Richard C Willson

List of Publications by Year
in descending order

61 papers	1,637 citations	331670 21 h-index	315739 38 g-index
128 all docs	128 docs citations	128 times ranked	2122 citing authors

#	Article	IF	Citations
1	Sediment and their bacterial communities in an industrialized estuary after Hurricane Harvey. Marine Pollution Bulletin, 2022, 175, 113359.	5.0	2
2	Suspendable Hydrogel Nanovials for Massively Parallel Single-Cell Functional Analysis and Sorting. ACS Nano, 2022, 16, 7242-7257.	14.6	35
3	Photoluminescent Molecules and Materials as Diagnostic Reporters in Lateral Flow Assays. ACS Applied Bio Materials, 2022, 5, 82-96.	4.6	6
4	Isocratic reporter-exclusion immunoassay using restricted-access adsorbents. Analyst, The, 2021, 146, 4835-4840.	3.5	1
5	Neutralizing Aptamers Block S/RBDâ€ACE2 Interactions and Prevent Host Cell Infection. Angewandte Chemie - International Edition, 2021, 60, 10273-10278.	13.8	81
6	Dynamics of Flexible Viruses in Polymer Solutions. Macromolecules, 2021, 54, 4557-4563.	4.8	16
7	Longitudinal patterns in sediment type and quality during daily flow regimes and following natural hazards in an urban estuary: a Hurricane Harvey retrospective. Environmental Science and Pollution Research, 2021, , 1.	5.3	1
8	SERS-Based Ultrasensitive Lateral Flow Assay for Quantitative Sensing of Protein Biomarkers. IEEE Journal of Selected Topics in Quantum Electronics, 2021, 27, 1-8.	2.9	5
9	Advancing pediatric medical device development via non-dilutive NIH SBIR/STTR grant funding. Journal of Pediatric Surgery, 2021, 56, 2118-2123.	1.6	5
10	Antibody mix-and-read assays based on fluorescence intensity probes. MAbs, 2021, 13, 1980178.	5.2	0
11	Antibody mix-and-read assays based on fluorescence intensity probes. MAbs, 2021, 13, 1980178.	5.2	1
12	The complete genome sequence of the nitrile biocatalyst Rhodococcus rhodochrous ATCC BAA-870. BMC Genomics, 2020, 21, 3.	2.8	7
13	A multicolor multiplex lateral flow assay for high-sensitivity analyte detection using persistent luminescent nanophosphors. Analytical Methods, 2020, 12, 272-280.	2.7	36
14	Toward in silico CMC: An industrial collaborative approach to modelâ€based process development. Biotechnology and Bioengineering, 2020, 117, 3986-4000.	3.3	26
15	Neutral DNAâ€“avidin nanoparticles as ultrasensitive reporters in immuno-PCR. Analyst, The, 2020, 145, 4942-4949.	3.5	1
16	Continuous Fc detection for protein A capture process control. Biosensors and Bioelectronics, 2020, 165, 112327.	10.1	9
17	Recombinant expression, characterization, and quantification in human cancer cell lines of the Anaplastic Large-Cell Lymphoma-characteristic NPM-ALK fusion protein. Scientific Reports, 2020, 10, 5078.	3.3	2
18	Highland games: A benchmarking exercise in predicting biophysical and drug properties of monoclonal antibodies from amino acid sequences. Biotechnology and Bioengineering, 2020, 117, 2100-2115.	3.3	9

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19	PCB-Based Magnetometer as a Platform for Quantification of Lateral-Flow Assays. Sensors, 2019, 19, 5433.	3.8	6
20	Evaluation of a nanophosphor lateral-flow assay for self-testing for herpes simplex virus type 2 seropositivity. PLoS ONE, 2019, 14, e0225365.	2.5	17
21	M13 bacteriophage purification using poly(ionic liquids) as alternative separation matrices. Journal of Chromatography A, 2018, 1532, 246-250.	3.7	10
22	Nanoparticle-Based Proximity Ligation Assay for Ultrasensitive, Quantitative Detection of Protein Biomarkers. ACS Applied Materials & Interfaces, 2018, 10, 31845-31849.	8.0	18
23	Akkermansia muciniphila as a Model Case for the Development of an Improved Quantitative RPA Microbiome Assay. Frontiers in Cellular and Infection Microbiology, 2018, 8, 237.	3.9	4
24	Monte Carlo economic analysis of Baker's yeast invertase purification using twoâ€•and threeâ€phase partitioning. Journal of Chemical Technology and Biotechnology, 2018, 93, 2511-2517.	3.2	7
25	Enhancement of lateral flow assay performance by electromagnetic relocation of reporter particles. PLoS ONE, 2018, 13, e0186782.	2.5	27
26	Increasing Binding Efficiency via Reporter Shape and Flux in a Viral Nanoparticle Lateral-Flow Assay. ACS Applied Materials & Interfaces, 2017, 9, 6878-6884.	8.0	13
27	A low-cost smartphone-based platform for highly sensitive point-of-care testing with persistent luminescent phosphors. Lab on A Chip, 2017, 17, 1051-1059.	6.0	99
28	Colloidal Stability of Graphene-Based Amphiphilic Janus Nanosheet Fluid. Chemistry of Materials, 2017, 29, 3454-3460.	6.7	36
29	Secondary Oil Recovery Using Graphene-Based Amphiphilic Janus Nanosheet Fluid at an Ultralow Concentration. Industrial & Engineering Chemistry Research, 2017, 56, 11125-11132.	3.7	87
30	Competitive multicomponent anion exchange adsorption of proteins at the single molecule level. Analyst, The, 2017, 142, 3127-3131.	3.5	17
31	Recovery and primary purification of bacteriophage M13 using aqueous twoâ€phase systems. Journal of Chemical Technology and Biotechnology, 2017, 92, 2808-2816.	3.2	20
32	Magnetic Sensing Potential of Fe₃O₄ Nanocubes Exceeds That of Fe₃O₄ Nanospheres. ACS Omega, 2017, 2, 8010-8019.	3.5	37
33	Orientational binding modes of reporters in a viral-nanoparticle lateral flow assay. Analyst, The, 2017, 142, 55-64.	3.5	6
34	Ultrasensitive Magnetic Nanoparticle Detector for Biosensor Applications. Sensors, 2017, 17, 1296.	3.8	23
35	pHâ€dependence of singleâ€protein adsorption and diffusion at a liquid chromatographic interface. Journal of Separation Science, 2016, 39, 682-688.	2.5	15
36	Flotation Immunoassay: Masking the Signal from Free Reporters in Sandwich Immunoassays. Scientific Reports, 2016, 6, 24297.	3.3	11

