Dissecting Elastic Heterogeneity along DNA Molecules Coated Partly with Rad51 Using Concurrent Fluorescence Microscopy and Optical Tweezers. Biophysical Journal, 2006, 91, L78-L80. | 0.2 | 47 |
| 95 | Allosteric inhibition of kinesin-5 modulates its processive directional motility. Nature Chemical Biology, 2006, 2, 480-485. | 3.9 | 103 |
| 96 | Calibrating bead displacements in optical tweezers using acousto-optic deflectors. Review of Scientific Instruments, 2006, 77, 013704. | 0.6 | 66 |
| 97 | Power spectrum analysis for optical tweezers. II: Laser wavelength dependence of parasitic filtering, and how to achieve high bandwidth. Review of Scientific Instruments, 2006, 77, 063106. | 0.6 | 47 |
| 98 | The bipolar mitotic kinesin Eg5 moves on both microtubules that it crosslinks. Nature, 2005, 435, 114-118. | 13.7 | 607 |
| 99 | Combining Optical Trapping and Single-Molecule Fluorescence Spectroscopy:Â Enhanced Photobleaching of Fluorophores. Journal of Physical Chemistry B, 2004, 108, 6479-6484. | 1.2 | 107 |
| 100 | SINGLE-MOLECULE FLUORESCENCE SPECTROSCOPY AND MICROSCOPY OF BIOMOLECULAR MOTORS. Annual Review of Physical Chemistry, 2004, 55, 79-96. | 4.8 | 151 |
| 101 | Parasitic filtering in position detection systems for optical tweezers. , 2004, , . | | 2 |
| 102 | Laser-Induced Heating in Optical Traps. Biophysical Journal, 2003, 84, 1308-1316. | 0.2 | 542 |
| 103 | Extending the bandwidth of optical-tweezers interferometry. Review of Scientific Instruments, 2003, 74, 3246-3249. | 0.6 | 47 |
| 104 | ADP-induced rocking of the kinesin motor domain revealed by single-molecule fluorescence polarization microscopy. Nature Structural Biology, 2001, 8, 540-544. | 9.7 | 160 |
| 105 | Polarized Fluorescence Microscopy of Individual and Many Kinesin Motors Bound to Axonemal Microtubules. Biophysical Journal, 2001, 81, 2851-2863. | 0.2 | 68 |
| 106 | Single-Molecule Fluorescence Resonant Energy Transfer in Calcium Concentration Dependent Cameleon. Journal of Physical Chemistry B, 2000, 104, 3676-3682. | 1.2 | 108 |
| 107 | Structure and Interactions of the ChlorophyllaMolecules in the Higher Plant Lhcb4 Antenna Protein. Journal of Physical Chemistry B, 2000, 104, 9317-9321. | 1.2 | 22 |
| 108 | Peridinin Chlorophyll a Protein:â€‰ Relating Structure and Steady-State Spectroscopy. Biochemistry, 2000, 39, 5184-5195. | 1.2 | 130 |

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| 109 | The Fluorescence Dynamics of Single Molecules of Green Fluorescent Protein. Journal of Physical Chemistry A, 1999, 103, 10553-10560. | 1.1 | 139 |
| 110 | Spectroscopic characterization of the spinach Lhcb4 protein (CP29), a minor light-harvesting complex of photosystem II. FEBS Journal, 1999, 262, 817-823. | 0.2 | 51 |
| 111 | Optical methods for exploring dynamics of single copies of green fluorescent protein. , 1999, 36, 232-238. | | 42 |
| 112 | Spectroscopic Properties of the CP43 Core Antenna Protein of Photosystem II. Biophysical Journal, 1999, 77, 3328-3340. | 0.2 | 119 |
| 113 | Decreasing the Chlorophyll a/b Ratio in Reconstituted LHCII:â€‰ Structural and Functional Consequences. Biochemistry, 1999, 38, 6587-6596. | 1.2 | 50 |
| 114 | The Influence of Aggregation on Triplet Formation in Light-Harvesting Chlorophylla/bPigmentâˆ'Protein Complex II of Green Plantsâ€. Biochemistry, 1998, 37, 546-551. | 1.2 | 68 |
| 115 | Fluorescence and Absorption Spectroscopy of the Weakly Fluorescent Chlorophyll a in Cytochrome b6f of Synechocystis PCC6803. Biophysical Journal, 1998, 75, 389-398. | 0.2 | 73 |
| 116 | The nature of the excited state of the reaction center of photosystem II of green plants: A high-resolution fluorescence spectroscopy study. Proceedings of the National Academy of Sciences of the United States of America, 1998, 95, 6128-6133. | 3.3 | 99 |
| 117 | Isolation and Characterisation of the Cytochrome B6F Complex from the Cyanobacterium Synechocystis PCC 6803. , 1998, , 1537-1540. | | 4 |
| 118 | Spectroscopic Characterization of Reconstituted Lhcii Which Contains Mainly Chl B and Xanthophylls.. , 1998, , 259-264. | | 0 |
| 119 | Xanthophylls in Light-Harvesting Complex II of Higher Plants:Â Light Harvesting and Triplet Quenchingâ€. Biochemistry, 1997, 36, 12208-12215. | 1.2 | 128 |
| 120 | Electronâˆ'Phonon Coupling and Vibronic Fine Structure of Light-Harvesting Complex II of Green Plants:â€‰ Temperature Dependent Absorption and High-Resolution Fluorescence Spectroscopy. Journal of Physical Chemistry B, 1997, 101, 4448-4457. | 1.2 | 118 |
| 121 | Ultrafast singlet excitation transfer from carotenoids to chlorophylls via different pathways in light-harvesting complex II of higher plants. Chemical Physics Letters, 1997, 264, 279-284. | 1.2 | 62 |
| 122 | Low-temperature spectroscopy of monomeric and trimeric forms of reconstituted light-harvesting chlorophyll ab complex. Biochimica Et Biophysica Acta - Bioenergetics, 1996, 1273, 171-174. | 0.5 | 32 |