

Andrew J Turberfield

List of Publications by Year in descending order

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119
papers

15,935
citations

36203

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h-index

18606

119
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130
all docs

130
docs citations

130
times ranked

9818
citing authors

#	ARTICLE	IF	CITATIONS
1	Template-directed conjugation of heterogeneous oligonucleotides to a homobifunctional molecule for programmable supramolecular assembly. <i>Nanoscale</i> , 2022, 14, 4463-4468.	2.8	0
2	A DNA molecular printer capable of programmable positioning and patterning in two dimensions. <i>Science Robotics</i> , 2022, 7, eabn5459.	9.9	9
3	DNA origami signposts for identifying proteins on cell membranes by electron cryotomography. <i>Cell</i> , 2021, 184, 1110-1121.e16.	13.5	43
4	Strategies for Constructing and Operating DNA Origami Linear Actuators. <i>Small</i> , 2021, 17, e2007704.	5.2	11
5	Reconfigurable T-junction DNA Origami. <i>Angewandte Chemie</i> , 2020, 132, 16076-16080.	1.6	0
6	Reconfigurable T-junction DNA Origami. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 15942-15946.	7.2	1
7	Design of hidden thermodynamic driving for non-equilibrium systems via mismatch elimination during DNA strand displacement. <i>Nature Communications</i> , 2020, 11, 2562.	5.8	66
8	Modifying Membrane Morphology and Interactions with DNA Origami Clathrin-Mimic Networks. <i>ACS Nano</i> , 2019, 13, 9973-9979.	7.3	42
9	Controlling the Bioreceptor Spatial Distribution at the Nanoscale for Single Molecule Counting in Microwell Arrays. <i>ACS Sensors</i> , 2019, 4, 2327-2335.	4.0	11
10	Peptide Assembly Directed and Quantified Using Megadalton DNA Nanostructures. <i>ACS Nano</i> , 2019, 13, 9927-9935.	7.3	45
11	Chiral DNA Origami Nanotubes with Well-Defined and Addressable Inside and Outside Surfaces. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 7687-7690.	7.2	29
12	Self-propulsion of catalytic nanomotors synthesised by seeded growth of asymmetric platinum-gold nanoparticles. <i>Chemical Communications</i> , 2018, 54, 1901-1904.	2.2	15
13	Chiral DNA Origami Nanotubes with Well-Defined and Addressable Inside and Outside Surfaces. <i>Angewandte Chemie</i> , 2018, 130, 7813-7816.	1.6	7
14	Dimensions and Global Twist of Single-Layer DNA Origami Measured by Small-Angle X-ray Scattering. <i>ACS Nano</i> , 2018, 12, 5791-5799.	7.3	35
15	The Evolution of DNA-Templated Synthesis as a Tool for Materials Discovery. <i>Accounts of Chemical Research</i> , 2017, 50, 2496-2509.	7.6	69
16	Practical aspects of structural and dynamic DNA nanotechnology. <i>MRS Bulletin</i> , 2017, 42, 889-896.	1.7	23
17	An autonomous molecular assembler for programmable chemical synthesis. <i>Nature Chemistry</i> , 2016, 8, 542-548.	6.6	130
18	The Formal Language and Design Principles of Autonomous DNA Walker Circuits. <i>ACS Synthetic Biology</i> , 2016, 5, 878-884.	1.9	23

