Bernard Yurke

List of Publications by Year
in descending order

90 papers	11,106 citations	81434 41 h-index	51423 90 g-index
91 all docs	91 docs citations	91 times ranked	9020 citing authors

#	Article	IF	Citations
1	Exciton Delocalization in a DNA-Templated Organic Semiconductor Dimer Assembly. ACS Nano, 2022, 16, 1301-1307.	7.3	15
2	Influence of Hydrophobicity on Excitonic Coupling in DNA-Templated Indolenine Squaraine Dye Aggregates. Journal of Physical Chemistry C, 2022, 126, 3475-3488.	1.5	19
3	Synthesis of Substituted Cy5 Phosphoramidite Derivatives and Their Incorporation into Oligonucleotides Using Automated DNA Synthesis. ACS Omega, 2022, 7, 11002-11016.	1.6	11
4	Tuning between Quenching and Energy Transfer in DNA-Templated Heterodimer Aggregates. Journal of Physical Chemistry Letters, 2022, 13, 2782-2791.	2.1	15
5	Oblique Packing and Tunable Excitonic Coupling in DNAâ€Templated Squaraine Rotaxane Dimer Aggregates. ChemPhotoChem, 2022, 6, .	1.5	12
6	Data-Driven and Multiscale Modeling of DNA-Templated Dye Aggregates. Molecules, 2022, 27, 3456.	1.7	6
7	Photocrosslinking Probes Proximity of Thymine Modifiers Tethering Excitonically Coupled Dye Aggregates to DNA Holliday Junction. Molecules, 2022, 27, 4006.	1.7	6
8	Characterizing Mode Anharmonicity and Huangâ€“Rhys Factors Using Models of Femtosecond Coherence Spectra. Journal of Physical Chemistry Letters, 2022, 13, 5413-5423.	2.1	12
9	Substituent Effects on the Solubility and Electronic Properties of the Cyanine Dye Cy5: Density Functional and Time-Dependent Density Functional Theory Calculations. Molecules, 2021, 26, 524.	1.7	18
10	First-principles studies of substituent effects on squaraine dyes. RSC Advances, 2021, 11, 19029-19040.	1.7	21
11	Rotaxane rings promote oblique packing and extended lifetimes in DNA-templated molecular dye aggregates. Communications Chemistry, 2021, 4, .	2.0	26
12	Excited-State Lifetimes of DNA-Templated Cyanine Dimer, Trimer, and Tetramer Aggregates: The Role of Exciton Delocalization, Dye Separation, and DNA Heterogeneity. Journal of Physical Chemistry B, 2021, 125, 10240-10259.	1.2	26
13	Exciton Delocalization and Scaffold Stability in Bridged Nucleotide-Substituted, DNA Duplex-Templated Cyanine Aggregates. Journal of Physical Chemistry B, 2021, 125, 13670-13684.	1.2	16
14	Exciton Delocalization in Indolenine Squaraine Aggregates Templated by DNA Holliday Junction Scaffolds. Journal of Physical Chemistry B, 2020, 124, 9636-9647.	1.2	43
15	Delocalized Two-Exciton States in DNA Scaffolded Cyanine Dimers. Journal of Physical Chemistry B, 2020, 124, 8042-8049.	1.2	25
16	Principles and Applications of Nucleic Acid Strand Displacement Reactions. Chemical Reviews, 2019, 119, 6326-6369.	23.0	506
17	DNA-Templated Aggregates of Strongly Coupled Cyanine Dyes: Nonradiative Decay Governs Exciton Lifetimes. Journal of Physical Chemistry Letters, 2019, 10, 2386-2392.	2.1	49
18	An All-Optical Excitonic Switch Operated in the Liquid and Solid Phases. ACS Nano, 2019, 13, 2986-2994.	7.3	34

