

# David C Schwartz

## List of Publications by Year in descending order

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69  
papers

10,165  
citations

109137

35  
h-index

110170

64  
g-index

70  
all docs

70  
docs citations

70  
times ranked

10325  
citing authors

#	ARTICLE	IF	CITATIONS
1	Separation of yeast chromosome-sized DNAs by pulsed field gradient gel electrophoresis. <i>Cell</i> , 1984, 37, 67-75.	13.5	2,914
2	Comparative genomics reveals mobile pathogenicity chromosomes in <i>Fusarium</i> . <i>Nature</i> , 2010, 464, 367-373.	13.7	1,442
3	Lifestyle transitions in plant pathogenic <i>Colletotrichum</i> fungi deciphered by genome and transcriptome analyses. <i>Nature Genetics</i> , 2012, 44, 1060-1065.	9.4	840
4	Assemblathon 2: evaluating de novo methods of genome assembly in three vertebrate species. <i>GigaScience</i> , 2013, 2, 10.	3.3	582
5	Lineage-Specific Biology Revealed by a Finished Genome Assembly of the Mouse. <i>PLoS Biology</i> , 2009, 7, e1000112.	2.6	419
6	Ordered restriction maps of <i>Saccharomyces cerevisiae</i> chromosomes constructed by optical mapping. <i>Science</i> , 1993, 262, 110-114.	6.0	391
7	A single-molecule barcoding system using nanoslits for DNA analysis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 2673-2678.	3.3	285
8	The challenges of sequencing by synthesis. <i>Nature Biotechnology</i> , 2009, 27, 1013-1023.	9.4	232
9	Whole-Genome Shotgun Optical Mapping of <i>Deinococcus radiodurans</i> . <i>Science</i> , 1999, 285, 1558-1562.	6.0	184
10	A Microfluidic System for Large DNA Molecule Arrays. <i>Analytical Chemistry</i> , 2004, 76, 5293-5301.	3.2	175
11	An algorithm for assembly of ordered restriction maps from single DNA molecules. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 15770-15775.	3.3	164
12	High-resolution human genome structure by single-molecule analysis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 10848-10853.	3.3	161
13	Nanochannel confinement: DNA stretch approaching full contour length. <i>Lab on A Chip</i> , 2011, 11, 1721.	3.1	131
14	A Single Molecule Scaffold for the Maize Genome. <i>PLoS Genetics</i> , 2009, 5, e1000711.	1.5	122
15	Validation of rice genome sequence by optical mapping. <i>BMC Genomics</i> , 2007, 8, 278.	1.2	111
16	Gapless genome assembly of <i>Colletotrichum higginsianum</i> reveals chromosome structure and association of transposable elements with secondary metabolite gene clusters. <i>BMC Genomics</i> , 2017, 18, 667.	1.2	111
17	Optical mapping of lambda bacteriophage clones using restriction endonucleases. <i>Nature Genetics</i> , 1995, 9, 432-438.	9.4	109
18	The Physical and Genetic Framework of the Maize B73 Genome. <i>PLoS Genetics</i> , 2009, 5, e1000715.	1.5	95

