

Michael Thompson

List of Publications by Year in descending order

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96
papers

2,655
citations

172207

29
h-index

205818

48
g-index

97
all docs

97
docs citations

97
times ranked

3346
citing authors

#	ARTICLE	IF	CITATIONS
1	Surface chemistry to minimize fouling from blood-based fluids. <i>Chemical Society Reviews</i> , 2012, 41, 5599.	18.7	244
2	Applications of electronic noses and tongues in food analysis. <i>International Journal of Food Science and Technology</i> , 2004, 39, 587-604.	1.3	236
3	Aptamers, antibody scFv, and antibody Fab' fragments: An overview and comparison of three of the most versatile biosensor biorecognition elements. <i>Biosensors and Bioelectronics</i> , 2016, 85, 32-45.	5.3	211
4	Standard additions: myth and reality. <i>Analyst, The</i> , 2008, 133, 992.	1.7	136
5	Molecular slip at the solid-liquid interface of an acoustic-wave sensor. <i>Journal of Applied Physics</i> , 1994, 76, 3448-3462.	1.1	99
6	Slip and coupling phenomena at the liquid-solid interface. <i>Physical Chemistry Chemical Physics</i> , 2004, 6, 4928-4938.	1.3	69
7	Ultra-high frequency piezoelectric aptasensor for the label-free detection of cocaine. <i>Biosensors and Bioelectronics</i> , 2015, 72, 383-392.	5.3	69
8	Antifouling Polymer Brushes Displaying Antithrombogenic Surface Properties. <i>Biomacromolecules</i> , 2016, 17, 1179-1185.	2.6	68
9	A survey of state-of-the-art surface chemistries to minimize fouling from human and animal biofluids. <i>Biomaterials Science</i> , 2015, 3, 1335-1370.	2.6	64
10	Surface chemical and physical modification in stent technology for the treatment of coronary artery disease. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2012, 100B, 1989-2014.	1.6	57
11	Single ether group in a glycol-based ultra-thin layer prevents surface fouling from undiluted serum. <i>Chemical Communications</i> , 2012, 48, 1305-1307.	2.2	57
12	Label-free detection of nucleic acid and protein microarrays by scanning Kelvin nanoprobe. <i>Biosensors and Bioelectronics</i> , 2005, 20, 1471-1481.	5.3	56
13	Early stage detection and screening of ovarian cancer: A research opportunity and significant challenge for biosensor technology. <i>Biosensors and Bioelectronics</i> , 2019, 135, 71-81.	5.3	51
14	Electromagnetic excitation of high frequency acoustic waves and detection in the liquid phase. <i>Analyst, The</i> , 2003, 128, 1048.	1.7	45
15	Electropolishing of medical-grade stainless steel in preparation for surface nano-texturing. <i>Journal of Solid State Electrochemistry</i> , 2012, 16, 1389-1397.	1.2	45
16	Interfacial Hybridization of RNA Homopolymers Studied by Liquid Phase Acoustic Network Analysis. <i>Langmuir</i> , 1996, 12, 2247-2255.	1.6	42
17	Interfacial nucleic acid chemistry studied by acoustic shear wave propagation. <i>Analytica Chimica Acta</i> , 2002, 469, 101-113.	2.6	41
18	Sequences of <i>E. coli</i> O157:H7 detected by a PCR-acoustic wave sensor combination. <i>Analyst, The</i> , 2001, 126, 2153-2158.	1.7	39

