

# David W Wright

## List of Publications by Year in descending order

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90  
papers

2,386  
citations

236925

25  
h-index

233421

45  
g-index

97  
all docs

97  
docs citations

97  
times ranked

3639  
citing authors

#	ARTICLE	IF	CITATIONS
1	Biomimetic Synthesis of Titanium Dioxide Utilizing the R5 Peptide Derived from <i>Cylindrothecafusiformis</i> . <i>Chemistry of Materials</i> , 2006, 18, 3108-3113.	6.7	171
2	Viral templates for gold nanoparticle synthesis. <i>Journal of Materials Chemistry</i> , 2005, 15, 749.	6.7	169
3	Hairpin DNA-Functionalized Gold Colloids for the Imaging of mRNA in Live Cells. <i>Journal of the American Chemical Society</i> , 2010, 132, 9789-9796.	13.7	162
4	Monoclonal Antibody Recognition of Histidine-Rich Peptide Encapsulated Nanoclusters. <i>Nano Letters</i> , 2002, 2, 169-173.	9.1	146
5	Computing Clinically Relevant Binding Free Energies of HIV-1 Protease Inhibitors. <i>Journal of Chemical Theory and Computation</i> , 2014, 10, 1228-1241.	5.3	123
6	Rapid, Accurate, Precise, and Reliable Relative Free Energy Prediction Using Ensemble Based Thermodynamic Integration. <i>Journal of Chemical Theory and Computation</i> , 2017, 13, 210-222.	5.3	101
7	Accurate Ensemble Molecular Dynamics Binding Free Energy Ranking of Multidrug-Resistant HIV-1 Proteases. <i>Journal of Chemical Information and Modeling</i> , 2010, 50, 890-905.	5.4	82
8	Inorganic Complexes and Metal-Based Nanomaterials for Infectious Disease Diagnostics. <i>Chemical Reviews</i> , 2019, 119, 1456-1518.	47.7	80
9	Hemozoin and antimalarial drug discovery. <i>Future Medicinal Chemistry</i> , 2013, 5, 1437-1450.	2.3	66
10	Dendrimer-Mediated Formation of Multicomponent Nanospheres. <i>Chemistry of Materials</i> , 2004, 16, 4890-4895.	6.7	60
11	Automated Molecular Simulation Based Binding Affinity Calculator for Ligand-Bound HIV-1 Proteases. <i>Journal of Chemical Information and Modeling</i> , 2008, 48, 1909-1919.	5.4	52
12	Size-Dependent Cellular Uptake of DNA Functionalized Gold Nanoparticles. <i>Small</i> , 2016, 12, 5592-5600.	10.0	52
13	Comparison of Three Magnetic Bead Surface Functionalities for RNA Extraction and Detection. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 6062-6069.	8.0	50
14	Optimization of a multi-well colorimetric assay to determine haem species in <i>Plasmodium falciparum</i> in the presence of anti-malarials. <i>Malaria Journal</i> , 2015, 14, 253.	2.3	48
15	Mobile phone imaging and cloud-based analysis for standardized malaria detection and reporting. <i>Scientific Reports</i> , 2016, 6, 28645.	3.3	44
16	Hairpin DNA coated gold nanoparticles as intracellular mRNA probes for the detection of tyrosinase gene expression in melanoma cells. <i>Chemical Communications</i> , 2010, 46, 5557.	4.1	40
17	The basis of the immunomodulatory activity of malaria pigment (hemozoin). <i>Journal of Biological Inorganic Chemistry</i> , 2006, 11, 917-929.	2.6	39
18	Identification of $\text{h}^2$ -hematin inhibitors in a high-throughput screening effort reveals scaffolds with <i>in vitro</i> antimalarial activity. <i>International Journal for Parasitology: Drugs and Drug Resistance</i> , 2014, 4, 316-325.	3.4	37

