

Frank Davis

List of Publications by Year in descending order

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76
papers

3,794
citations

136740

32
h-index

128067

60
g-index

82
all docs

82
docs citations

82
times ranked

4875
citing authors

#	ARTICLE	IF	CITATIONS
1	Biofuel cells—Recent advances and applications. <i>Biosensors and Bioelectronics</i> , 2007, 22, 1224-1235.	5.3	511
2	Current trends in explosive detection techniques. <i>Talanta</i> , 2012, 88, 14-29.	2.9	429
3	Recent trends in antibody based sensors. <i>Biosensors and Bioelectronics</i> , 2012, 34, 12-24.	5.3	246
4	Lactate in human sweat: a critical review of research to the present day. <i>Journal of Physiological Sciences</i> , 2012, 62, 429-440.	0.9	184
5	Electrochemical Detection of Uric Acid in Mixed and Clinical Samples: A Review. <i>Electroanalysis</i> , 2011, 23, 305-320.	1.5	181
6	Structured thin films as functional components within biosensors. <i>Biosensors and Bioelectronics</i> , 2005, 21, 1-20.	5.3	169
7	A facile optosensing protocol based on molecularly imprinted polymer coated on CdTe quantum dots for highly sensitive and selective amoxicillin detection. <i>Sensors and Actuators B: Chemical</i> , 2018, 254, 255-263.	4.0	108
8	Sol—gel based sensor for selective formaldehyde determination. <i>Analytica Chimica Acta</i> , 2010, 659, 251-257.	2.6	99
9	Sonochemically fabricated microelectrode arrays for biosensors offering widespread applicability: Part I. <i>Biosensors and Bioelectronics</i> , 2004, 20, 328-337.	5.3	69
10	Label-free and reversible immunosensor based upon an ac impedance interrogation protocol. <i>Analytica Chimica Acta</i> , 2005, 537, 163-168.	2.6	66
11	Novel flexible enzyme laminate-based sensor for analysis of lactate in sweat. <i>Sensors and Actuators B: Chemical</i> , 2017, 242, 502-510.	4.0	66
12	Labelless Immunosensor Assay for the Stroke Marker Protein Neuron Specific Enolase Based upon an Alternating Current Impedance Protocol. <i>Analytical Chemistry</i> , 2008, 80, 9411-9416.	3.2	65
13	Labelless Immunosensor Assay for Prostate Specific Antigen with Picogram per Milliliter Limits of Detection Based upon an ac Impedance Protocol. <i>Analytical Chemistry</i> , 2008, 80, 6198-6205.	3.2	65
14	Cadmium Sulfide Nanoparticles in Langmuir—Blodgett Films of Calixarenes. <i>Langmuir</i> , 1997, 13, 3198-3201.	1.6	62
15	Selective adsorption in gold—thiol monolayers of calix-4-resorcinarenes. <i>Journal of the Chemical Society Chemical Communications</i> , 1994, , 2527-2529.	2.0	61
16	Calix[4]arene based molecules for amino-acid detection. <i>Sensors and Actuators B: Chemical</i> , 2007, 124, 38-45.	4.0	59
17	Label-less Immunosensor Assay for Myelin Basic Protein Based upon an ac Impedance Protocol. <i>Analytical Chemistry</i> , 2008, 80, 2058-2062.	3.2	55
18	A nanocomposite optosensor containing carboxylic functionalized multiwall carbon nanotubes and quantum dots incorporated into a molecularly imprinted polymer for highly selective and sensitive detection of ciprofloxacin. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2018, 201, 382-391.	2.0	54