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19	Quantitative Single-Molecule Surface-Enhanced Raman Scattering by Optothermal Tuning of DNA Origami-Assembled Plasmonic Nanoantennas. <i>ACS Nano</i> , 2016, 10, 9809-9815.	7.3	127
20	Ordering Gold Nanoparticles with DNA Origami Nanoflowers. <i>ACS Nano</i> , 2016, 10, 7303-7306.	7.3	87
21	Domain-swap polymerization drives the self-assembly of the bacterial flagellar motor. <i>Nature Structural and Molecular Biology</i> , 2016, 23, 197-203.	3.6	48
22	Modelling DNA origami self-assembly at the domain level. <i>Journal of Chemical Physics</i> , 2015, 143, 165102.	1.2	28
23	Guiding the folding pathway of DNA origami. <i>Nature</i> , 2015, 525, 82-86.	13.7	146
24	DNA walker circuits: computational potential, design, and verification. <i>Natural Computing</i> , 2015, 14, 195-211.	1.8	26
25	Automated Design and Verification of Localized DNA Computation Circuits. <i>Lecture Notes in Computer Science</i> , 2015, , 168-180.	1.0	3
26	Transport and self-organization across different length scales powered by motor proteins and programmed by DNA. <i>Nature Nanotechnology</i> , 2014, 9, 44-47.	15.6	75
27	Programmable energy landscapes for kinetic control of DNA strand displacement. <i>Nature Communications</i> , 2014, 5, 5324.	5.8	172
28	A clocked finite state machine built from DNA. <i>Chemical Communications</i> , 2013, 49, 237-239.	2.2	26
29	Combinatorial Displacement of DNA Strands: Application to Matrix Multiplication and Weighted Sums. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 1189-1192.	7.2	67
30	“Giant Surfactants” Created by the Fast and Efficient Functionalization of a DNA Tetrahedron with a Temperature-Responsive Polymer. <i>ACS Nano</i> , 2013, 7, 8561-8572.	7.3	93
31	Optimizing DNA Nanotechnology through Coarse-Grained Modeling: A Two-Footed DNA Walker. <i>ACS Nano</i> , 2013, 7, 2479-2490.	7.3	88
32	Non-covalent Single Transcription Factor Encapsulation Inside a DNA Cage. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 2284-2288.	7.2	63
33	Molecular machinery built from DNA. , 2013, , .		2
34	DNA Walker Circuits: Computational Potential, Design, and Verification. <i>Lecture Notes in Computer Science</i> , 2013, , 31-45.	1.0	25
35	A DNA Network as an Information Processing System. <i>International Journal of Molecular Sciences</i> , 2012, 13, 5125-5137.	1.8	12
36	Sequence-specific synthesis of macromolecules using DNA-templated chemistry. <i>Chemical Communications</i> , 2012, 48, 5614.	2.2	74

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37	Small Molecule Signals that Direct the Route of a Molecular Cargo. <i>Small</i> , 2012, 8, 3593-3597.	5.2	26
38	A DNA-based molecular motor that can navigate a network of tracks. <i>Nature Nanotechnology</i> , 2012, 7, 169-173.	15.6	340
39	Programmable One-Pot Multistep Organic Synthesis Using DNA Junctions. <i>Journal of the American Chemical Society</i> , 2012, 134, 1446-1449.	6.6	78
40	Geometrical self-assembly. <i>Nature Chemistry</i> , 2011, 3, 580-581.	6.6	12
41	DNA-Templated Protein Arrays for Single-Molecule Imaging. <i>Nano Letters</i> , 2011, 11, 657-660.	4.5	99
42	Reversible Logic Circuits Made of DNA. <i>Journal of the American Chemical Society</i> , 2011, 133, 20080-20083.	6.6	160
43	DNA Cage Delivery to Mammalian Cells. <i>ACS Nano</i> , 2011, 5, 5427-5432.	7.3	506
44	A Programmable Molecular Robot. <i>Nano Letters</i> , 2011, 11, 982-987.	4.5	155
45	Peptidomimetic bond formation by DNA-templated acyl transfer. <i>Organic and Biomolecular Chemistry</i> , 2011, 9, 1661.	1.5	33
46	Remote Toehold: A Mechanism for Flexible Control of DNA Hybridization Kinetics. <i>Journal of the American Chemical Society</i> , 2011, 133, 2177-2182.	6.6	263
47	Direct observation of stepwise movement of a synthetic molecular transporter. <i>Nature Nanotechnology</i> , 2011, 6, 166-169.	15.6	351
48	The Control of Shrinkage and Thermal Instability in SU-8 Photoresists for Holographic Lithography. <i>Advanced Functional Materials</i> , 2011, 21, 1593-1601.	7.8	25
49	Multistep DNA-Templated Reactions for the Synthesis of Functional Sequence Controlled Oligomers. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 7948-7951.	7.2	144
50	A Geometrical Allosteric DNA Switch. <i>Lecture Notes in Computer Science</i> , 2010, , 189-189.	1.0	0
51	Replicated photonic crystals by atomic layer deposition within holographically defined polymer templates. <i>Applied Physics Letters</i> , 2009, 94, 263109.	1.5	13
52	A Facile Method for Reversibly Linking a Recombinant Protein to DNA. <i>ChemBioChem</i> , 2009, 10, 1551-1557.	1.3	68
53	DNA Monofunctionalization of Quantum Dots. <i>ChemBioChem</i> , 2009, 10, 1781-1783.	1.3	23
54	Mechanism for a Directional, Processive, and Reversible DNA Motor. <i>Small</i> , 2009, 5, 1513-1516.	5.2	110

