

Ryan J White

List of Publications by Year in descending order

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Version: 2024-02-01

58
papers

2,845
citations

218677

26
h-index

168389

53
g-index

60
all docs

60
docs citations

60
times ranked

3001
citing authors

#	ARTICLE	IF	CITATIONS
1	Real-Time, Aptamer-Based Tracking of Circulating Therapeutic Agents in Living Animals. <i>Science Translational Medicine</i> , 2013, 5, 213ra165.	12.4	291
2	Optimization of Electrochemical Aptamer-Based Sensors via Optimization of Probe Packing Density and Surface Chemistry. <i>Langmuir</i> , 2008, 24, 10513-10518.	3.5	278
3	Single Ion-Channel Recordings Using Glass Nanopore Membranes. <i>Journal of the American Chemical Society</i> , 2007, 129, 11766-11775.	13.7	238
4	Comparing the Properties of Electrochemical-Based DNA Sensors Employing Different Redox Tags. <i>Analytical Chemistry</i> , 2009, 81, 9109-9113.	6.5	152
5	Reagentless, Structure-Switching, Electrochemical Aptamer-Based Sensors. <i>Annual Review of Analytical Chemistry</i> , 2016, 9, 163-181.	5.4	139
6	DNA biomolecular-electronic encoder and decoder devices constructed by multiplex biosensors. <i>NPG Asia Materials</i> , 2012, 4, e1-e1.	7.9	138
7	Exploiting Binding-Induced Changes in Probe Flexibility for the Optimization of Electrochemical Biosensors. <i>Analytical Chemistry</i> , 2010, 82, 73-76.	6.5	125
8	Enhancing the Analytical Performance of Electrochemical RNA Aptamer-Based Sensors for Sensitive Detection of Aminoglycoside Antibiotics. <i>Analytical Chemistry</i> , 2014, 86, 1131-1137.	6.5	104
9	Ionic Conductivity of the Aqueous Layer Separating a Lipid Bilayer Membrane and a Glass Support. <i>Langmuir</i> , 2006, 22, 10777-10783.	3.5	94
10	Re-engineering aptamers to support reagentless, self-reporting electrochemical sensors. <i>Analyst</i> , The, 2010, 135, 589.	3.5	92
11	Perspective on the Future Role of Aptamers in Analytical Chemistry. <i>Analytical Chemistry</i> , 2019, 91, 15335-15344.	6.5	89
12	Achieving Reproducible Performance of Electrochemical, Folding Aptamer-Based Sensors on Microelectrodes: Challenges and Prospects. <i>Analytical Chemistry</i> , 2014, 86, 11417-11424.	6.5	81
13	Electrochemical Aptamer-Based Sensor for Real-Time Monitoring of Insulin. <i>ACS Sensors</i> , 2019, 4, 498-503.	7.8	75
14	A Random Walk through Electron-Transfer Kinetics. <i>Analytical Chemistry</i> , 2005, 77, 214 A-220 A.	6.5	74
15	Survey of Redox-Active Moieties for Application in Multiplexed Electrochemical Biosensors. <i>Analytical Chemistry</i> , 2016, 88, 10452-10458.	6.5	66
16	Wash-free, Electrochemical Platform for the Quantitative, Multiplexed Detection of Specific Antibodies. <i>Analytical Chemistry</i> , 2012, 84, 1098-1103.	6.5	64
17	A Mechanistic Study of Electron Transfer from the Distal Termini of Electrode-Bound, Single-Stranded DNAs. <i>Journal of the American Chemical Society</i> , 2010, 132, 16120-16126.	13.7	56
18	Sensitivity and Signal Complexity as a Function of the Number of Ion Channels in a Stochastic Sensor. <i>Analytical Chemistry</i> , 2009, 81, 533-537.	6.5	51