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19	A large and complex structural polymorphism at 16p12.1 underlies microdeletion disease risk. <i>Nature Genetics</i> , 2010, 42, 745-750.	9.4	89
20	A shotgun optical map of the entire <i>Plasmodium falciparum</i> genome. <i>Nature Genetics</i> , 1999, 23, 309-313.	9.4	78
21	Shotgun Optical Maps of the Whole <i>Escherichia coli</i> O157:H7 Genome. <i>Genome Research</i> , 2001, 11, 1584-1593.	2.4	78
22	Genomics via Optical Mapping II: Ordered Restriction Maps. <i>Journal of Computational Biology</i> , 1997, 4, 91-118.	0.8	77
23	Alignment of Optical Maps. <i>Journal of Computational Biology</i> , 2006, 13, 442-462.	0.8	76
24	Chromosome-level genome map provides insights into diverse defense mechanisms in the medicinal fungus <i>Ganoderma sinense</i> . <i>Scientific Reports</i> , 2015, 5, 11087.	1.6	76
25	Elongation and migration of single DNA molecules in microchannels using oscillatory shear flows. <i>Lab on A Chip</i> , 2009, 9, 2348.	3.1	74
26	Tension-Dependent Free Energies of Nucleosome Unwrapping. <i>ACS Central Science</i> , 2016, 2, 660-666.	5.3	67
27	A Whole-Genome Shotgun Optical Map of <i>Yersinia pestis</i> Strain KIM. <i>Applied and Environmental Microbiology</i> , 2002, 68, 6321-6331.	1.4	65
28	In silico evidence for sequence-dependent nucleosome sliding. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E9197-E9205.	3.3	65
29	Molecular Propulsion: Chemical Sensing and Chemotaxis of DNA Driven by RNA Polymerase. <i>Journal of the American Chemical Society</i> , 2009, 131, 5722-5723.	6.6	64
30	Single-Molecule Approach to Bacterial Genomic Comparisons via Optical Mapping. <i>Journal of Bacteriology</i> , 2004, 186, 7773-7782.	1.0	63
31	The genome of opportunistic fungal pathogen <i>Fusarium oxysporum</i> carries a unique set of lineage-specific chromosomes. <i>Communications Biology</i> , 2020, 3, 50.	2.0	55
32	Whole-Genome Shotgun Optical Mapping of <i>Rhodobacter sphaeroides</i> strain 2.4.1 and Its Use for Whole-Genome Shotgun Sequence Assembly. <i>Genome Research</i> , 2003, 13, 2142-2151.	2.4	49
33	Single-molecule analysis reveals widespread structural variation in multiple myeloma. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 7689-7694.	3.3	43
34	Shotgun optical mapping of the entire <i>Leishmania major</i> Friedlin genome. <i>Molecular and Biochemical Parasitology</i> , 2004, 138, 97-106.	0.5	41
35	Genome Sequence and Annotation of <i>Colletotrichum higginsianum</i> , a Causal Agent of Crucifer Anthracnose Disease. <i>Genome Announcements</i> , 2016, 4, .	0.8	41
36	Allele-Specific Quantification of Structural Variations in Cancer Genomes. <i>Cell Systems</i> , 2016, 3, 21-34.	2.9	41