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55	High-Resolution Structural Analysis of a DNA Nanostructure by cryoEM. Nano Letters, 2009, 9, 2747-2750.	4.5	82
56	Kinetically Controlled Self-Assembly of DNA Oligomers. Journal of the American Chemical Society, 2009, 131, 2422-2423.	6.6	51
57	A Two-Dimensional DNA Array: The Three-Layer Logpile. Journal of the American Chemical Society, 2009, 131, 13574-13575.	6.6	21
58	DNA nanomachines. , 2009, , 124-133.		2
59	Algorithmic Control: The Assembly and Operation of DNA Nanostructures and Molecular Machinery. Natural Computing Series, 2009, , 215-225.	2.2	1
60	Templated self-assembly of wedge-shaped DNA arrays. Tetrahedron, 2008, 64, 8530-8534.	1.0	11
61	Reconfigurable, braced, three-dimensional DNA nanostructures. Nature Nanotechnology, 2008, 3, 93-96.	15.6	356
62	Coordinated Chemomechanical Cycles: A Mechanism for Autonomous Molecular Motion. Physical Review Letters, 2008, 101, 238101.	2.9	185
63	Towards registered single quantum dot photonic devices. Nanotechnology, 2008, 19, 455307.	1.3	4
64	2P-118 Structural analysis of a DNA nanomachine with a piston motion(The 46th Annual Meeting of the Tj ETQq0 0,0 rgBT /Qverlock 1		
65	Engineering Entropy-Driven Reactions and Networks Catalyzed by DNA. Science, 2007, 318, 1121-1125.	6.0	1,022
66	1P127 Smallest structure revealed by cryo-EM(Nucleic acid,Poster Presentations). Seibutsu Butsuri, 2007, 47, S55.	0.0	0
67	A Self-Assembled DNA Bipyramid. Journal of the American Chemical Society, 2007, 129, 6992-6993.	6.6	144
68	DNA nanomachines. Nature Nanotechnology, 2007, 2, 275-284.	15.6	934
69	Registration of single quantum dots using cryogenic laser photolithography. Applied Physics Letters, 2006, 88, 193106.	1.5	32
70	DNA Hairpins: Fuel for Autonomous DNA Devices. Biophysical Journal, 2006, 91, 2966-2975.	0.2	183
71	Single-Molecule Protein Encapsulation in a Rigid DNA Cage. Angewandte Chemie - International Edition, 2006, 45, 7414-7417.	7.2	252
72	Three-Dimensional Optical Lithography for Photonic Microstructures. Advanced Materials, 2006, 18, 1557-1560.	11.1	71

