Ryan J White

List of Publications by Year
in descending order

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	3-D printed microfluidics for rapid prototyping and testing of electrochemical, aptamer-based sensor devices under flow conditions. Analytica Chimica Acta, 2022, 1192, 339377.	5.4	5
2	Effects of Nucleic Acid Structural Heterogeneity on the Electrochemistry of Tethered Redox Molecules. Langmuir, 2022, 38, 7322-7330.	3.5	1
3	Observing Real-Time Formation of Self-Assembled Monolayers on Polycrystalline Gold Surfaces with Scanning Electrochemical Cell Microscopy. Langmuir, 2022, 38, 9148-9156.	3.5	7
4	Recent advances in ion-channel probes for nanopore sensing: Insights into the probe architectures. Analytica Chimica Acta, 2022, 1224, 340162.	5.4	3
5	Effects of Experimental Conditions on the Signaling Fidelity of Impedance-Based Nucleic Acid Sensors. Analytical Chemistry, 2021, 93, 812-819.	6.5	16
6	Ultra-low-power neurotransmitter sensor using novel â€œclickâ€•chemistry aptamer-functionalized deep subthreshold Schottky barrier IGZO TFT. MRS Communications, 2021, 11, 233-243.	1.8	5
7	Electrochemical Affinity Assays/Sensors: Brief History and Current Status. Annual Review of Analytical Chemistry, 2021, 14, 109-131.	5.4	18
8	Silver Nanoneedle Probes Enable Sustained DC Current, Single-Channel Resistive Pulse Nanopore Sensing. Analytical Chemistry, 2021, 93, 11568-11575.	6.5	5
9	Repetitive drug releases from light-activatable micron-sized liposomes. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2021, 625, 126778.	4.7	11
10	Nanoelectrode Ensembles Consisting of Carbon Nanotubes. Applied Sciences (Switzerland), 2021, 11, 8399.	2.5	5
11	Sensitive Electrochemical Detection of Microcystin-LR in Water Samples Via Target-Induced Displacement of Aptamer Associated [Ru(NH₃)₆]³⁺. ACS ES&T Engineering, 2021, 1, 1597-1605.	7.6	7
12	Nucleic Acid Identity, Structure, and Flexibility Affect the Electrochemical Signal of Tethered Redox Molecules upon Biopolymer Collapse. Langmuir, 2021, 37, 12466-12475.	3.5	3
13	Measuring Practical Reversibility of Surface-Bound DNA for Mechanistic Insight into Folding-Based Sensors. Journal of the Electrochemical Society, 2021, 168, 116511.	2.9	2
14	Analysis of Membrane Protein Deinsertion-Associated Currents with Nanoneedle-Supported Bilayers to Discover Pore Formation Mechanisms. Langmuir, 2020, 36, 10012-10021.	3.5	12
15	Use of Electrocatalysis for Differentiating DNA Polymorphisms and Enhancing the Sensitivity of Electrochemical Nucleic Acid-Based Sensors with Covalent Redox Tagsâ€”Part II. ACS Sensors, 2020, 5, 3842-3849.	7.8	7
16	Electrocatalytic Mechanism for Improving Sensitivity and Specificity of Electrochemical Nucleic Acid-Based Sensors with Covalent Redox Tagsâ€”Part I. ACS Sensors, 2020, 5, 3833-3841.	7.8	14
17	Effect of Laser Irradiation on Reversibility and Drug Release of Light-Activatable Drug-Encapsulated Liposomes. Langmuir, 2020, 36, 3573-3582.	3.5	12
18	Recessed Ag/AgCl Microelectrode-Supported Lipid Bilayer for Nanopore Sensing. Analytical Chemistry, 2020, 92, 10856-10862.	6.5	17

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19	Electrochromic, Closed-Bipolar Electrodes Employing Aptamer-Based Recognition for Direct Colorimetric Sensing Visualization. Analytical Chemistry, 2019, 91, 11467-11473.	6.5	30
20	Direct Chemical Detection in a Microchannel with a Nanoneedle-Based Biological Nanopore Probe. , 2019, , .		0
21	Perspective on the Future Role of Aptamers in Analytical Chemistry. Analytical Chemistry, 2019, 91, 15335-15344.	6.5	89
22	Electrochemical Studies of Cation Condensation-Induced Collapse of Surface-Bound DNA. Langmuir, 2019, 35, 12962-12970.	3.5	9
23	Spatially Resolved Chemical Detection with a Nanoneedle-Probe-Supported Biological Nanopore. ACS Nano, 2019, 13, 2606-2614.	14.6	20
24	Direct, Real-Time Detection of Adenosine Triphosphate Release from Astrocytes in Three-Dimensional Culture Using an Integrated Electrochemical Aptamer-Based Sensor. ACS Chemical Neuroscience, 2019, 10, 2070-2079.	3.5	38
25	Electrochemistry of Controlled Diameter Carbon Nanotube Fibers at the Cross Section and Sidewall. ACS Applied Energy Materials, 2019, 2, 8757-8766.	5.1	8
26	Electrochemical Aptamer-Based Sensor for Real-Time Monitoring of Insulin. ACS Sensors, 2019, 4, 498-503.	7.8	75
27	Quantitative Framework for Stochastic Nanopore Sensors Using Multiple Channels. Analytical Chemistry, 2018, 90, 903-911.	6.5	12
28	Ultrasensitive label-free tobramycin detection with aptamer-functionalized ZnO TFT biosensor. , 2018, , .		1
29	Rapid Two-Millisecond Interrogation of Electrochemical, Aptamer-Based Sensor Response Using Intermittent Pulse Amperometry. ACS Sensors, 2018, 3, 1203-1209.	7.8	34
30	Advances and Perspectives in Chemical Imaging in Cellular Environments Using Electrochemical Methods. Chemosensors, 2018, 6, 24.	3.6	9
31	Collagen Membranes with Ribonuclease Inhibitors for Long-Term Stability of Electrochemical Aptamer-Based Sensors Employing RNA. Analytical Chemistry, 2017, 89, 5598-5604.	6.5	19
32	Reagentless, Structure-Switching, Electrochemical Aptamer-Based Sensors. Annual Review of Analytical Chemistry, 2016, 9, 163-181.	5.4	139
33	Survey of Redox-Active Moieties for Application in Multiplexed Electrochemical Biosensors. Analytical Chemistry, 2016, 88, 10452-10458.	6.5	66
34	Bioinspired Protein Channel-Based Scanning Ion Conductance Microscopy (Bio-SICM) for Simultaneous Conductance and Specific Molecular Imaging. Journal of the American Chemical Society, 2016, 138, 2793-2801.	13.7	38
35	Monitoring Cooperative Binding Using Electrochemical DNA-Based Sensors. Langmuir, 2015, 31, 868-875.	3.5	15
36	Heterogeneous Electrochemical Aptamer-Based Sensor Surfaces for Controlled Sensor Response. Langmuir, 2015, 31, 6563-6569.	3.5	32

