Tim Albrecht

List of Publications by Year
in descending order

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114 papers	4,029 citations	126907 33 h-index	128289 60 g-index
119 all docs	119 docs citations	119 times ranked	4663 citing authors

#	Article	IF	Citations
1	Single-Molecule Electron Transfer in Electrochemical Environments. Chemical Reviews, 2008, 108, 2737-2791.	47.7	276
2	Layering and shear properties of an ionic liquid, 1-ethyl-3-methylimidazolium ethylsulfate, confined to nano-films between mica surfaces. Physical Chemistry Chemical Physics, 2010, 12, 1243-1247.	2.8	269
3	Non-invasive diagnosis of hepatic cirrhosis by transit-time analysis of an ultrasound contrast agent. Lancet, The, 1999, 353, 1579-1583.	13.7	242
4	DNA Tunneling Detector Embedded in a Nanopore. Nano Letters, 2011, 11, 279-285.	9.1	214
5	Prolongation and optimization of Doppler enhancement with a microbubble US contrast agent by using continuous infusion: preliminary experience.. Radiology, 1998, 207, 339-347.	7.3	150
6	Transistor-like Behavior of Transition Metal Complexes. Nano Letters, 2005, 5, 1451-1455.	9.1	144
7	Ultrafast Surface Enhanced Resonance Raman Scattering Detection in Droplet-Based Microfluidic Systems. Analytical Chemistry, 2011, 83, 3076-3081.	6.5	103
8	Single-Molecule Conductance of Redox Molecules in Electrochemical Scanning Tunneling Microscopyâ€. Journal of Physical Chemistry B, 2007, 111, 6703-6712.	2.6	100
9	Rapid Ultrasensitive Single Particle Surface-Enhanced Raman Spectroscopy Using Metallic Nanopores. Nano Letters, 2013, 13, 4602-4609.	9.1	100
10	In situscanning tunnelling spectroscopy of inorganic transition metal complexes. Faraday Discussions, 2006, 131, 265-279.	3.2	97
11	Mechanism of Electrochemical Charge Transport in Individual Transition Metal Complexes. Journal of the American Chemical Society, 2006, 128, 17132-17138.	13.7	94
12	Scanning Tunneling Spectroscopy in an Ionic Liquid. Journal of the American Chemical Society, 2006, 128, 6574-6575.	13.7	92
13	Oligomeric ferrocene rings. Nature Chemistry, 2016, 8, 825-830.	13.6	82
14	Prototype for In Situ Detection of Atmospheric NO3and N2O5via Laser-Induced Fluorescence. Environmental Science & Technology, 2003, 37, 5732-5738.	10.0	71
15	Single-Molecule Studies of Intrinsically Disordered Proteins Using Solid-State Nanopores. Analytical Chemistry, 2013, 85, 2449-2456.	6.5	71
16	Synchronized Optical and Electronic Detection of Biomolecules Using a Low Noise Nanopore Platform. ACS Nano, 2015, 9, 1740-1748.	14.6	62
17	Unsupervised vector-based classification of single-molecule charge transport data. Nature Communications, 2016, 7, 12922.	12.8	62
18	Intrinsic Multistate Switching of Gold Clusters through Electrochemical Gating. Journal of the American Chemical Society, 2007, 129, 9162-9167.	13.7	61