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37	Presentation of Large DNA Molecules for Analysis as Nanoconfined Dumbbells. <i>Macromolecules</i> , 2013, 46, 8356-8368.	2.2	39
38	Optical mapping discerns genome wide DNA methylation profiles. <i>BMC Molecular Biology</i> , 2008, 9, 68.	3.0	35
39	Optical mapping of the <i>Mycobacterium avium</i> subspecies <i>paratuberculosis</i> genome. <i>BMC Genomics</i> , 2009, 10, 25.	1.2	35
40	Mapping the genome one molecule at a time – optical mapping. <i>Nature</i> , 1995, 378, 516-517.	13.7	31
41	Engineering BspQI nicking enzymes and application of N.BspQI in DNA labeling and production of single-strand DNA. <i>Protein Expression and Purification</i> , 2010, 69, 226-234.	0.6	30
42	Discovery of structural alterations in solid tumor oligodendroglioma by single molecule analysis. <i>BMC Genomics</i> , 2013, 14, 505.	1.2	30
43	Refinement of optical map assemblies. <i>Bioinformatics</i> , 2006, 22, 1217-1224.	1.8	29
44	Inhibition of Restriction Endonuclease Activity by DNA Binding Fluorochromes. <i>Journal of Biomolecular Structure and Dynamics</i> , 1996, 13, 945-951.	2.0	25
45	Electrostatic confinement and manipulation of DNA molecules for genome analysis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 13400-13405.	3.3	25
46	DNA binding fluorescent proteins for the direct visualization of large DNA molecules. <i>Nucleic Acids Research</i> , 2016, 44, e6-e6.	6.5	24
47	Sizing single DNA molecules. <i>Nature</i> , 1992, 359, 783-784.	13.7	23
48	An integrative approach for the optical sequencing of single DNA molecules. <i>Analytical Biochemistry</i> , 2004, 330, 227-241.	1.1	23
49	A Single-Molecule Barcoding System using Nanoslits for DNA Analysis. <i>Methods in Molecular Biology</i> , 2009, 544, 29-42.	0.4	22
50	Comparative Genomic Analyses of the Human NPHP1 Locus Reveal Complex Genomic Architecture and Its Regional Evolution in Primates. <i>PLoS Genetics</i> , 2015, 11, e1005686.	1.5	21
51	Maligner: a fast ordered restriction map aligner. <i>Bioinformatics</i> , 2016, 32, 1016-1022.	1.8	19
52	Chapter 9 A Single Molecule System for Whole Genome Analysis. <i>Perspectives in Bioanalysis</i> , 2007, , 265-300.	0.3	18
53	Statistical Significance of Optical Map Alignments. <i>Journal of Computational Biology</i> , 2012, 19, 478-492.	0.8	17
54	High-density polymerase-mediated incorporation of fluorochrome-labeled nucleotides. <i>Analytical Biochemistry</i> , 2005, 337, 1-11.	1.1	15

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55	New Generations: Sequencing Machines and Their Computational Challenges. <i>Journal of Computer Science and Technology</i> , 2010, 25, 3-9.	0.9	15
56	Optical PCR: Genomic analysis by long-range PCR and optical mapping. <i>Mammalian Genome</i> , 1999, 10, 1005-1009.	1.0	13
57	Mycobacterial genome structure (minireview). <i>Electrophoresis</i> , 1998, 19, 573-576.	1.3	12
58	Optical Mapping of DNA Polymerase I Action and Products. <i>Biochemical and Biophysical Research Communications</i> , 1999, 254, 466-473.	1.0	12
59	A clone-free, single molecule map of the domestic cow ( <i>Bos taurus</i> ) genome. <i>BMC Genomics</i> , 2015, 16, 644.	1.2	12
60	Imaging and analysis of transcription on large, surface-mounted single template DNA molecules. <i>Analytical Biochemistry</i> , 2008, 380, 111-121.	1.1	11
61	Optical mapping and nanocoding approaches to whole-genome analysis. <i>Microfluidics and Nanofluidics</i> , 2016, 20, 1.	1.0	8
62	Sizing of Large DNA Molecules by Hook Formation in a Loose Matrix. <i>Journal of Biomolecular Structure and Dynamics</i> , 1993, 11, 1-10.	2.0	5
63	Biophysics and the Genomic Sciences. <i>Biophysical Journal</i> , 2019, 117, 2047-2053.	0.2	2
64	Trench field-effect transistors integrated in a microfluidic channel and design considerations for charge detection. <i>Applied Physics Letters</i> , 2022, 120, 192102.	1.5	1
65	Electrifying separations. <i>Nature</i> , 1991, 353, 470-470.	13.7	0
66	Microscale Objects via Restructuring of Large, Double-Stranded DNA Molecules. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 41215-41223.	4.0	0
67	Discrete and Continuum Models for the Salt in Crowded Environments of Suspended Charged Particles. <i>Journal of Chemical Theory and Computation</i> , 2018, 14, 4901-4913.	2.3	0
68	A simple dialysis device for large DNA molecules. <i>BioTechniques</i> , 2019, 66, 93-95.	0.8	0
69	Optical Mapping of the Myeloma Cancer Genome to Elucidate Mechanisms of Acquired Resistance to Proteasome Inhibitors.. <i>Blood</i> , 2012, 120, 2444-2444.	0.6	0