Hendrik Dietz

List of Publications by Year
in descending order

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86 papers	12,687 citations	61984 43 h-index	48315 88 g-index

93 all docs	93 docs citations	93 times ranked	7900 citing authors

#	Article	IF	Citations
1	Self-assembly of DNA into nanoscale three-dimensional shapes. Nature, 2009, 459, 414-418.	27.8	2,222
2	Folding DNA into Twisted and Curved Nanoscale Shapes. Science, 2009, 325, 725-730.	12.6	1,189
3	A primer to scaffolded DNA origami. Nature Methods, 2011, 8, 221-229.	19.0	824
4	Synthetic Lipid Membrane Channels Formed by Designed DNA Nanostructures. Science, 2012, 338, 932-936.	12.6	659
5	Dynamic DNA devices and assemblies formed by shape-complementary, nonâ€“base pairing 3D components. Science, 2015, 347, 1446-1452.	12.6	577
6	Biotechnological mass production of DNA origami. Nature, 2017, 552, 84-87.	27.8	374
7	Gigadalton-scale shape-programmable DNA assemblies. Nature, 2017, 552, 78-83.	27.8	350
8	Quantitative prediction of 3D solution shape and flexibility of nucleic acid nanostructures. Nucleic Acids Research, 2012, 40, 2862-2868.	14.5	327
9	Exploring the energy landscape of GFP by single-molecule mechanical experiments. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 16192-16197.	7.1	321
10	Anisotropic deformation response of single protein molecules. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 12724-12728.	7.1	280
11	Rapid Folding of DNA into Nanoscale Shapes at Constant Temperature. Science, 2012, 338, 1458-1461.	12.6	252
12	Facile and Scalable Preparation of Pure and Dense DNA Origami Solutions. Angewandte Chemie - International Edition, 2014, 53, 12735-12740.	13.8	220
13	Cryo-EM structure of a 3D DNA-origami object. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 20012-20017.	7.1	219
14	Building machines with DNA molecules. Nature Reviews Genetics, 2020, 21, 5-26.	16.3	198
15	Single-molecule dissection of stacking forces in DNA. Science, 2016, 353, .	12.6	180
16	Uncovering the forces between nucleosomes using DNA origami. Science Advances, 2016, 2, e1600974.	10.3	179
17	Placing molecules with Bohr radius resolution using DNA origami. Nature Nanotechnology, 2016, 11, 47-52.	31.5	175
18	Sequence-programmable covalent bonding of designed DNA assemblies. Science Advances, 2018, 4, eaau1157.	10.3	174

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19	Membrane sculpting by curved DNA origami scaffolds. Nature Communications, 2018, 9, 811.	12.8	173
20	DNA Origami Gatekeepers for Solidâ€State Nanopores. Angewandte Chemie - International Edition, 2012, 51, 4864-4867.	13.8	168
21	Protein structure by mechanical triangulation. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 1244-1247.	7.1	162
22	Molecular transport through large-diameter DNA nanopores. Nature Communications, 2016, 7, 12787.	12.8	160
23	The enabled state of DNA nanotechnology. Current Opinion in Biotechnology, 2013, 24, 555-561.	6.6	152
24	Controlled Trapping and Release of Quantum Dots in a DNAâ€Switchable Hydrogel. Small, 2007, 3, 1688-1693.	10.0	148
25	Magnesium-free self-assembly of multi-layer DNA objects. Nature Communications, 2012, 3, 1103.	12.8	147
26	Revealing the bifurcation in the unfolding pathways of GFP by using single-molecule experiments and simulations. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 20268-20273.	7.1	145
27	Nanoscale rotary apparatus formed from tight-fitting 3D DNA components. Science Advances, 2016, 2, e1501209.	10.3	138
28	Self-assembly of genetically encoded DNA-protein hybrid nanoscale shapes. Science, 2017, 355, .	12.6	137
29	How We Make DNA Origami. ChemBioChem, 2017, 18, 1873-1885.	2.6	134
30	Programmable icosahedral shell system for virus trapping. Nature Materials, 2021, 20, 1281-1289.	27.5	116
31	DNA origami scaffold for studying intrinsically disordered proteins of the nuclear pore complex. Nature Communications, 2018, 9, 902.	12.8	109
32	Rigid DNA Beams for Highâ€Resolution Singleâ€Molecule Mechanics. Angewandte Chemie - International Edition, 2013, 52, 7766-7771.	13.8	104
33	Custom-Size, Functional, and Durable DNA Origami with Design-Specific Scaffolds. ACS Nano, 2019, 13, 5015-5027.	14.6	103
34	Efficient Production of Single-Stranded Phage DNA as Scaffolds for DNA Origami. Nano Letters, 2015, 15, 4672-4676.	9.1	100
35	Velocity of DNA during Translocation through a Solid-State Nanopore. Nano Letters, 2015, 15, 732-737.	9.1	98
36	Design of a molecular support for cryo-EM structure determination. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E7456-E7463.	7.1	93