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19	Single-Molecule Analysis with Solid-State Nanopores. Annual Review of Analytical Chemistry, 2019, 12, 371-387.	5.4	60
20	Electrochemical tunnelling sensors and their potential applications. Nature Communications, 2012, 3, 829.	12.8	58
21	Oxidative purification of halogenated ferrocenes. Dalton Transactions, 2013, 42, 2813-2816.	3.3	57
22	Deep learning for single-molecule science. Nanotechnology, 2017, 28, 423001.	2.6	54
23	Single Molecule Trapping and Sensing Using Dual Nanopores Separated by a Zeptoliter Nanobridge. Nano Letters, 2017, 17, 6376-6384.	9.1	52
24	A Redoxâ€Activated Gâ€Quadruplex DNA Binder Based on a Platinum(IV)â€“Salphen Complex. Angewandte Chemie - International Edition, 2018, 57, 310-313.	13.8	52
25	Electrochemistry and bioelectrochemistry towards the single-molecule level: Theoretical notions and systems. Electrochimica Acta, 2005, 50, 3143-3159.	5.2	51
26	Label-Free Pb(II) Whispering Gallery Mode Sensing Using Self-Assembled Glutathione-Modified Gold Nanoparticles on an Optical Microcavity. Analytical Chemistry, 2014, 86, 6299-6306.	6.5	51
27	New Insights into Single-Molecule Junctions Using a Robust, Unsupervised Approach to Data Collection and Analysis. Journal of the American Chemical Society, 2015, 137, 9971-9981.	13.7	50
28	Singleâ€Molecule Conductance Studies of Organometallic Complexes Bearing 3â€Thienyl Contacting Groups. Chemistry - A European Journal, 2017, 23, 2133-2143.	3.3	50
29	Ferroceneâ€•and Biferroceneâ€Containing Macrocycles towards Singleâ€Molecule Electronics. Angewandte Chemie - International Edition, 2017, 56, 6838-6842.	13.8	42
30	Transistor Effects and In Situ STM of Redox Molecules at Room Temperature. IEEE Nanotechnology Magazine, 2005, 4, 430-434.	2.0	38
31	Potential-induced structural transitions of DL-homocysteine monolayers on Au(111) electrode surfaces. Chemical Physics, 2005, 319, 210-221.	1.9	37
32	Interfacial redox processes of cytochrome b562. Physical Chemistry Chemical Physics, 2009, 11, 7430.	2.8	35
33	Nanopore/electrode structures for single-molecule biosensing. Electrochimica Acta, 2010, 55, 8237-8243.	5.2	34
34	Scale-Up of Room-Temperature Constructive Quantum Interference from Single Molecules to Self-Assembled Molecular-Electronic Films. Journal of the American Chemical Society, 2020, 142, 8555-8560.	13.7	34
35	Precise electrochemical fabrication of sub-20 nm solid-state nanopores for single-molecule biosensing. Journal of Physics Condensed Matter, 2010, 22, 454128.	1.8	33
36	High Precision Fabrication and Positioning of Nanoelectrodes in a Nanopore. ACS Nano, 2014, 8, 1940-1948.	14.6	33