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19	Development of a Histidine-Targeted Spectrophotometric Sensor Using Ni(II)NTA-Functionalized Au and Ag Nanoparticles. <i>Langmuir</i> , 2011, 27, 15330-15339.	3.5	32
20	Low-Resource Method for Extracting the Malarial Biomarker Histidine-Rich Protein II To Enhance Diagnostic Test Performance. <i>Analytical Chemistry</i> , 2012, 84, 6136-6142.	6.5	32
21	An embedded barcode for "connected" malaria rapid diagnostic tests. <i>Lab on A Chip</i> , 2017, 17, 1314-1322.	6.0	31
22	SCT: a suite of programs for comparing atomistic models with small-angle scattering data. <i>Journal of Applied Crystallography</i> , 2015, 48, 953-961.	4.5	30
23	Immunomagnetic capture and colorimetric detection of malarial biomarker Plasmodium falciparum lactate dehydrogenase. <i>Analytical Biochemistry</i> , 2016, 493, 30-34.	2.4	29
24	Increase on the Initial Soluble Heme Levels in Acidic Conditions Is an Important Mechanism for Spontaneous Heme Crystallization In Vitro. <i>PLoS ONE</i> , 2010, 5, e12694.	2.5	28
25	Identification of $\beta$ -hematin inhibitors in the MMV Malaria Box. <i>International Journal for Parasitology: Drugs and Drug Resistance</i> , 2015, 5, 84-91.	3.4	27
26	An Ensemble-Based Protocol for the Computational Prediction of Helix-Helix Interactions in G Protein-Coupled Receptors using Coarse-Grained Molecular Dynamics. <i>Journal of Chemical Theory and Computation</i> , 2017, 13, 2254-2270.	5.3	27
27	Design criteria for developing low-resource magnetic bead assays using surface tension valves. <i>Biomicrofluidics</i> , 2013, 7, 014104.	2.4	25
28	Thumbs Down for HIV: Domain Level Rearrangements Do Occur in the NNRTI-Bound HIV-1 Reverse Transcriptase. <i>Journal of the American Chemical Society</i> , 2012, 134, 12885-12888.	13.7	22
29	The solution structures of native and patient monomeric human IgA1 reveal asymmetric extended structures: implications for function and IgAN disease. <i>Biochemical Journal</i> , 2015, 471, 167-185.	3.7	22
30	Comparative Analysis of Gene Expression Changes Mediated by Individual Constituents of Hemozoin. <i>Chemical Research in Toxicology</i> , 2009, 22, 433-445.	3.3	21
31	Simultaneous capture and sequential detection of two malarial biomarkers on magnetic microparticles. <i>Talanta</i> , 2016, 161, 443-449.	5.5	21
32	Building Confidence in Simulation: Applications of EasyVWUQ. <i>Advanced Theory and Simulations</i> , 2020, 3, 1900246.	2.8	21
33	Characterization of Plasmodium Lactate Dehydrogenase and Histidine-Rich Protein 2 Clearance Patterns via Rapid On-Bead Detection from a Single Dried Blood Spot. <i>American Journal of Tropical Medicine and Hygiene</i> , 2018, 98, 1389-1396.	1.4	21
34	Application of ESMACS binding free energy protocols to diverse datasets: Bromodomain-containing protein 4. <i>Scientific Reports</i> , 2019, 9, 6017.	3.3	18
35	Direct transfer of HRPII-magnetic bead complexes to malaria rapid diagnostic tests significantly improves test sensitivity. <i>Malaria Journal</i> , 2016, 15, 399.	2.3	17
36	Tuberculosis Biomarker Extraction and Isothermal Amplification in an Integrated Diagnostic Device. <i>PLoS ONE</i> , 2015, 10, e0130260.	2.5	16