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19	Large Davydov Splitting and Strong Fluorescence Suppression: An Investigation of Exciton Delocalization in DNA-Templated Holliday Junction Dye Aggregates. Journal of Physical Chemistry A, 2018, 122, 2086-2095.	1.1	57
20	Ab Initio Studies of Exciton Interactions of Cy5 Dyes. Journal of Physical Chemistry A, 2018, 122, 8989-8997.	1.1	19
21	Availability: A Metric for Nucleic Acid Strand Displacement Systems. ACS Synthetic Biology, 2017, 6, 84-93.	1.9	45
22	Kinetics of DNA Strand Displacement Systems with Locked Nucleic Acids. Journal of Physical Chemistry B, 2017, 121, 2594-2602.	1.2	46
23	Twisting of DNA Origami from Intercalators. Scientific Reports, 2017, 7, 7382.	1.6	17
24	Coherent Exciton Delocalization in a Two-State DNA-Templated Dye Aggregate System. Journal of Physical Chemistry A, 2017, 121, 6905-6916.	1.1	67
25	Thermodynamics and kinetics of DNA nanotube polymerization from single-filament measurements. Chemical Science, 2015, 6, 2252-2267.	3.7	39
26	DNA-mediated excitonic upconversion FRET switching. New Journal of Physics, 2015, 17, 115007.	1.2	10
27	Excitonic AND Logic Gates on DNA Brick Nanobreadboards. ACS Photonics, 2015, 2, 398-404.	3.2	73
28	DNA topology influences molecular machine lifetime in human serum. Nanoscale, 2015, 7, 10382-10390.	2.8	37
29	Determining hydrodynamic forces in bursting bubbles using DNA nanotube mechanics. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E6086-E6095.	3.3	20
30	High precision and high yield fabrication of dense nanoparticle arrays onto DNA origami at statistically independent binding sites. Nanoscale, 2014, 6, 13928-13938.	2.8	29
31	Speeding up the self-assembly of a DNA nanodevice using a variety of polar solvents. Nanoscale, 2014, 6, 14153-14157.	2.8	13
32	Multiscaffold DNA Origami Nanoparticle Waveguides. Nano Letters, 2013, 13, 3850-3856.	4.5	73
33	Enhanced DNA sensing via catalytic aggregation of gold nanoparticles. Biosensors and Bioelectronics, 2013, 50, 382-386.	5.3	13
34	On the biophysics and kinetics of toehold-mediated DNA strand displacement. Nucleic Acids Research, 2013, 41, 10641-10658.	6.5	423
35	Chiral plasmonic DNA nanostructures with switchable circular dichroism. Nature Communications, 2013, 4, 2948.	5.8	289
36	Meta-DNA: synthetic biology via DNA nanostructures and hybridization reactions. Journal of the Royal Society Interface, 2012, 9, 1637-1653.	1.5	11

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37	Robust self-replication of combinatorial information via crystal growth and scission. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 6405-6410.	3.3	107
38	Mechanical Properties of DNA-Crosslinked Polyacrylamide Hydrogels with Increasing Crosslinker Density. BioResearch Open Access, 2012, 1, 256-259.	2.6	11
39	DNA-Controlled Excitonic Switches. Nano Letters, 2012, 12, 2117-2122.	4.5	69
40	The relationship between fibroblast growth and the dynamic stiffnesses of a DNA crosslinked hydrogel. Biomaterials, 2010, 31, 1199-1212.	5.7	66
41	Cavity resonant mode in a metal film perforated with two-dimensional triangular lattice hole arrays. Optics Communications, 2010, 283, 4090-4093.	1.0	5
42	Simultaneous determination of Young's modulus, shear modulus, and Poisson's ratio of soft hydrogels. Journal of Materials Research, 2010, 25, 545-555.	1.2	51
43	Passive linear nanoscale optical and molecular electronics device synthesis from nanoparticles. Physical Review A, 2010, 81, .	1.0	28
44	Effect of Dynamic Stiffness of the Substrates on Neurite Outgrowth by Using a DNA-Crosslinked Hydrogel. Tissue Engineering - Part A, 2010, 16, 1873-1889.	1.6	68
45	Programmable Periodicity of Quantum Dot Arrays with DNA Origami Nanotubes. Nano Letters, 2010, 10, 3367-3372.	4.5	220
46	Elongational-flow-induced scission of DNA nanotubes in laminar flow. Physical Review E, 2010, 82, 046307.	0.8	12
47	Kinetics of DNA and RNA Hybridization in Serum and Serum-SDS. IEEE Nanotechnology Magazine, 2010, 9, 603-609.	1.1	11
48	Atomic force microscopy of DNA self-assembled nanostructures for device applications. , 2009, , .		0
49	Neurite Outgrowth on a DNA Crosslinked Hydrogel with Tunable Stiffnesses. Annals of Biomedical Engineering, 2008, 36, 1565-1579.	1.3	120
50	Dielectrophoretic Trapping of DNA Origami. Small, 2008, 4, 447-450.	5.2	88
51	Engineering Entropy-Driven Reactions and Networks Catalyzed by DNA. Science, 2007, 318, 1121-1125.	6.0	1,022
52	Prospects of employing superconducting stripline resonators for studying the dynamical Casimir effect experimentally. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 370, 202-206.	0.9	30
53	Controlled Trapping and Release of Quantum Dots in a DNAâ€Switchable Hydrogel. Small, 2007, 3, 1688-1693.	5.2	148
54	Catalyzed Relaxation of a Metastable DNA Fuel. Journal of the American Chemical Society, 2006, 128, 12211-12220.	6.6	164