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37	Molecular engineering of chiral colloidal liquid crystals using DNA origami. Nature Materials, 2017, 16, 849-856.	27.5	85
38	Ionic Permeability and Mechanical Properties of DNA Origami Nanoplates on Solid-State Nanopores. ACS Nano, 2014, 8, 35-43.	14.6	78
39	Cysteine engineering of polyproteins for single-molecule force spectroscopy. Nature Protocols, 2006, 1, 80-84.	12.0	71
40	Nanopore electro-osmotic trap for the label-free study of single proteins and their conformations. Nature Nanotechnology, 2021, 16, 1244-1250.	31.5	67
41	Singleâ€Molecule Observation of the Photoregulated Conformational Dynamics of DNA Origami Nanoscissors. Angewandte Chemie - International Edition, 2017, 56, 15324-15328.	13.8	63
42	Dynamic Vesicles Formed By Dissipative Selfâ€Assembly. ChemSystemsChem, 2020, 2, e1900044.	2.6	53
43	Nucleosome Spacing Generated by ISWI and CHD1 Remodelers Is Constant Regardless of Nucleosome Density. Molecular and Cellular Biology, 2015, 35, 1588-1605.	2.3	52
44	Exploring Nucleosome Unwrapping Using DNA Origami. Nano Letters, 2016, 16, 7891-7898.	9.1	52
45	Covalent immobilization of recombinant fusion proteins with hAGT for single molecule force spectroscopy. European Biophysics Journal, 2005, 35, 72-78.	2.2	47
46	Structure and mechanism of the two-component Î±-helical pore-forming toxin YaxAB. Nature Communications, 2018, 9, 1806.	12.8	46
47	Reconstitution of Ultrawide DNA Origami Pores in Liposomes for Transmembrane Transport of Macromolecules. ACS Nano, 2021, 15, 12768-12779.	14.6	44
48	The sequence of events during folding of a DNA origami. Science Advances, 2019, 5, eaaw1412.	10.3	43
49	Revealing the structures of megadalton-scale DNA complexes with nucleotide resolution. Nature Communications, 2020, 11, 6229.	12.8	43
50	Time-Resolved Small-Angle X-ray Scattering Reveals Millisecond Transitions of a DNA Origami Switch. Nano Letters, 2018, 18, 2672-2676.	9.1	42
51	Reciprocal Coupling in Chemically Fueled Assembly: A Reaction Cycle Regulates Self-Assembly and Vice Versa. Journal of the American Chemical Society, 2020, 142, 20837-20844.	13.7	42
52	Facile and Scalable Preparation of Pure and Dense DNA Origami Solutions. Angewandte Chemie, 2014, 126, 12949-12954.	2.0	41
53	Reversible Covalent Stabilization of Stacking Contacts in DNA Assemblies. Angewandte Chemie - International Edition, 2019, 58, 2680-2684.	13.8	39
54	Reversible membrane deformations by straight DNA origami filaments. Soft Matter, 2021, 17, 276-287.	2.7	38