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37	Structure, Dynamics, and Function of the Hammerhead Ribozyme in Bulk Water and at a Clay Mineral Surface from Replica Exchange Molecular Dynamics. <i>Langmuir</i> , 2015, 31, 2493-2501.	3.5	16
38	Exploring the scope of new arylamino alcohol derivatives: Synthesis, antimalarial evaluation, toxicological studies, and target exploration. <i>International Journal for Parasitology: Drugs and Drug Resistance</i> , 2016, 6, 184-198.	3.4	16
39	Spontaneous self-assembly and disassembly of colloidal gold nanoparticles induced by tetrakis(hydroxymethyl) phosphonium chloride. <i>Chemical Communications</i> , 2016, 52, 1266-1269.	4.1	16
40	Automated Device for Asynchronous Extraction of RNA, DNA, or Protein Biomarkers from Surrogate Patient Samples. <i>Journal of the Association for Laboratory Automation</i> , 2016, 21, 732-742.	2.8	16
41	App Use and Usability of a Barcode-Based Digital Platform to Augment COVID-19 Contact Tracing: Postpilot Survey and Paradata Analysis. <i>JMIR Public Health and Surveillance</i> , 2021, 7, e25859.	2.6	16
42	Multifunctional nanoparticles as simulants for a gravimetric immunoassay. <i>Analytical and Bioanalytical Chemistry</i> , 2011, 399, 1021-1029.	3.7	15
43	Real-time imaging of VCAM-1 mRNA in TNF- $\alpha$ activated retinal microvascular endothelial cells using antisense hairpin-DNA functionalized gold nanoparticles. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2018, 14, 63-71.	3.3	14
44	Mechanism of Drug Efficacy Within the EGF Receptor Revealed by Microsecond Molecular Dynamics Simulation. <i>Molecular Cancer Therapeutics</i> , 2012, 11, 2394-2400.	4.1	13
45	Sensitive Method for Biomolecule Detection Utilizing Signal Amplification with Porphyrin Nanoparticles. <i>Analytical Chemistry</i> , 2016, 88, 5928-5933.	6.5	13
46	Metal Affinity-Enabled Capture and Release Antibody Reagents Generate a Multiplex Biomarker Enrichment System that Improves Detection Limits of Rapid Diagnostic Tests. <i>Analytical Chemistry</i> , 2017, 89, 10216-10223.	6.5	13
47	Unsaturated Glycerophospholipids Mediate Heme Crystallization: Biological Implications for Hemozoin Formation in the Kissing Bug <i>Rhodnius prolixus</i> . <i>PLoS ONE</i> , 2014, 9, e88976.	2.5	12
48	Detergent-Mediated Formation of $\beta$ -Hematin: Heme Crystallization Promoted by Detergents Implicates Nanostructure Formation for Use as a Biological Mimic. <i>Crystal Growth and Design</i> , 2016, 16, 2542-2551.	3.0	12
49	Magnetically-enabled biomarker extraction and delivery system: towards integrated ASSURED diagnostic tools. <i>Analyst</i> , 2017, 142, 1569-1580.	3.5	12
50	$\beta$ -Hematin (Hemozoin) Mediated Decomposition of Polyunsaturated Fatty Acids to 4-Hydroxy-2-nonenal. <i>Inorganic Chemistry</i> , 2005, 44, 2134-2136.	4.0	11
51	Identification of hydroxyeicosatetraenoic acid components of schistosomal hemozoin. <i>Biochemical and Biophysical Research Communications</i> , 2007, 363, 867-872.	2.1	11
52	From base pair to bedside: molecular simulation and the translation of genomics to personalized medicine. <i>Wiley Interdisciplinary Reviews: Systems Biology and Medicine</i> , 2012, 4, 585-598.	6.6	11
53	Hit-to-lead and lead optimization binding free energy calculations for G protein-coupled receptors. <i>Interface Focus</i> , 2020, 10, 20190128.	3.0	11
54	Resolution of Discordant HIV-1 Protease Resistance Rankings Using Molecular Dynamics Simulations. <i>Journal of Chemical Information and Modeling</i> , 2011, 51, 2636-2649.	5.4	10

