

David E Clffel

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

122
papers

5,662
citations

42
h-index

73
g-index

137
ext. papers

6,071
ext. citations

6.5
avg, IF

5.66
L-index

#	Paper	IF	Citations
122	Electrochemical sensors and biosensors. <i>Analytical Chemistry</i> , 2012 , 84, 685-707	7.8	622
121	A PtRu/Graphitic Carbon Nanofiber Nanocomposite Exhibiting High Relative Performance as a Direct-Methanol Fuel Cell Anode Catalyst. <i>Journal of Physical Chemistry B</i> , 2001 , 105, 8097-8101	3.4	328
120	Redox and Fluorophore Functionalization of Water-Soluble, Tiopronin-Protected Gold Clusters. <i>Journal of the American Chemical Society</i> , 1999 , 121, 7081-7089	16.4	276
119	Electronic Conductivity of Solid-State, Mixed-Valent, Monolayer-Protected Au Clusters. <i>Journal of the American Chemical Society</i> , 2000 , 122, 11465-11472	16.4	257
118	Mercaptoammonium-Monolayer-Protected, Water-Soluble Gold, Silver, and Palladium Clusters. <i>Langmuir</i> , 2000 , 16, 9699-9702	4	162
117	Functionalized nanoporous gold leaf electrode films for the immobilization of photosystem I. <i>ACS Nano</i> , 2008 , 2, 2465-72	16.7	153
116	In vivo toxicity, biodistribution, and clearance of glutathione-coated gold nanoparticles. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2013 , 9, 257-63	6	144
115	Ag ₄₄ (SR) ₃₀ (4-): a silver-thiolate superatom complex. <i>Nanoscale</i> , 2012 , 4, 4269-74	7.7	138
114	Electrochemistry of fullerene films. <i>Thin Solid Films</i> , 1995 , 257, 166-184	2.2	138
113	Engineering challenges for instrumenting and controlling integrated organ-on-chip systems. <i>IEEE Transactions on Biomedical Engineering</i> , 2013 , 60, 682-90	5	130
112	Synthesis and catalytic properties of soluble platinum nanoparticles protected by a thiol monolayer. <i>Langmuir</i> , 2004 , 20, 6012-8	4	109
111	Enhanced Photocurrent Production by Photosystem I Multilayer Assemblies. <i>Advanced Functional Materials</i> , 2010 , 20, 4048-4054	15.6	108
110	Photosystem I - based biohybrid photoelectrochemical cells. <i>Bioresource Technology</i> , 2010 , 101, 3047-53	11	103
109	Short-chain PEG mixed monolayer protected gold clusters increase clearance and red blood cell counts. <i>ACS Nano</i> , 2011 , 5, 3577-84	16.7	97
108	Enhanced photocurrents of photosystem I films on p-doped silicon. <i>Advanced Materials</i> , 2012 , 24, 5959-62	11	90
107	Rapid assembly of photosystem I monolayers on gold electrodes. <i>Langmuir</i> , 2008 , 24, 8409-12	4	88
106	A microphysiometer for simultaneous measurement of changes in extracellular glucose, lactate, oxygen, and acidification rate. <i>Analytical Chemistry</i> , 2004 , 76, 519-27	7.8	88