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55	Quantifying quality in DNA self-assembly. Nature Communications, 2014, 5, 3691.	12.8	37
56	Advancing Biophysics Using DNA Origami. Annual Review of Biophysics, 2021, 50, 469-492.	10.0	36
57	Conformational Changes and Flexibility of DNA Devices Observed by Small-Angle X-ray Scattering. Nano Letters, 2016, 16, 4871-4879.	9.1	33
58	Tethered multifluorophore motion reveals equilibrium transition kinetics of single DNA double helices. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E7512-E7521.	7.1	33
59	Iron-Sequestering Nanocompartments as Multiplexed Electron Microscopy Gene Reporters. ACS Nano, 2019, 13, 8114-8123.	14.6	33
60	Specific growth rate and multiplicity of infection affect highâ€cellâ€density fermentation with bacteriophage M13 for ssDNA production. Biotechnology and Bioengineering, 2017, 114, 777-784.	3.3	32
61	Dielectrophoretic trapping of multilayer DNA origami nanostructures and DNA origamiâ€induced local destruction of silicon dioxide. Electrophoresis, 2015, 36, 255-262.	2.4	31
62	Impact of Heterogeneity and Lattice Bond Strength on DNA Triangle Crystal Growth. ACS Nano, 2016, 10, 9156-9164.	14.6	31
63	Characterization of Lipid-Based Hexosomes as Versatile Vaccine Carriers. Molecular Pharmaceutics, 2016, 13, 3945-3954.	4.6	31
64	DNA origami devices for molecular-scale precision measurements. MRS Bulletin, 2017, 42, 925-929.	3.5	27
65	Dissecting FOXP2 Oligomerization and DNA Binding. Angewandte Chemie - International Edition, 2019, 58, 7662-7667.	13.8	26
66	Antigen-Triggered Logic-Gating of DNA Nanodevices. Journal of the American Chemical Society, 2021, 143, 21630-21636.	13.7	26
67	A synthetic tubular molecular transport system. Nature Communications, 2021, 12, 4393.	12.8	23
68	Cellular uptake of self-assembled phytantriol-based hexosomes is independent of major endocytic machineries. Journal of Colloid and Interface Science, 2019, 553, 820-833.	9.4	21
69	Synthetic virions reveal fatty acid-coupled adaptive immunogenicity of SARS-CoV-2 spike glycoprotein. Nature Communications, 2022, 13, 868.	12.8	20
70	Cryo-Electron Microscopy and Mass Analysis of Oligolysine-Coated DNA Nanostructures. ACS Nano, 2021, 15, 9391-9403.	14.6	18
71	Immune responses induced by nano-self-assembled lipid adjuvants based on a monomycoloyl glycerol analogue after vaccination with the Chlamydia trachomatis major outer membrane protein. Journal of Controlled Release, 2018, 285, 12-22.	9.9	17
72	A nanoscale reciprocating rotary mechanism with coordinated mobility control. Nature Communications, 2021, 12, 7138.	12.8	14

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73	Detecting Molecular Fingerprints in Single Molecule Force Spectroscopy Using Pattern Recognition. Japanese Journal of Applied Physics, 2007, 46, 5540.	1.5	12
74	Reversible Covalent Stabilization of Stacking Contacts in DNA Assemblies. Angewandte Chemie, 2019, 131, 2706-2710.	2.0	11
75	Tailored Peptide Phenyl Esters Block ClpXP Proteolysis by an Unusual Breakdown into a Heptamerâ€“Hexamer Assembly. Angewandte Chemie - International Edition, 2019, 58, 7127-7132.	13.8	10
76	Thermoresponsive Molecular Brushes with Propylene Oxide/Ethylene Oxide Copolymer Side Chains in Aqueous Solution. Macromolecules, 2020, 53, 4068-4081.	4.8	10
77	Programming protein self assembly with coiled coils. New Journal of Physics, 2007, 9, 424-424.	2.9	9
78	Quantification of the three-dimensional nanoparticle distribution in polymer nanocomposites. IEEE Transactions on Dielectrics and Electrical Insulation, 2019, 26, 601-609.	2.9	9
79	Phageâ€free production of artificial ssDNA with Escherichia coli. Biotechnology and Bioengineering, 2022, 119, 2878-2889.	3.3	7
80	Dissecting FOXP2 Oligomerization and DNA Binding. Angewandte Chemie, 2019, 131, 7744-7749.	2.0	6
81	Membrane Remodeling by DNA Origami Nanorods: Experiments Exploring the Parameter Space for Vesicle Remodeling. Langmuir, 2021, 37, 6219-6231.	3.5	5
82	Synthetic Lipid Membrane Channels formed by Designed DNA Nanostructures. Biophysical Journal, 2013, 104, 545a.	0.5	4
83	Exploiting shape complementarity. Nature Materials, 2015, 14, 752-754.	27.5	3
84	Nanoscale cable tacking. Nature Nanotechnology, 2015, 10, 829-830.	31.5	3
85	Biphasic Packing of DNA and Internal Proteins in Bacteriophage T4 Heads Revealed by Bubblegram Imaging. Viruses, 2020, 12, 1282.	3.3	2
86	High Bandwidth Sensing of Single Protein Dynamics using Nanopores and DNA Origami. Biophysical Journal, 2019, 116, 341a-342a.	0.5	1