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55	Ni(II)NTA AuNPs as a low-resource malarial diagnostic platform for the rapid colorimetric detection of Plasmodium falciparum Histidine-Rich Protein-2. <i>Talanta</i> , 2015, 135, 94-101.	5.5	10
56	Targeted Imaging of VCAM-1 mRNA in a Mouse Model of Laser-Induced Choroidal Neovascularization Using Antisense Hairpin-DNA-Functionalized Gold-Nanoparticles. <i>Molecular Pharmaceutics</i> , 2018, 15, 5514-5520.	4.6	10
57	Evidence for histidine-rich protein 2 immune complex formation in symptomatic patients in Southern Zambia. <i>Malaria Journal</i> , 2018, 17, 256.	2.3	10
58	A Polymorphism at Position 400 in the Connection Subdomain of HIV-1 Reverse Transcriptase Affects Sensitivity to NNRTIs and RNaseH Activity. <i>PLoS ONE</i> , 2013, 8, e74078.	2.5	10
59	Plasmodium falciparum HRP2 ELISA for analysis of dried blood spot samples in rural Zambia. <i>Malaria Journal</i> , 2017, 16, 350.	2.3	9
60	Poly(amidoamine)-coated magnetic particles for enhanced detection of Schistosoma circulating anodic antigen in endemic urine samples. <i>Analyst</i> , 2019, 144, 212-219.	3.5	9
61	Detection of Single-Nucleotide Polymorphism Markers of Antimalarial Drug Resistance Directly from Whole Blood. <i>Journal of Molecular Diagnostics</i> , 2019, 21, 623-631.	2.8	9
62	Application of the ESMACS Binding Free Energy Protocol to a Multi- $\epsilon$ -Binding Site Lactate Dehydrogenase A Ligand Dataset. <i>Advanced Theory and Simulations</i> , 2020, 3, 1900194.	2.8	9
63	Rapid concentration and elution of malarial antigen histidine-rich protein II using solid phase Zn(II) resin in a simple flow-through pipette tip format. <i>Biomicrofluidics</i> , 2017, 11, 034115.	2.4	8
64	Nanoscale tools for rapid and sensitive diagnosis of viruses. <i>Future Virology</i> , 2006, 1, 769-781.	1.8	7
65	Differential gene expression mediated by 15-hydroxyeicosatetraenoic acid in LPS-stimulated RAW 264.7 cells. <i>Malaria Journal</i> , 2009, 8, 195.	2.3	7
66	Understanding On-Campus Interactions With a Semiautomated, Barcode-Based Platform to Augment COVID-19 Contact Tracing: App Development and Usage. <i>JMIR MHealth and UHealth</i> , 2021, 9, e24275.	3.7	7
67	Global Conformational Dynamics of HIV-1 Reverse Transcriptase Bound to Non-Nucleoside Inhibitors. <i>Biology</i> , 2012, 1, 222-244.	2.8	6
68	On-particle detection of Plasmodium falciparum histidine-rich protein II by a $\epsilon$ -switch-on- $\epsilon$ -iridium(III) probe. <i>Analytical Biochemistry</i> , 2014, 445, 60-66.	2.4	6
69	A Prototype Biomarker Detector Combining Biomarker Extraction and Fixed Temperature PCR. <i>Journal of the Association for Laboratory Automation</i> , 2016, 21, 590-598.	2.8	6
70	Design and use of mouse control DNA for DNA biomarker extraction and PCR detection from urine: Application for transrenal Mycobacterium tuberculosis DNA detection. <i>Journal of Microbiological Methods</i> , 2017, 136, 65-70.	1.6	6
71	Evaluating Network Readiness for mHealth Interventions Using the Beacon Mobile Phone App: Application Development and Validation Study. <i>JMIR MHealth and UHealth</i> , 2020, 8, e18413.	3.7	6
72	Ensemble Simulations and Experimental Free Energy Distributions: Evaluation and Characterization of Isoxazole Amides as SMYD3 Inhibitors. <i>Journal of Chemical Information and Modeling</i> , 2022, 62, 2561-2570.	5.4	6