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19	Nanoparticles at biointerfaces: Antibacterial activity and nanotoxicology. <i>Colloids and Surfaces B: Biointerfaces</i> , 2019, 184, 110550.	2.5	39
20	Probing the Hydration of Ultrathin Antifouling Organosilane Adlayers using Neutron Reflectometry. <i>Langmuir</i> , 2014, 30, 1199-1203.	1.6	37
21	On the hydration of subnanometric antifouling organosilane adlayers: A molecular dynamics simulation. <i>Journal of Colloid and Interface Science</i> , 2015, 437, 197-204.	5.0	37
22	New oligoethylene glycol linkers for the surface modification of an ultra-high frequency acoustic wave biosensor. <i>Chemical Science</i> , 2010, 1, 271.	3.7	36
23	Biocompatibility and antifouling: is there really a link?. <i>Trends in Biotechnology</i> , 2014, 32, 61-62.	4.9	36
24	Immobilization of Fab™ fragments onto substrate surfaces: A survey of methods and applications. <i>Biosensors and Bioelectronics</i> , 2015, 70, 167-180.	5.3	35
25	Acoustic wave biosensor for the detection of the breast and prostate cancer metastasis biomarker protein PTHrP. <i>Biosensors and Bioelectronics</i> , 2016, 78, 92-99.	5.3	34
26	Contact angle-based predictive model for slip at the solid-liquid interface of a transverse-shear mode acoustic wave device. <i>Journal of Applied Physics</i> , 2003, 94, 6201-6207.	1.1	33
27	Superior analytical sensitivity of electromagnetic excitation compared to contact electrode instigation of transverse acoustic waves. <i>Analyst, The</i> , 2004, 129, 219.	1.7	33
28	Interfacial Properties of Biotin Conjugate-Avidin Complexes Studied by Acoustic Wave Sensor. <i>Langmuir</i> , 1999, 15, 564-572.	1.6	31
29	Label-free detection of HIV-2 antibodies in serum with an ultra-high frequency acoustic wave sensor. <i>Talanta</i> , 2011, 85, 816-819.	2.9	30
30	Prevention of Thrombogenesis from Whole Human Blood on Plastic Polymer by Ultrathin Monoethylene Glycol Silane Adlayer. <i>Langmuir</i> , 2014, 30, 3217-3222.	1.6	27
31	Electrode modification and the response of the acoustic shear wave device operating in liquids. <i>Analyst, The</i> , 2001, 126, 2159-2167.	1.7	24
32	High efficiency reduction capability for the formation of Fab ₃ antibody fragments from F(ab) ₂ units. <i>Biochemistry and Biophysics Reports</i> , 2015, 2, 23-28.	0.7	24
33	Covalent binding of amino, carboxy, and nitro-substituted aminopropyltriethoxysilanes to oxidized silicon surfaces and their interaction with octadecanamine and octadecanoic acid studied by X-ray photoelectron spectroscopy and ellipsometry. <i>Journal of Adhesion Science and Technology</i> , 1991, 5, 801-814.	1.4	22
34	A true theranostic approach to medicine: Towards tandem sensor detection and removal of endotoxin in blood. <i>Biosensors and Bioelectronics</i> , 2015, 67, 3-10.	5.3	22
35	Utilizing a Key Aptamer Structure-Switching Mechanism for the Ultrahigh Frequency Detection of Cocaine. <i>Analytical Chemistry</i> , 2016, 88, 3098-3106.	3.2	22
36	Acoustic Wave-Based Detection in Bioanalytical Chemistry: Competition for Surface Plasmon Resonance?. <i>Analytical Letters</i> , 2008, 41, 2525-2538.	1.0	21

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37	High surface density immobilization of oligonucleotide on silicon. <i>Analyst, The</i> , 2001, 126, 485-490.	1.7	20
38	Surface immobilisation and properties of smooth muscle cells monitored by on-line acoustic wave detector. <i>Analyst, The</i> , 2008, 133, 85-92.	1.7	20
39	Casein probe-based fast plasmin determination in the picomolar range by an ultra-high frequency acoustic wave biosensor. <i>Sensors and Actuators B: Chemical</i> , 2018, 275, 206-214.	4.0	20
40	Electrochemical sensor for enzymatic lactate detection based on laser-scribed graphitic carbon modified with platinum, chitosan and lactate oxidase. <i>Talanta</i> , 2022, 246, 123492.	2.9	20
41	Surface properties and electromagnetic excitation of a piezoelectric gallium phosphate biosensor. <i>Analyst, The</i> , 2005, 130, 213.	1.7	17
42	Label-free detection of neuron-drug interactions using acoustic and Kelvin vibrational fields. <i>Analyst, The</i> , 2007, 132, 242-255.	1.7	17
43	Adlayer-Mediated Antibody Immobilization to Stainless Steel for Potential Application to Endothelial Progenitor Cell Capture. <i>Langmuir</i> , 2015, 31, 5423-5431.	1.6	17
44	Detection of the Ovarian Cancer Biomarker Lysophosphatidic Acid in Serum. <i>Biosensors</i> , 2020, 10, 13.	2.3	17
45	Critical role of surface hydration on the dynamics of serum adsorption studied with monoethylene glycol adlayers on gold. <i>Chemical Communications</i> , 2013, 49, 466-468.	2.2	16
46	Detection of E. coli Bacteria in Milk by an Acoustic Wave Aptasensor with an Anti-Fouling Coating. <i>Sensors</i> , 2022, 22, 1853.	2.1	16
47	Sacrificial BSA to block non-specific adsorption on organosilane adlayers in ultra-high frequency acoustic wave sensing. <i>Surface and Interface Analysis</i> , 2013, 45, 1781-1784.	0.8	15
48	Prevention of surface-induced thrombogenesis on poly(vinyl chloride). <i>Journal of Materials Chemistry B</i> , 2015, 3, 8623-8628.	2.9	15
49	In vitro and in vivo cell-capture strategies using cardiac stent technology – A review. <i>Clinical Biochemistry</i> , 2016, 49, 186-191.	0.8	15
50	Conformational states of nucleic acid-peptide complexes monitored by acoustic wave propagation and molecular dynamics simulation. <i>Chemical Science</i> , 2011, 2, 237-255.	3.7	14
51	Detection of Sub-Nanomolar Concentration of Trypsin by Thickness-Shear Mode Acoustic Biosensor and Spectrophotometry. <i>Biosensors</i> , 2021, 11, 117.	2.3	14
52	Interfacial Properties and the Response of the Transverse Acoustic Wave Device in Electrolytes. <i>Electroanalysis</i> , 2000, 12, 326-336.	1.5	13
53	Reduction of microbial adhesion on polyurethane by a sub-nanometer covalently-attached surface modifier. <i>Colloids and Surfaces B: Biointerfaces</i> , 2021, 200, 111579.	2.5	13
54	Gigahertz surface acoustic wave probe for chemical analysis. <i>Analyst, The</i> , 2001, 126, 1619-1624.	1.7	12