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37	SSB Binding to Single-Stranded DNA Probed Using Solid-State Nanopore Sensors. Journal of Physical Chemistry B, 2014, 118, 11605-11612.	2.6	33
38	Rapid Sonogashira cross-coupling of iodoferrocenes and the unexpected cyclo-oligomerization of 4-ethynylphenylthioacetate. Chemical Communications, 2013, 49, 5663.	4.1	31
39	How to Understand and Interpret Current Flow in Nanopore/Electrode Devices. ACS Nano, 2011, 5, 6714-6725.	14.6	30
40	Insulated molecular wires: inhibiting orthogonal contacts in metal complex based molecular junctions. Nanoscale, 2017, 9, 9902-9912.	5.6	30
41	Trianguleniums as Optical Probes for Gâ€Quadruplexes: Aâ€…Photophysical, Electrochemical, and Computational Study. Chemistry - A European Journal, 2016, 22, 4129-4139.	3.3	29
42	Electrodeposition and Bipolar Effects in Metallized Nanopores and Their Use in the Detection of Insulin. Analytical Chemistry, 2015, 87, 2337-2344.	6.5	27
43	Challenges of Biomolecular Detection at the Nanoscale: Nanopores and Microelectrodes. Analytical Chemistry, 2015, 87, 5470-5475.	6.5	27
44	High-speed detection of DNA translocation in nanopipettes. Nanoscale, 2016, 8, 7604-7611.	5.6	27
45	Electrochemical and Spectroscopic Investigations of Immobilized De Novo Designed Heme Proteins on Metal Electrodes. ChemPhysChem, 2005, 6, 961-970.	2.1	26
46	The Unusual Redox Properties of Fluoroferrocenes Revealed through a Comprehensive Study of the Haloferrocenes. Organometallics, 2015, 34, 5461-5469.	2.3	26
47	Branched Redox-Active Complexes for the Study of Novel Charge Transport Processes. Organometallics, 2013, 32, 6053-6060.	2.3	25
48	The role of ionâ€“water interactions in determining the Soret coefficient of LiCl aqueous solutions. Physical Chemistry Chemical Physics, 2017, 19, 9575-9583.	2.8	25
49	A computational approach to calculate the heat of transport of aqueous solutions. Scientific Reports, 2017, 7, 44833.	3.3	22
50	Single Molecule Ionic Current Sensing in Segmented Flow Microfluidics. Analytical Chemistry, 2014, 86, 1864-1871.	6.5	21
51	High-bandwidth detection of short DNA in nanopipettes. Faraday Discussions, 2016, 193, 459-470.	3.2	19
52	Solid-state nanopores for biosensing with submolecular resolution. Biochemical Society Transactions, 2012, 40, 624-628.	3.4	18
53	Ionic liquids for metal extraction from chalcopyrite: solid, liquid and gas phase studies. Physical Chemistry Chemical Physics, 2017, 19, 21556-21564.	2.8	18
54	Functionalised Biferrocene Systems towards Molecular Electronics. European Journal of Inorganic Chemistry, 2017, 2017, 496-504.	2.0	18

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55	Voltammetry and in situ scanning tunnelling microscopy of de novo designed heme protein monolayers on Au(111)-electrode surfaces. Bioelectrochemistry, 2006, 69, 193-200.	4.6	17
56	Electronic structures of cyclometalated palladium complexes in the higher oxidation states. Dalton Transactions, 2015, 44, 16586-16591.	3.3	17
57	Single-Molecule Studies of Unlabeled Full-Length p53 Protein Binding to DNA. Journal of Physical Chemistry B, 2016, 120, 2106-2114.	2.6	17
58	A Redoxâ€Activated Gâ€Quadruplex DNA Binder Based on a Platinum(IV)â€“Salphen Complex. Angewandte Chemie, 2018, 130, 316-319.	2.0	17
59	Assisted delivery of anti-tumour platinum drugs using DNA-coiling gold nanoparticles bearing lumophores and intercalators: towards a new generation of multimodal nanocarriers with enhanced action. Chemical Science, 2019, 10, 9244-9256.	7.4	17
60	Design and characterization of a current sensing platform for silicon-based nanopores with integrated tunneling nanoelectrodes. Analog Integrated Circuits and Signal Processing, 2013, 77, 333-343.	1.4	16
61	Progress in single-biomolecule analysis with solid-state nanopores. Current Opinion in Electrochemistry, 2017, 4, 159-165.	4.8	16
62	Electrochemical processes at the nanoscale. Current Opinion in Electrochemistry, 2018, 7, 138-145.	4.8	16
63	Unsupervised classification of single-molecule data with autoencoders and transfer learning. Machine Learning: Science and Technology, 2020, 1, 035013.	5.0	16
64	Ion Transport in Nanopores. , 2013, , 1-30.		15
65	Electric Single-Molecule Hybridization Detector for Short DNA Fragments. Analytical Chemistry, 2018, 90, 14063-14071.	6.5	15
66	Avoiding problem reactions at the ferrocenyl-alkyne motif: a convenient synthesis of model, redox-active complexes for molecular electronics. Dalton Transactions, 2014, 43, 15287-15290.	3.3	14
67	Multi-component self-assembled molecular-electronic films: towards new high-performance thermoelectric systems. Chemical Science, 2022, 13, 5176-5185.	7.4	14
68	A new look for nanopore sensing. Nature Nanotechnology, 2011, 6, 195-196.	31.5	13
69	Mapping the Ion Current Distribution in Nanopore/Electrode Devices. ACS Nano, 2013, 7, 547-555.	14.6	13
70	Electrochemistry of single nanoparticles: general discussion. Faraday Discussions, 2016, 193, 387-413.	3.2	13
71	A robotic platform for high-throughput electrochemical analysis of chalcopyrite leaching. Green Chemistry, 2016, 18, 1930-1937.	9.0	13
72	Oxide-coated silicon nanowire array capacitor electrodes in room temperature ionic liquid. Electrochimica Acta, 2016, 210, 32-37.	5.2	13