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73	Infiltration and Inversion of Holographically Defined Polymer Photonic Crystal Templates by Atomic Layer Deposition. <i>Advanced Materials</i> , 2006, 18, 1561-1565.	11.1	87
74	Cryogenic two-photon laser photolithography with SU-8. <i>Applied Physics Letters</i> , 2006, 88, 143123.	1.5	7
75	Design of Autonomous DNA Cellular Automata. <i>Lecture Notes in Computer Science</i> , 2006, , 399-416.	1.0	10
76	Holographic fabrication of photonic crystals. , 2005, 5720, 1.		1
77	Design of an Autonomous DNA Nanomechanical Device Capable of Universal Computation and Universal Translational Motion. <i>Lecture Notes in Computer Science</i> , 2005, , 426-444.	1.0	24
78	Photonic crystals with a chiral basis by holographic lithography. <i>Photonics and Nanostructures - Fundamentals and Applications</i> , 2005, 3, 79-83.	1.0	16
79	Engineering a 2D Protein-DNA Crystal. <i>Angewandte Chemie - International Edition</i> , 2005, 44, 3057-3061.	7.2	179
80	A Free-Running DNA Motor Powered by a Nicking Enzyme. <i>Angewandte Chemie - International Edition</i> , 2005, 44, 4358-4361.	7.2	305
81	Designs of Autonomous Unidirectional Walking DNA Devices. <i>Lecture Notes in Computer Science</i> , 2005, , 410-425.	1.0	17
82	Design and assembly of double-crossover linear arrays of micrometre length using rolling circle replication. <i>Nanotechnology</i> , 2005, 16, 1574-1577.	1.3	13
83	Rapid Chiral Assembly of Rigid DNA Building Blocks for Molecular Nanofabrication. <i>Science</i> , 2005, 310, 1661-1665.	6.0	1,013
84	A Unidirectional DNA Walker That Moves Autonomously along a Track. <i>Angewandte Chemie - International Edition</i> , 2004, 43, 4906-4911.	7.2	441
85	The single-step synthesis of a DNA tetrahedron Electronic supplementary information (ESI) available: stoichiometry control. See http://www.rsc.org/suppdata/cc/b4/b402293a/ . <i>Chemical Communications</i> , 2004, , 1372.	2.2	397
86	Self-Assembly of Chiral DNA Nanotubes. <i>Journal of the American Chemical Society</i> , 2004, 126, 16342-16343.	6.6	207
87	Solâ~Gel Organicâ~Inorganic Composites for 3-D Holographic Lithography of Photonic Crystals with Submicron Periodicity. <i>Chemistry of Materials</i> , 2003, 15, 2301-2304.	3.2	52
88	Holographic photonic crystals with diamond symmetry. <i>Physical Review B</i> , 2003, 68, .	1.1	79
89	DNA Fuel for Free-Running Nanomachines. <i>Physical Review Letters</i> , 2003, 90, 118102.	2.9	338
90	DNA as an engineering material. <i>Physics World</i> , 2003, 16, 43-46.	0.0	24