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19	The Current and Future Role of Aptamers in Electroanalysis. <i>Journal of the Electrochemical Society</i> , 2014, 161, H301-H313.	2.9	50
20	Random Walk on a Leash: A Simple Single-Molecule Diffusion Model for Surface-Tethered Redox Molecules with Flexible Linkers. <i>Journal of the American Chemical Society</i> , 2013, 135, 12808-12817.	13.7	49
21	Electrochemistry in Nanometer-Wide Electrochemical Cells. <i>Langmuir</i> , 2008, 24, 2850-2855.	3.5	45
22	Bioinspired Protein Channel-Based Scanning Ion Conductance Microscopy (Bio-SICM) for Simultaneous Conductance and Specific Molecular Imaging. <i>Journal of the American Chemical Society</i> , 2016, 138, 2793-2801.	13.7	38
23	Direct, Real-Time Detection of Adenosine Triphosphate Release from Astrocytes in Three-Dimensional Culture Using an Integrated Electrochemical Aptamer-Based Sensor. <i>ACS Chemical Neuroscience</i> , 2019, 10, 2070-2079.	3.5	38
24	Rapid Two-Millisecond Interrogation of Electrochemical, Aptamer-Based Sensor Response Using Intermittent Pulse Amperometry. <i>ACS Sensors</i> , 2018, 3, 1203-1209.	7.8	34
25	Heterogeneous Electrochemical Aptamer-Based Sensor Surfaces for Controlled Sensor Response. <i>Langmuir</i> , 2015, 31, 6563-6569.	3.5	32
26	Electrochromic, Closed-Bipolar Electrodes Employing Aptamer-Based Recognition for Direct Colorimetric Sensing Visualization. <i>Analytical Chemistry</i> , 2019, 91, 11467-11473.	6.5	30
27	Monitoring Charge Flux to Quantify Unusual Ligand-Induced Ion Channel Activity for Use in Biological Nanopore-Based Sensors. <i>Analytical Chemistry</i> , 2014, 86, 5519-5525.	6.5	21
28	Spatially Resolved Chemical Detection with a Nanoneedle-Probe-Supported Biological Nanopore. <i>ACS Nano</i> , 2019, 13, 2606-2614.	14.6	20
29	Collagen Membranes with Ribonuclease Inhibitors for Long-Term Stability of Electrochemical Aptamer-Based Sensors Employing RNA. <i>Analytical Chemistry</i> , 2017, 89, 5598-5604.	6.5	19
30	Electrochemical Affinity Assays/Sensors: Brief History and Current Status. <i>Annual Review of Analytical Chemistry</i> , 2021, 14, 109-131.	5.4	18
31	Recessed Ag/AgCl Microelectrode-Supported Lipid Bilayer for Nanopore Sensing. <i>Analytical Chemistry</i> , 2020, 92, 10856-10862.	6.5	17
32	Effects of Experimental Conditions on the Signaling Fidelity of Impedance-Based Nucleic Acid Sensors. <i>Analytical Chemistry</i> , 2021, 93, 812-819.	6.5	16
33	Monitoring Cooperative Binding Using Electrochemical DNA-Based Sensors. <i>Langmuir</i> , 2015, 31, 868-875.	3.5	15
34	Rationally Designing Aptamer Sequences with Reduced Affinity for Controlled Sensor Performance. <i>Sensors</i> , 2015, 15, 7754-7767.	3.8	14
35	Electrocatalytic Mechanism for Improving Sensitivity and Specificity of Electrochemical Nucleic Acid-Based Sensors with Covalent Redox Tags—Part I. <i>ACS Sensors</i> , 2020, 5, 3833-3841.	7.8	14
36	Influence of Electrophoresis Waveforms in Determining Stochastic Nanoparticle Capture Rates and Detection Sensitivity. <i>Analytical Chemistry</i> , 2007, 79, 6334-6340.	6.5	12