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55	Low-fouling SPR detection of lysozyme and its aggregates. <i>Analytical Methods</i> , 2014, 6, 7646-7654.	1.3	12
56	Simultaneous Determination of Streptomycin and Oxytetracycline Using a Oracet-Blue/Silver-Nanoparticle/Graphene-Oxide/Modified Screen-Printed Electrode. <i>Biosensors</i> , 2020, 10, 23.	2.3	12
57	Biofouling-Resistant Impedimetric Sensor for Array High-Resolution Extracellular Potassium Monitoring in the Brain. <i>Biosensors</i> , 2016, 6, 53.	2.3	11
58	Functionalizable self-assembled trichlorosilyl-based monolayer for application in biosensor technology. <i>Applied Surface Science</i> , 2017, 414, 435-441.	3.1	11
59	Surface energy and the response of transverse acoustic wave devices in liquids. <i>Analyst, The</i> , 2000, 125, 1525-1528.	1.7	10
60	Surface modification of piezoelectric aluminum nitride with functionalizable organosilane adlayers. <i>Applied Surface Science</i> , 2013, 282, 709-713.	3.1	10
61	Deactivation of SARS-CoV-2 via Shielding of Spike Glycoprotein Using Carbon Quantum Dots: Bioinformatic Perspective. <i>Covid</i> , 2021, 1, 120-129.	0.7	10
62	Blood platelet adhesion to protein studied by on-line acoustic wave sensor. <i>Analyst, The</i> , 2001, 126, 342-348.	1.7	9
63	Surface Probe Linker with Tandem Anti-Fouling Properties for Application in Biosensor Technology. <i>Biosensors</i> , 2020, 10, 20.	2.3	9
64	Assembling Surface Linker Chemistry with Minimization of Non-Specific Adsorption on Biosensor Materials. <i>Materials</i> , 2021, 14, 472.	1.3	9
65	Depolarization of surface-attached hypothalamic mouse neurons studied by acoustic wave (thickness) Tj ETQq1 1 Q.784314 ggBT /Overl	1.7	9
66	On-Chip Glucose Detection Based on Glucose Oxidase Immobilized on a Platinum-Modified, Gold Microband Electrode. <i>Biosensors</i> , 2021, 11, 249.	2.3	8
67	Advances in Electromagnetic Piezoelectric Acoustic Sensor Technology for Biosensor-Based Detection. <i>Chemosensors</i> , 2021, 9, 58.	1.8	6
68	Anti-Thrombogenicity Study of a Covalently-Attached Monolayer on Stent-Grade Stainless Steel. <i>Materials</i> , 2021, 14, 2342.	1.3	6
69	Enhanced Long-term Antithrombogenicity Instigated by Covalently-Attached Surface Modifier on Biomedical Polymers. , 2020, 2, 1-16.		6
70	Mass spectra of aliphatic dicarboxylic acids and their dimethyl esters: Cyclic structures for the $[M + H_2O]^+ E^+$ ions from the diacids and $[M + MeOH]^+ E^+$ ions from the dimethyl esters. <i>Organic Mass Spectrometry</i> , 1988, 23, 723-728.	1.3	5
71	Synchronization of the circadian rhythm generator and the effects of glucagon on hypothalamic mouse neurons detected by acoustic wave propagation. <i>Analyst, The</i> , 2011, 136, 2786.	1.7	5
72	Endotoxin detection in full blood plasma in a theranostic approach to combat sepsis. <i>RSC Advances</i> , 2016, 6, 38037-38041.	1.7	5