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73	Controlling the Dynamic Instability of Capped Metal Nanoparticles on Metallic Surfaces. Journal of Physical Chemistry Letters, 2018, 9, 57-62.	4.6	13
74	A Density Functional Theory Study of the Electronic Properties of Os(II) and Os(III) Complexes Immobilized on Au(111). Inorganic Chemistry, 2007, 46, 117-124.	4.0	12
75	New developments in nanopore researchâ€"from fundamentals to applications. Journal of Physics Condensed Matter, 2010, 22, 450301.	1.8	12
76	Which way up? Recognition of homologous DNA segments in parallel and antiparallel alignments. Journal of Chemical Physics, 2015, 142, 045101.	3.0	12
77	Cross-plane conductance through a graphene/molecular monolayer/Au sandwich. Nanoscale, 2018, 10, 19791-19798.	5.6	12
78	Principles of a Single-Molecule Rectifier in Electrolytic Environment. Journal of Physical Chemistry C, 2016, 120, 3089-3106.	3.1	11
79	TiO₂ coated Si nanowire electrodes for electrochemical double layer capacitors in room temperature ionic liquid. Journal Physics D: Applied Physics, 2017, 50, 415503.	2.8	11
80	Flow-Based Autocorrelation Studies for the Detection and Investigation of Single-Particle Surface-Enhanced Resonance Raman Spectroscopic Events. Analytical Chemistry, 2011, 83, 1418-1424.	6.5	10
81	Probing Electron Transport in Proteins at Room Temperature with Single-Molecule Precision. ACS Nano, 2012, 6, 13-16.	14.6	10
82	Disentangling chemical effects in ionic-liquid-based Cu leaching from chalcopyrite. Journal of Electroanalytical Chemistry, 2018, 819, 130-135.	3.8	10
83	Assembly, structure and thermoelectric properties of 1,1â€²-dialkynylferrocene â€˜hingesâ€™. Chemical Science, 2022, 13, 8380-8387.	7.4	8
84	Rapid Fragmentation during Seeded Lysozyme Aggregation Revealed at the Single Molecule Level. Analytical Chemistry, 2019, 91, 6880-6886.	6.5	7
85	Resizing Metalâ€Coated Nanopores Using a Scanning Electron Microscope. Small, 2011, 7, 2736-2741.	10.0	6
86	Ferroceneâ€•and Biferroceneâ€Containing Macrocycles towards Singleâ€Molecule Electronics. Angewandte Chemie, 2017, 129, 6942-6946.	2.0	6
87	Dynamics of RS-(Au-SR)_x Staple Motifs on Metal Surfaces: From Nanoclusters to 2D Surfaces. Journal of Physical Chemistry C, 2020, 124, 5452-5459.	3.1	6
88	Charge Transfer And Interfacial Bioelectrochemistry At The Nanoscale And Single-Molecule Levels. , 2008, , 249-302.		6
89	Shedding Light on the Interfacial Structure of Low-Coverage Alkanethiol Lattices. Journal of Physical Chemistry C, 2020, 124, 26748-26758.	3.1	6
90	Charge transport in nanoscale junctions. Journal of Physics Condensed Matter, 2008, 20, 370301.	1.8	4