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37	Rationally Designing Aptamer Sequences with Reduced Affinity for Controlled Sensor Performance. Sensors, 2015, 15, 7754-7767.	3.8	14
38	Achieving Reproducible Performance of Electrochemical, Folding Aptamer-Based Sensors on Microelectrodes: Challenges and Prospects. Analytical Chemistry, 2014, 86, 11417-11424.	6.5	81
39	The Current and Future Role of Aptamers in Electroanalysis. Journal of the Electrochemical Society, 2014, 161, H301-H313.	2.9	50
40	Monitoring Charge Flux to Quantify Unusual Ligand-Induced Ion Channel Activity for Use in Biological Nanopore-Based Sensors. Analytical Chemistry, 2014, 86, 5519-5525.	6.5	21
41	Enhancing the Analytical Performance of Electrochemical RNA Aptamer-Based Sensors for Sensitive Detection of Aminoglycoside Antibiotics. Analytical Chemistry, 2014, 86, 1131-1137.	6.5	104
42	Merging Metabolism and Power: Development of a Novel Photobioelectric Device Driven by Photosynthesis and Respiration. PLoS ONE, 2014, 9, e86518.	2.5	5
43	Real-Time, Aptamer-Based Tracking of Circulating Therapeutic Agents in Living Animals. Science Translational Medicine, 2013, 5, 213ra165.	12.4	291
44	Random Walk on a Leash: A Simple Single-Molecule Diffusion Model for Surface-Tethered Redox Molecules with Flexible Linkers. Journal of the American Chemical Society, 2013, 135, 12808-12817.	13.7	49
45	Biocompatible hydrogel membranes for the protection of RNA aptamer-based electrochemical sensors. Proceedings of SPIE, 2013, , .	0.8	4
46	DNA biomolecular-electronic encoder and decoder devices constructed by multiplex biosensors. NPG Asia Materials, 2012, 4, e1-e1.	7.9	138
47	Wash-free, Electrochemical Platform for the Quantitative, Multiplexed Detection of Specific Antibodies. Analytical Chemistry, 2012, 84, 1098-1103.	6.5	64
48	Re-engineering aptamers to support reagentless, self-reporting electrochemical sensors. Analyst, The, 2010, 135, 589.	3.5	92
49	A Mechanistic Study of Electron Transfer from the Distal Termini of Electrode-Bound, Single-Stranded DNAs. Journal of the American Chemical Society, 2010, 132, 16120-16126.	13.7	56
50	Exploiting Binding-Induced Changes in Probe Flexibility for the Optimization of Electrochemical Biosensors. Analytical Chemistry, 2010, 82, 73-76.	6.5	125
51	Sensitivity and Signal Complexity as a Function of the Number of Ion Channels in a Stochastic Sensor. Analytical Chemistry, 2009, 81, 533-537.	6.5	51
52	Comparing the Properties of Electrochemical-Based DNA Sensors Employing Different Redox Tags. Analytical Chemistry, 2009, 81, 9109-9113.	6.5	152
53	Optimization of Electrochemical Aptamer-Based Sensors via Optimization of Probe Packing Density and Surface Chemistry. Langmuir, 2008, 24, 10513-10518.	3.5	278
54	Electrochemistry in Nanometer-Wide Electrochemical Cells. Langmuir, 2008, 24, 2850-2855.	3.5	45

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55	Single Ion-Channel Recordings Using Glass Nanopore Membranes. Journal of the American Chemical Society, 2007, 129, 11766-11775.	13.7	238
56	Influence of Electrophoresis Waveforms in Determining Stochastic Nanoparticle Capture Rates and Detection Sensitivity. Analytical Chemistry, 2007, 79, 6334-6340.	6.5	12
57	Ionic Conductivity of the Aqueous Layer Separating a Lipid Bilayer Membrane and a Glass Support. Langmuir, 2006, 22, 10777-10783.	3.5	94
58	A Random Walk through Electron-Transfer Kinetics. Analytical Chemistry, 2005, 77, 214 A-220 A.	6.5	74