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19	Calix-4-resorcinarene Monolayers and Multilayers: Formation, Structure, and Differential Adsorption. <i>Langmuir</i> , 1996, 12, 5365-5374.	1.6	53
20	Langmuir and Langmuir-Blodgett films of derivatives of alternating copolymers of straight-chain α -olefins and maleic anhydride. <i>Macromolecules</i> , 1991, 24, 5695-5703.	2.2	52
21	Labelless AC impedimetric antibody-based sensors with pgml ⁻¹ sensitivities for point-of-care biomedical applications. <i>Biosensors and Bioelectronics</i> , 2009, 24, 1090-1095.	5.3	51
22	Disposable screen-printed sensors for the electrochemical detection of TNT and DNT. <i>Analyst</i> , The, 2013, 138, 346-352.	1.7	51
23	Species differentiation by DNA-modified carbon electrodes using an ac impedimetric approach. <i>Biosensors and Bioelectronics</i> , 2005, 20, 1531-1538.	5.3	50
24	Layer-by-layer immobilization of carbon dots fluorescent nanomaterials on single optical fiber. <i>Analytica Chimica Acta</i> , 2012, 735, 90-95.	2.6	46
25	Labelless and reversible immunosensor assay based upon an electrochemical current-transient protocol. <i>Analytica Chimica Acta</i> , 2003, 495, 21-32.	2.6	45
26	Single Gene Differentiation by DNA-Modified Carbon Electrodes Using an AC Impedimetric Approach. <i>Analytical Chemistry</i> , 2007, 79, 1153-1157.	3.2	43
27	Spontaneous multilayering of calix-4-resorcinarenes. <i>Journal of the American Chemical Society</i> , 1995, 117, 10385-10386.	6.6	40
28	Detection of Fluoroquinolone Antibiotics in Milk via a Labelless Immunoassay Based upon an Alternating Current Impedance Protocol. <i>Analytical Chemistry</i> , 2008, 80, 9233-9239.	3.2	40
29	Long period grating based toluene sensor for use with water contamination. <i>Sensors and Actuators B: Chemical</i> , 2014, 203, 621-625.	4.0	40
30	Selective Ion Binding by Langmuir-Blodgett Films of Calix(8)arenes. <i>Langmuir</i> , 1996, 12, 1892-1894.	1.6	35
31	Pyroelectric Molecular Baskets: Temperature-Dependent Polarization from Substituted Calix(8)arene Langmuir-Blodgett Films. <i>Langmuir</i> , 1995, 11, 4623-4625.	1.6	34
32	The electrochemistry of the ferri/ferrocyanide couple at a calix[4]resorcinarenetetrathiol-modified gold electrode as a study of novel electrode modifying coatings for use within electro-analytical sensors. <i>Journal of Electroanalytical Chemistry</i> , 2003, 549, 119-127.	1.9	32
33	The study of genomic DNA adsorption and subsequent interactions using total internal reflection ellipsometry. <i>Biosensors and Bioelectronics</i> , 2007, 23, 377-383.	5.3	32
34	A membrane-based immunosensor for the analysis of the herbicide isoproturon. <i>Analytica Chimica Acta</i> , 2011, 699, 223-231.	2.6	29
35	Langmuir and Langmuir-Blodgett Films of Poly(vinylpyridine)s Quaternized with Long-Chain Alkyl Halides. <i>Macromolecules</i> , 1994, 27, 1957-1963.	2.2	28
36	Order and Structure in Langmuir-Blodgett Mono- and Multilayers of Resorcarenes. <i>Langmuir</i> , 1998, 14, 4180-4185.	1.6	27

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37	Langmuirâ€“Blodgett thin film for chloroform detection. <i>Applied Surface Science</i> , 2015, 350, 129-134.	3.1	25
38	Label-Free Immunochemistry Approach to Detect and Identity Antibiotics in Milk. <i>Pediatric Research</i> , 2010, 67, 476-480.	1.1	24
39	A hybrid molecularly imprinted polymer coated quantum dot nanocomposite optosensor for highly sensitive and selective determination of salbutamol in animal feeds and meat samples. <i>Analytical and Bioanalytical Chemistry</i> , 2017, 409, 4697-4707.	1.9	24
40	Volatile Organic Compounds Sensing Using Optical Fibre Long Period Grating with Mesoporous Nano-Scale Coating. <i>Sensors</i> , 2017, 17, 205.	2.1	24
41	Chimeric polymers formed from a monomer capable of free radical, oxidative and electrochemical polymerisation. <i>Chemical Communications</i> , 2009, , 2759.	2.2	22
42	Conjugated Polymers with Pendant Iniferter Units: Versatile Materials for Grafting. <i>Macromolecules</i> , 2011, 44, 1856-1865.	2.2	20
43	Calix[4]resorcinareneâ€“surfactant complexes: formulation, structure and potential sensor applications. <i>Soft Matter</i> , 2009, 5, 2746.	1.2	19
44	Electrochemical Aptasensor for Detection of Dopamine. <i>Chemosensors</i> , 2020, 8, 28.	1.8	18
45	Scanning electrochemical microscopy of genomic DNA microarraysâ€“study of adsorption and subsequent interactions. <i>Analyst, The</i> , 2009, 134, 1302.	1.7	16
46	A new application of scanning electrochemical microscopy for the label-free interrogation of antibodyâ€“antigen interactions. <i>Analytica Chimica Acta</i> , 2011, 689, 206-211.	2.6	16
47	Arrays of microelectrodes: technologies for environmental investigations. <i>Environmental Sciences: Processes and Impacts</i> , 2013, 15, 1477.	1.7	16
48	Detection and imaging the expression of the trans-membrane protein CD44 in RT112 cells by use of enzyme-labeled antibodies and SECM.. <i>Biosensors and Bioelectronics</i> , 2013, 41, 282-288.	5.3	16
49	Sonochemically fabricated microelectrode arrays for biosensors. <i>Biosensors and Bioelectronics</i> , 2005, 21, 666-671.	5.3	15
50	Electrochemical Detection of TNT at Cobalt Phthalocyanine Mediated Screenâ€“Printed Electrodes and Application to Detection of Airborne Vapours. <i>Electroanalysis</i> , 2013, 25, 2445-2452.	1.5	13
51	A new application of scanning electrochemical microscopy for the label-free interrogation of antibodyâ€“antigen interactions: Part 2. <i>Analytica Chimica Acta</i> , 2012, 741, 1-8.	2.6	12
52	Template and catalytic effects of DNA in the construction of polypyrrole/DNA composite macro and microelectrodes. <i>Biosensors and Bioelectronics</i> , 2013, 41, 294-301.	5.3	12
53	Enhancement of Electrode Performance by a Simple Casting Method Using Sonochemically Exfoliated Graphene. <i>Analytical Chemistry</i> , 2015, 87, 9273-9279.	3.2	12
54	Examples of amphitropic polymers: monolayer film, Langmuirâ€“Blodgett film and liquid-crystalline properties of some polymeric amphiphiles containing cholestanol moieties and those of some closely related non-polymeric amphiphiles. <i>Journal of Materials Chemistry</i> , 1996, 6, 15-22.	6.7	11