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91	High-Vacuum Deposition of Biferrocene Thin Films on Room-Temperature Substrates. Chemistry of Materials, 2017, 29, 8663-8669.	6.7	4
92	Taming the thermodiffusion of alkali halide solutions in silica nanopores. Nanoscale, 2020, 12, 23626-23635.	5.6	4
93	Combined Impact of Denticity and Orientation on Molecular-Scale Charge Transport. Journal of Physical Chemistry C, 2020, 124, 9460-9469.	3.1	4
94	Unraveling the Causes of the Instability of Au_n(SR)_x Nanoclusters on Au(111). Chemistry of Materials, 2021, 33, 3428-3435.	6.7	3
95	Probing DNA Methylation in Breast Cancer Cell Lines Using Solid-State Nanopores. Biophysical Journal, 2014, 106, 18a.	0.5	2
96	Cyclic Voltammetry Peaks Due to Deep Level Traps in Si Nanowire Array Electrodes. IEEE Nanotechnology Magazine, 2018, 17, 154-160.	2.0	2
97	Analytical nanoscience. Analyst, The, 2022, 147, 765-766.	3.5	2
98	Transistor effects and in situ STM of redox molecules at room temperature. , 0, , .		1
99	SSB Enhances Detection of ssDNA Translocation through Solid-State Nanopores. Biophysical Journal, 2012, 102, 205a.	0.5	1
100	Low-noise dual-channel current amplifier for DNA sensing with solid-state nanopores. , 2012, , .		1
101	Wafer-Scale Ion Beam Lithography of Nanopore Devices. Microscopy and Microanalysis, 2013, 19, 912-913.	0.4	1
102	Nanopores: general discussion. Faraday Discussions, 2016, 193, 507-531.	3.2	1
103	Complexes comprising â€˜danglingâ€™ phosphorus arms and tri(hetero)metallic butenynyl moieties. Journal of Organometallic Chemistry, 2016, 812, 145-150.	1.8	1
104	Low Noise Nanopore Platforms Optimised for the Synchronised Optical and Electrical Detection of Biomolecules. RSC Nanoscience and Nanotechnology, 2016, , 270-300.	0.2	1
105	Chapter 5. Electrochemical applications of nanopore systems. SPR Electrochemistry, 0, , 155-186.	0.7	1
106	Multivariate Approach to Single-Molecule Thermopower and Electrical Conductance Measurements. Journal of Physical Chemistry C, 2021, 125, 26256-26262.	3.1	1
107	Fabrication of Metallised Solid-State Nanopores Using Electrodeposition with Ionic Current Feedback. Biophysical Journal, 2010, 98, 598a.	0.5	0
108	Label-Free Detection of the P53-DNA Complex. Biophysical Journal, 2014, 106, 18a.	0.5	0

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109	Probing DNA Translocations in Nanopipettes using High-Speed Detection Electronics. Biophysical Journal, 2016, 110, 655a.	0.5	0
110	Gold-Induced Desulfurization in a Bis(ferrocenyl) Alkane Dithiol. Organometallics, 2019, 38, 2227-2232.	2.3	0
111	Stepwise electrochemical deposition and single-molecule conductance of nucleic acid analogues. Electrochimica Acta, 2020, 346, 136159.	5.2	0
112	Surface Design: Exploiting the Instability of Small Nanoparticles on Metallic Substrates. ECS Meeting Abstracts, 2020, MA2020-01, 2865-2865.	0.0	0
113	DNA Assay-on-a-String: Rapid Detection of Marker Panels Against Sepsis. ECS Meeting Abstracts, 2020, MA2020-01, 1966-1966.	0.0	0
114	Surface Design: Exploiting the Instability of Small Nanoparticles on Metallic Substrates. ECS Transactions, 2020, 97, 885-892.	0.5	0