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37	Quantitative Framework for Stochastic Nanopore Sensors Using Multiple Channels. <i>Analytical Chemistry</i> , 2018, 90, 903-911.	6.5	12
38	Analysis of Membrane Protein Deinsertion-Associated Currents with Nanoneedle-Supported Bilayers to Discover Pore Formation Mechanisms. <i>Langmuir</i> , 2020, 36, 10012-10021.	3.5	12
39	Effect of Laser Irradiation on Reversibility and Drug Release of Light-Activatable Drug-Encapsulated Liposomes. <i>Langmuir</i> , 2020, 36, 3573-3582.	3.5	12
40	Repetitive drug releases from light-activatable micron-sized liposomes. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2021, 625, 126778.	4.7	11
41	Advances and Perspectives in Chemical Imaging in Cellular Environments Using Electrochemical Methods. <i>Chemosensors</i> , 2018, 6, 24.	3.6	9
42	Electrochemical Studies of Cation Condensation-Induced Collapse of Surface-Bound DNA. <i>Langmuir</i> , 2019, 35, 12962-12970.	3.5	9
43	Electrochemistry of Controlled Diameter Carbon Nanotube Fibers at the Cross Section and Sidewall. <i>ACS Applied Energy Materials</i> , 2019, 2, 8757-8766.	5.1	8
44	Use of Electrocatalysis for Differentiating DNA Polymorphisms and Enhancing the Sensitivity of Electrochemical Nucleic Acid-Based Sensors with Covalent Redox Tagsâ€”Part II. <i>ACS Sensors</i> , 2020, 5, 3842-3849.	7.8	7
45	Sensitive Electrochemical Detection of Microcystin-LR in Water Samples Via Target-Induced Displacement of Aptamer Associated [Ru(NH ₃) ₆] ³⁺ . <i>ACS ES&T Engineering</i> , 2021, 1, 1597-1605.	7.6	7
46	Observing Real-Time Formation of Self-Assembled Monolayers on Polycrystalline Gold Surfaces with Scanning Electrochemical Cell Microscopy. <i>Langmuir</i> , 2022, 38, 9148-9156.	3.5	7
47	Ultra-low-power neurotransmitter sensor using novel â€œclickâ€ chemistry aptamer-functionalized deep subthreshold Schottky barrier IGZO TFT. <i>MRS Communications</i> , 2021, 11, 233-243.	1.8	5
48	Silver Nanoneedle Probes Enable Sustained DC Current, Single-Channel Resistive Pulse Nanopore Sensing. <i>Analytical Chemistry</i> , 2021, 93, 11568-11575.	6.5	5
49	Nanoelectrode Ensembles Consisting of Carbon Nanotubes. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 8399.	2.5	5
50	Merging Metabolism and Power: Development of a Novel Photobioelectric Device Driven by Photosynthesis and Respiration. <i>PLoS ONE</i> , 2014, 9, e86518.	2.5	5
51	3-D printed microfluidics for rapid prototyping and testing of electrochemical, aptamer-based sensor devices under flow conditions. <i>Analytica Chimica Acta</i> , 2022, 1192, 339377.	5.4	5
52	Biocompatible hydrogel membranes for the protection of RNA aptamer-based electrochemical sensors. <i>Proceedings of SPIE</i> , 2013, , .	0.8	4
53	Nucleic Acid Identity, Structure, and Flexibility Affect the Electrochemical Signal of Tethered Redox Molecules upon Biopolymer Collapse. <i>Langmuir</i> , 2021, 37, 12466-12475.	3.5	3
54	Recent advances in ion-channel probes for nanopore sensing: Insights into the probe architectures. <i>Analytica Chimica Acta</i> , 2022, 1224, 340162.	5.4	3

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55	Measuring Practical Reversibility of Surface-Bound DNA for Mechanistic Insight into Folding-Based Sensors. <i>Journal of the Electrochemical Society</i> , 2021, 168, 116511.	2.9	2
56	Ultrasensitive label-free tobramycin detection with aptamer-functionalized ZnO TFT biosensor. , 2018, , .		1
57	Effects of Nucleic Acid Structural Heterogeneity on the Electrochemistry of Tethered Redox Molecules. <i>Langmuir</i> , 2022, 38, 7322-7330.	3.5	1
58	Direct Chemical Detection in a Microchannel with a Nanoneedle-Based Biological Nanopore Probe. , 2019, , .		0