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55	Hybridization of Genomic DNA Adsorbed Electrostatically onto Cationic Surfaces. <i>Journal of Physical Chemistry B</i> , 2009, 113, 7897-7902.	1.2	11
56	Label-free impedimetric immunosensors for psoriasis- α Increased reproducibility and sensitivity using an automated dispensing system. <i>Biosensors and Bioelectronics</i> , 2013, 44, 198-203.	5.3	10
57	Construction and interrogation of enzyme microarrays using scanning electrochemical microscopy α optimisation of adsorption and determination of enzymatic activity. <i>Analyst</i> , The, 2011, 136, 5287.	1.7	8
58	A chemical sensor based on a photonic-crystal L3 nanocavity defined in a silicon-nitride membrane. <i>Journal of Materials Chemistry C</i> , 2014, 2, 8700-8706.	2.7	8
59	Characterisation of thin films of graphene α surfactant composites produced through a novel semi-automated method. <i>Beilstein Journal of Nanotechnology</i> , 2016, 7, 209-219.	1.5	8
60	Changing Surface Hydro- and Oleophobicity with Resorcinarene MultilayersA Simple Water/Oil Proofing Process. <i>Langmuir</i> , 2004, 20, 9075-9079.	1.6	7
61	Structures and binding of LB films of calix-8-arenes. <i>Supramolecular Science</i> , 1997, 4, 201-206.	0.7	6
62	Sonochemically Fabricated Microelectrode Arrays for Use as Sensing Platforms. <i>Sensors</i> , 2010, 10, 5090-5132.	2.1	6
63	Stereoselective adsorption on a gold α thiol monolayer with an enantiopure surface. <i>Journal of the Chemical Society Chemical Communications</i> , 1994, , 1199-1200.	2.0	5
64	Chapter 15 Ultra-sensitive determination of pesticides via cholinesterase-based sensors for environmental analysis. <i>Comprehensive Analytical Chemistry</i> , 2007, 49, 311-330.	0.7	5
65	Labelless Immunosensor Assay for the Stroke Marker Protein S-100[α] Based Upon an AC Impedance Protocol. <i>Analytical Letters</i> , 2010, 43, 2160-2170.	1.0	5
66	Electrical properties of alternating acid and amino substituted calixarene Langmuir-Blodgett thin films. <i>Journal of Physics and Chemistry of Solids</i> , 2020, 136, 109146.	1.9	5
67	Glucose Biosensors α Recent Advances in the Field of Diabetes Management. , 2009, , 243-292.		3
68	Microband Sensor for As(III) Analysis: Reduced Matrix Interference. <i>Electroanalysis</i> , 2017, 29, 2332-2339.	1.5	3
69	A Membrane-Based ELISA Assay for the Herbicide Isoproturon in Soil Samples. <i>Analytical Letters</i> , 2012, 45, 99-109.	1.0	2
70	Electrical characterisation of stearic acid/calix[4]amine Langmuir α Blodgett thin film. <i>Materials Chemistry and Physics</i> , 2014, 143, 1258-1264.	2.0	2
71	An n.m.r. study of a polymeric Langmuir-Blodgett multilayer film. <i>Polymer</i> , 1994, 35, 885-887.	1.8	1
72	Procedure 24 Construction of an enzyme-containing microelectrode array and use for detection of low levels of pesticides. <i>Comprehensive Analytical Chemistry</i> , 2007, , e169-e176.	0.7	1

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73	Monolayer behavior of calix-4-resorcinarenes and their surfactant complexes. Thin Solid Films, 2012, 520, 6989-6993.	0.8	1
74	Label-Free Impedimetric Immunosensor for Nerve Growth Factor Protein Constructed Using an Automated Dispensing System. Electroanalysis, 2013, 25, 1675-1682.	1.5	1
75	Advances and applications in biofuel cells. , 0, , 202-214.		0
76	Calixarene-Based Gas Sensors. Materials Horizons, 2020, , 433-462.	0.3	0