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73	Electromagnetic Piezoelectric Acoustic Sensor Detection of Extracellular Vesicles through Interaction with Detached Vesicle Proteins. <i>Biosensors</i> , 2020, 10, 173.	2.3	5
74	Interfacial behavior of immortalized hypothalamic mouse neurons detected by acoustic wave propagation. <i>Analyst, The</i> , 2011, 136, 4412.	1.7	4
75	Modulation of indium-tin oxide work function by a versatile self-assembled monolayer measured with the scanning Kelvin nanoprobe. <i>Canadian Journal of Chemistry</i> , 2011, 89, 1512-1518.	0.6	4
76	Kelvin Physics of Protein Layers Printed in Microarray Format. <i>ACS Symposium Series</i> , 2007, , 312-337.	0.5	3
77	Electrochemical Sensor for the Direct Determination of Warfarin in Blood. <i>Chemosensors</i> , 2022, 10, 44.	1.8	3
78	Molecular Modeling and Chemical Sensor Response. <i>ACS Symposium Series</i> , 1994, , 155-161.	0.5	2
79	Study of bimolecular interactions by molecular modeling and surface acoustic wave device. <i>Electroanalysis</i> , 1997, 9, 1054-1061.	1.5	2
80	Modulation of Acoustic Coupling by Photo-Oxidation of Self-Assembled Monolayers. <i>Analytical Letters</i> , 2010, 43, 1801-1811.	1.0	2
81	Scanning Kelvin probe study of photolabile silane surface modification of indium tin oxide. <i>Surface and Interface Analysis</i> , 2013, 45, 1347-1352.	0.8	2
82	Anti-fouling properties of Fab™ fragments immobilized on silane-based adlayers. <i>Applied Surface Science</i> , 2015, 359, 21-29.	3.1	2
83	Special issue on acoustic wave sensor technology for biophysical and bioanalytical studies. <i>Sensing and Bio-Sensing Research</i> , 2016, 11, 59.	2.2	2
84	NEUROPHYSIOLOGICAL MONITORING OF POTASSIUM. , 2019, , 293-323.		2
85	Long-Term Reduction of Bacterial Adhesion on Polyurethane by an Ultra-Thin Surface Modifier. <i>Biomedicines</i> , 2022, 10, 979.	1.4	2
86	Hydrodynamics and Slip at the Liquid-Solid Interface. <i>Advances in Chemical Physics</i> , 2005, , 61-84.	0.3	1
87	Acoustic wave network and multivariate analysis for biosensing in space. <i>Microgravity Science and Technology</i> , 2005, 16, 348-352.	0.7	1
88	On the acoustic wave sensor response to immortalized hypothalamic neurons at the device-liquid interface. <i>Sensing and Bio-Sensing Research</i> , 2016, 11, 113-120.	2.2	1
89	Radiation-Activated Pre-Differentiated Retinal Tissue Monitored by Acoustic Wave Biosensor. <i>Sensors</i> , 2020, 20, 2628.	2.1	1
90	Surface Adsorption of the Cancer Biomarker Lysophosphatidic Acid in Serum Studied by Acoustic Wave Biosensor. <i>Materials</i> , 2021, 14, 4158.	1.3	1

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91	Thermomagnetic Analysis in Archaeometry: The Akhenaten Temple Project. Analytical Letters, 1983, 16, 101-111.	1.0	0
92	Neural Networks and Self-Referent Acoustic-Wave Sensor Signaling. ACS Symposium Series, 1998, , 78-88.	0.5	0
93	Activity of Lambda-Exonuclease on Surface-Attached Oligonucleotide Detected by Acoustic Wave Device and Radiochemical Labeling. Analytical Letters, 2008, 41, 2805-2818.	1.0	0
94	Ultrathin Surface Chemistry to Delay Anion Fouling. ChemPlusChem, 2015, 80, 911-914.	1.3	0
95	Detection of sub-nanomolar concentration of trypsin by thickness-shear mode (TSM) acoustic wave biosensor. , 2020, 60, .		0
96	Interaction of Lipopolysaccharide-Spiked Blood with Anti-Fouling Polymyxin B-Modified Glass. Materials, 2022, 15, 1551.	1.3	0