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37	Nanofluid of graphene-based amphiphilic Janus nanosheets for tertiary or enhanced oil recovery: High performance at low concentration. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 7711-7716.	7.1	196
38	An embedded microretroreflector-based microfluidic immunoassay platform. Lab on A Chip, 2016, 16, 1625-1635.	6.0	6
39	Ensemble and single-molecule biophysical characterization of D17.4 DNA aptamerâ€"IgE interactions. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2016, 1864, 154-164.	2.3	14
40	Detection of Viruses By Counting Single Fluorescent Genetically Biotinylated Reporter Immunophage Using a Lateral Flow Assay. ACS Applied Materials & Interfaces, 2015, 7, 2891-2898.	8.0	21
41	Aptamer-Phage Reporters for Ultrasensitive Lateral Flow Assays. Analytical Chemistry, 2015, 87, 11660-11665.	6.5	35
42	Sensitive Detection of Norovirus Using Phage Nanoparticle Reporters in Lateral-Flow Assay. PLoS ONE, 2015, 10, e0126571.	2.5	37
43	Unified superresolution experiments and stochastic theory provide mechanistic insight into protein ion-exchange adsorptive separations. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 2075-2080.	7.1	68
44	High ionic strength narrows the population of sites participating in protein ion-exchange adsorption: A single-molecule study. Journal of Chromatography A, 2014, 1343, 135-142.	3.7	38
45	Spermine Sepharose as a clustered-charge anion exchange adsorbent. Journal of Chromatography A, 2014, 1324, 135-140.	3.7	5
46	Persistent Luminescence Strontium Aluminate Nanoparticles as Reporters in Lateral Flow Assays. Analytical Chemistry, 2014, 86, 9481-9488.	6.5	104
47	Ultrasensitive immuno-detection using viral nanoparticles with modular assembly using genetically-directed biotinylation. Biotechnology Letters, 2014, 36, 1863-1868.	2.2	10
48	Functionalized viral nanoparticles as ultrasensitive reporters in lateral-flow assays. Analyst, The, 2013, 138, 5584.	3.5	29
49	Cubic Silica-Coated and Amine-Functionalized FeCo Nanoparticles with High Saturation Magnetization. Chemistry of Materials, 2013, 25, 1092-1097.	6.7	45
50	Detection and Monitoring of Microparticles Under Skin by Optical Coherence Tomography as an Approach to Continuous Glucose Sensing Using Implanted Retroreflectors. IEEE Sensors Journal, 2013, 13, 4534-4541.	4.7	20
51	Recovery of Small DNA Fragments from Serum Using Compaction Precipitation. PLoS ONE, 2012, 7, e51863.	2.5	4
52	Nucleic acid affinity of clustered-charge anion exchange adsorbents: Effects of ionic strength and ligand density. Journal of Chromatography A, 2011, 1218, 258-262.	3.7	12
53	Suspended, micron-scale corner cube retroreflectors as ultra-bright optical labels. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, 06FA01.	1.2	11
54	Biophysical characterization of DNA aptamer interactions with vascular endothelial growth factor. Biopolymers, 2009, 91, 145-156.	2.4	106

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55	System for large scale production of small RNAs through their in vivo expression within 5S rRNAâ€derived scaffold.. FASEB Journal, 2009, 23, 846.5.	0.5	0
56	Conformational flexibility and kinetic complexity in antibodyâ€“antigen interactions. Journal of Molecular Recognition, 2008, 21, 114-121.	2.1	15
57	A fluorescence polarization assay for identifying ligands that bind to vascular endothelial growth factor. Analytical Biochemistry, 2008, 378, 8-14.	2.4	21
58	Enhanced Protein Affinity and Selectivity of Clustered-Charge Anion-Exchange Adsorbents. Analytical Chemistry, 2007, 79, 9060-9065.	6.5	11
59	Competitive ion-exchange adsorption of proteins: Competitive isotherms with controlled competitor concentration. Journal of Chromatography A, 2005, 1079, 116-126.	3.7	18
60	Enhancement of anion-exchange chromatography of DNA using compaction agents. Journal of Chromatography A, 2003, 984, 215-221.	3.7	37
61	Association and Dissociation Kinetics of Anti-Hen Egg Lysozyme Monoclonal Antibodies HyHEL-5 and HyHEL-10. Biophysical Journal, 1998, 74, 2036-2045.	0.5	74