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73	A handheld orbital mixer for processing viscous samples in low resource settings. <i>Analytical Methods</i> , 2016, 8, 7347-7353.	2.7	5
74	An antibody-free dual-biomarker rapid enrichment workflow (AnDREW) improves the sensitivity of malaria rapid diagnostic tests. <i>Analytical Biochemistry</i> , 2021, 612, 114020.	2.4	5
75	mHAT app for automated malaria rapid test result analysis and aggregation: a pilot study. <i>Malaria Journal</i> , 2021, 20, 237.	2.3	5
76	Application of mass transfer theory to biomarker capture by surface functionalized magnetic beads in microcentrifuge tubes. <i>Advances in Colloid and Interface Science</i> , 2017, 246, 275-288.	14.7	4
77	Structure-activity relationship of new antimalarial 1-aryl-3-substituted propanol derivatives: Synthesis, preliminary toxicity profiling, parasite life cycle stage studies, target exploration, and targeted delivery. <i>European Journal of Medicinal Chemistry</i> , 2018, 152, 489-514.	5.5	4
78	Inductively coupled plasma optical emission spectroscopy as a tool for evaluating lateral flow assays. <i>Analytical Methods</i> , 2021, 13, 2137-2146.	2.7	4
79	Quantized Water Access to the HIV-1 Protease Active Site as a Proposed Mechanism for Cooperative Mutations in Drug Affinity. <i>Biochemistry</i> , 2012, 51, 6487-6489.	2.5	3
80	Characterization and utility of immobilized metal affinity-functionalized cellulose membranes for point-of-care malaria diagnostics. <i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> , 2021, 1186, 123023.	2.3	3
81	Incorporating Lateral Flow Assays into Undergraduate Analytical Chemistry Lab Curricula for In-Person, Hybrid, and Remote Learning Formats. <i>Journal of Chemical Education</i> , 2022, 99, 902-909.	2.3	3
82	Heme Detoxification in Malaria: A Target Rich Environment. <i>ACS Symposium Series</i> , 2005, , 263-280.	0.5	2
83	Impact of 4-hydroxynonenal on matrix metalloproteinase-9 regulation in lipopolysaccharide-stimulated RAW 264.7 cells. <i>Cell Biochemistry and Function</i> , 2015, 33, 59-66.	2.9	2
84	The cyanobacterial lectin, microvirin-N, enhances the specificity and sensitivity of lipoarabinomannan-based TB diagnostic tests. <i>Analyst</i> , The, 2021, 146, 1207-1215.	3.5	2
85	Printing Biinks with Technologically Relevant Applications. , 2009, , 269-282.		1
86	Iridium(III) Luminescent Probe for Detection of the Malarial Protein Biomarker Histidine Rich Protein-II. <i>Journal of Visualized Experiments</i> , 2015, , e52856.	0.3	1
87	Cellular Uptake: Size-Dependent Cellular Uptake of DNA Functionalized Gold Nanoparticles (Small) Tj ETQq1 1 0.784314 rgBT /Overbo 10,0		1
88	Immunoreactivity and Characterization of Histidine-Rich Peptide Encapsulated Nanoclusters. <i>Materials Research Society Symposia Proceedings</i> , 2001, 711, 1.	0.1	0
89	Crystallization of Synthetic Hemozoin (Beta-Hematin) Nucleated at the Surface of Synthetic Neutral Lipid Bodies. <i>Materials Research Society Symposia Proceedings</i> , 2010, 1274, 1.	0.1	0
90	Signal Amplification with Co(III) Protoporphyrin IX Nanoparticles and Anodic Stripping Voltammetry. <i>Electroanalysis</i> , 2021, 33, 1923-1929.	2.9	0