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91	Photonic crystals for the visible spectrum by holographic lithography. Optical and Quantum Electronics, 2002, 34, 3-12.	1.5	45
92	Experimental aspects of DNA neural network computation. Soft Computing, 2001, 5, 10-18.	2.1	15
93	Photonic Crystals Made by Holographic Lithography. MRS Bulletin, 2001, 26, 632-636.	1.7	34
94	Low-energy electronic spin excitations between filling factors $\hat{\nu}=1$ and studied by optically detected nuclear magnetic resonance. Physica E: Low-Dimensional Systems and Nanostructures, 2000, 6, 56-59.	1.3	6
95	Fabrication of photonic crystals for the visible spectrum by holographic lithography. Nature, 2000, 404, 53-56.	13.7	1,720
96	A DNA-fuelled molecular machine made of DNA. Nature, 2000, 406, 605-608.	13.7	2,247
97	Variable sample temperature scanning superconducting quantum interference device microscope. Applied Physics Letters, 1999, 74, 4011-4013.	1.5	52
98	Skyrmion-hole excitations at $\hat{\nu}=1$ studied by photoluminescence spectroscopy. Physica B: Condensed Matter, 1998, 249-251, 544-548.	1.3	10
99	Role of spin excitations in the fractional quantum Hall effect at. Physica B: Condensed Matter, 1998, 249-251, 44-48.	1.3	1
100	Optically detected nuclear magnetic resonance from a single heterojunction in the fractional quantum Hall regime. Physica B: Condensed Matter, 1998, 256-258, 104-112.	1.3	11
101	Spin and Charge Density Excitations and the Collapse of the Fractional Quantum Hall State at $\hat{\nu}=1/3$. Physical Review Letters, 1997, 78, 4095-4098.	2.9	67
102	Electron Diffraction from a 2D Electron Wigner Crystal. Europhysics Letters, 1995, 29, 333-338.	0.7	15
103	Picosecond photoluminescence intensity correlation measurements of hot carriers in GaAs/AlxGa1-xAs quantum wells. Journal of Luminescence, 1994, 59, 303-313.	1.5	3
104	Quasi-particle recombination and spatial ordering of 2D electrons in the extreme quantum limit. Surface Science, 1994, 305, 61-66.	0.8	7
105	Optical investigation of tunneling in AlAs/GaAs/AlAs double-barrier diodes. Physical Review B, 1993, 47, 15705-15716.	1.1	4
106	Incompressible electron liquid states studied by optical spectroscopy. Physical Review B, 1993, 47, 4794-4797.	1.1	44
107	Correlated states of degenerate 2D electrons studied by optical spectroscopy. Physica Scripta, 1992, T45, 164-167.	1.2	1
108	Optical spectroscopy of correlated phases of degenerate two-dimensional electrons. Surface Science, 1992, 263, 1-8.	0.8	20

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109	Luminescence from degenerate two-dimensional electrons at an ultrahigh mobility heterojunction. <i>Surface Science</i> , 1992, 263, 614-617.	0.8	5
110	Optical Measurements of Correlated States of Two Dimensional Electrons in GaAs at Low Temperatures and High Magnetic Fields. <i>Physica Scripta</i> , 1991, T39, 223-229.	1.2	1
111	Optical studies of tunneling in double barrier diodes. <i>Superlattices and Microstructures</i> , 1991, 9, 357-361.	1.4	4
112	Optical spectroscopy of GaAs in the extreme quantum limit: integer and fractional quantum Hall effect, and onset of the electron solid. <i>Physica B: Condensed Matter</i> , 1991, 169, 336-354.	1.3	6
113	Optical detection of the integer and fractional quantum Hall effects in GaAs. <i>Physical Review Letters</i> , 1990, 65, 637-640.	2.9	240
114	Investigation of inter-valley scattering and hot phonon dynamics in GaAs quantum wells using femtosecond luminescence intensity correlation. <i>Superlattices and Microstructures</i> , 1989, 6, 199-202.	1.4	6
115	Magnetic field-dependent hot carrier relaxation in GaAs quantum wells. <i>Solid-State Electronics</i> , 1988, 31, 387-390.	0.8	5
116	Time-resolved photoluminescence from hot two-dimensional carriers in GaAs δ -GaAlAs MQWS. <i>Surface Science</i> , 1986, 170, 511-519.	0.8	55
117	Photoluminescence study of two-dimensional carriers in the presence of in-plane magnetic fields. <i>Surface Science</i> , 1986, 170, 624-628.	0.8	11
118	Picosecond photoluminescence measurements of Landau level lifetimes and time dependent Landau level linebroadening in modulation-doped GaAs-GaAlAs multiple quantum wells. <i>Physica B: Physics of Condensed Matter & C: Atomic, Molecular and Plasma Physics, Optics</i> , 1985, 134, 318-322.	0.9	3
119	Time-Resolved Photoluminescence of Two-Dimensional Hot Carriers in GaAs-AlGaAs Heterostructures. <i>Physical Review Letters</i> , 1984, 53, 1841-1844.	2.9	262