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55	Performance of Cavity-Parametric Amplifiers, Employing Kerr Nonlinearites, in the Presence of Two-Photon Loss. Journal of Lightwave Technology, 2006, 24, 5054-5066.	2.7	106
56	A DNA Superstructure-based Replicator without Product Inhibition. Natural Computing, 2006, 5, 183-202.	1.8	10
57	Use of Rigid Spherical Inclusions in Youngâ€™s Moduli Determination: Application to DNA-Crosslinked Gels. Journal of Biomechanical Engineering, 2005, 127, 571-579.	0.6	25
58	Mechanical Properties of a Reversible, DNA-Crosslinked Polyacrylamide Hydrogel. Journal of Biomechanical Engineering, 2004, 126, 104-110.	0.6	214
59	Using DNA to Power Nanostructures. Genetic Programming and Evolvable Machines, 2003, 4, 111-122.	1.5	279
60	A DNA-based molecular device switchable between three distinct mechanical states. Applied Physics Letters, 2002, 80, 883-885.	1.5	106
61	Operation Kinetics of a DNA-Based Molecular Switch. Journal of Nanoscience and Nanotechnology, 2002, 2, 383-390.	0.9	10
62	Using DNA to construct and power a nanoactuator. Physical Review E, 2001, 63, 041913.	0.8	104
63	A DNA-fuelled molecular machine made of DNA. Nature, 2000, 406, 605-608.	13.7	2,247
64	Position-momentum local-realism violation of the Hardy type. Physical Review A, 1999, 60, 3444-3447.	1.0	12
65	Article for analog vector algebra computation. BioSystems, 1999, 52, 175-180.	0.9	35
66	DNA implementation of addition in which the input strands are separate from the operator strands. BioSystems, 1999, 52, 165-174.	0.9	50
67	Microtubule Dynamics and the Positioning of Microtubule Organizing Centers. Physical Review Letters, 1998, 81, 485-488.	2.9	41
68	Measurement of the Force-Velocity Relation for Growing Microtubules. Science, 1997, 278, 856-860.	6.0	486
69	Dynamics of monopole annihilation by type-1/2 strings in a nematic liquid crystal. Physical Review E, 1996, 53, R25-R28.	0.8	16
70	A magnetic manipulator for studying local rheology and micromechanical properties of biological systems. Review of Scientific Instruments, 1996, 67, 818-827.	0.6	158
71	Bellâ€™s-inequality experiment employing four harmonic oscillators. Physical Review A, 1995, 51, 3437-3444.	1.0	5
72	PlanarXY-model dynamics in a nematic liquid crystal system. Physical Review E, 1994, 49, 4250-4257.	0.8	49

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73	Coarsening dynamics in uniaxial nematic liquid crystals. Physical Review E, 1993, 47, 3343-3356.	0.8	78
74	Using the Pauli exclusion principle to exhibit local-realism violations in overlapping interferometers. Physical Review A, 1993, 47, 1704-1707.	1.0	10
75	Power-law scattering in fluids with a nonscalar order parameter. Physical Review E, 1993, 47, 2683-2688.	0.8	26
76	Einstein-Podolsky-Rosen effects from independent particle sources. Physical Review Letters, 1992, 68, 1251-1254.	2.9	145
77	Structure-factor scaling at the isotropic-to-nematic transition of cesium perfluoro-octanoate. Physical Review Letters, 1992, 68, 3583-3586.	2.9	43
78	Bellâ€™s-inequality experiments using independent-particle sources. Physical Review A, 1992, 46, 2229-2234.	1.0	148
79	Coarsening dynamics in nematic liquid crystals. Physica B: Condensed Matter, 1992, 178, 56-72.	1.3	32
80	Monopole-antimonopole annihilation in a nematic liquid crystal. Physical Review Letters, 1991, 67, 1570-1573.	2.9	70
81	Late-time coarsening dynamics in a nematic liquid crystal. Physical Review Letters, 1991, 66, 2472-2475.	2.9	130
82	Generation of superpositions of classically distinguishable quantum states from optical back-action evasion. Physical Review A, 1990, 41, 5261-5264.	1.0	149
83	Squeezed Light. Scientific American, 1988, 258, 50-56.	1.0	37
84	SU(2) and SU(1,1) interferometers. Physical Review A, 1986, 33, 4033-4054.	1.0	1,078
85	Quantizing the damped harmonic oscillator. American Journal of Physics, 1986, 54, 1133-1139.	0.3	18
86	Squeezed-coherent-state generation via four-wave mixers and detection via homodyne detectors. Physical Review A, 1985, 32, 300-310.	1.0	148
87	Wideband photon counting and homodyne detection. Physical Review A, 1985, 32, 311-323.	1.0	111
88	Use of cavities in squeezed-state generation. Physical Review A, 1984, 29, 408-410.	1.0	247
89	Conservative model for the damped harmonic oscillator. American Journal of Physics, 1984, 52, 1099-1102.	0.3	13
90	Quantum network theory. Physical Review A, 1984, 29, 1419-1437.	1.0	308