105	NanoLiterBioReactor: long-term mammalian cell culture at nanofabricated scale. <i>Biomedical Microdevices</i> , 2004 , 6, 325-39	3.7	86
104	Scanning Electrochemical Microscopy. 37. Light Emission by Electrogenerated Chemiluminescence at SECM Tips and Their Application to Scanning Optical Microscopy. <i>Analytical Chemistry</i> , 1998 , 70, 2941-2948	7.8	85
103	Characterization of thiolate-protected gold nanoparticles by mass spectrometry. <i>Analyst, The</i> , 2010 , 135, 868-74	5	83
102	Glucose and lactate biosensors for scanning electrochemical microscopy imaging of single live cells. <i>Analytical Chemistry</i> , 2008 , 80, 2717-27	7.8	77
101	Photosystem I on graphene as a highly transparent, photoactive electrode. <i>Langmuir</i> , 2013 , 29, 4177-80	4	68
100	Nanoscale phase segregation of mixed thiolates on gold nanoparticles. <i>Angewandte Chemie - International Edition</i> , 2011 , 50, 10554-9	16.4	68
99	Electrospray mass spectrometry study of tiopronin monolayer-protected gold nanoclusters. <i>Journal of the American Chemical Society</i> , 2007 , 129, 1095-104	16.4	68
98	Electrochemistry and photoelectrochemistry of photosystem I adsorbed on hydroxyl-terminated monolayers. <i>Journal of Electroanalytical Chemistry</i> , 2007 , 599, 72-78	4.1	68
97	Photosystem I-polyaniline/TiO ₂ solid-state solar cells: simple devices for biohybrid solar energy conversion. <i>Energy and Environmental Science</i> , 2015 , 8, 3572-3576	35.4	66
96	The effect of As, Co, and Ni impurities on pyrite oxidation kinetics: An electrochemical study of synthetic pyrite. <i>Geochimica Et Cosmochimica Acta</i> , 2007 , 71, 2491-2509	5.5	66
95	Effect of surface composition on the adsorption of photosystem I onto alkanethiolate self-assembled monolayers on gold. <i>Langmuir</i> , 2004 , 20, 4033-8	4	64
94	Quartz crystal microbalance detection of glutathione-protected nanoclusters using antibody recognition. <i>Analytical Chemistry</i> , 2005 , 77, 304-10	7.8	61
93	Multianalyte microphysiometry as a tool in metabolomics and systems biology. <i>Journal of Electroanalytical Chemistry</i> , 2006 , 587, 333-339	4.1	60
92	Electrochemical Studies of the Protonation of C ₆₀ - and C ₆₀ 2-. <i>The Journal of Physical Chemistry</i> , 1994 , 98, 8140-8143		56
91	Unexpected toxicity of monolayer protected gold clusters eliminated by PEG-thiol place exchange reactions. <i>Chemical Research in Toxicology</i> , 2010 , 23, 1608-16	4	55
90	The role of transforming growth factor-beta-mediated tumor-stroma interactions in prostate cancer progression: an integrative approach. <i>Cancer Research</i> , 2009 , 69, 7111-20	10.1	51
89	Photosystem I protein films at electrode surfaces for solar energy conversion. <i>Langmuir</i> , 2014 , 30, 10990-1001	4	49
88	Neurovascular unit on a chip: implications for translational applications. <i>Stem Cell Research and Therapy</i> , 2013 , 4 Suppl 1, S18	8.3	48

87	Surface fragmentation of complexes from thiolate protected gold nanoparticles by ion mobility-mass spectrometry. <i>Analytical Chemistry</i> , 2010 , 82, 3061-6	7.8	48
86	A multiwalled carbon nanotube/dihydropyran composite film electrode for insulin detection in a microphysiometer chamber. <i>Analytica Chimica Acta</i> , 2008 , 609, 44-52	6.6	48
85	Modification of the Cytosensor μ microphysiometer to simultaneously measure extracellular acidification and oxygen consumption rates. <i>Analytica Chimica Acta</i> , 2003 , 496, 93-101	6.6	47
84	Electrochemical preparation of Photosystem I-polyaniline composite films for biohybrid solar energy conversion. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 9328-35	9.5	44
83	Entrapment of photosystem I within self-assembled films. <i>Langmuir</i> , 2006 , 22, 8114-20	4	43
82	Tiopronin gold nanoparticle precursor forms aurophilic ring tetramer. <i>Inorganic Chemistry</i> , 2010 , 49, 10858-66	5.8	42
81	Detection of Ebola virus envelope using monoclonal and polyclonal antibodies in ELISA, surface plasmon resonance and a quartz crystal microbalance immunosensor. <i>Journal of Virological Methods</i> , 2006 , 137, 219-28	2.6	42
80	Metabolic discrimination of select list agents by monitoring cellular responses in a multianalyte microphysiometer. <i>Sensors</i> , 2009 , 9, 2117-33	3.8	40
79	Electrochemistry of tert-Butylcalix[8]arene-C(60) Films Using a Scanning Electrochemical Microscope-Quartz Crystal Microbalance. <i>Analytical Chemistry</i> , 1998 , 70, 4146-51	7.8	37
78	Photosystem I patterning imaged by scanning electrochemical microscopy. <i>Langmuir</i> , 2005 , 21, 692-8	4	36
77	IL4 receptor η mediates enhanced glucose and glutamine metabolism to support breast cancer growth. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 2015 , 1853, 1219-28	4.9	35
76	Photoactive films of photosystem I on transparent reduced graphene oxide electrodes. <i>Langmuir</i> , 2014 , 30, 8990-4	4	34
75	A structural mass spectrometry strategy for the relative quantitation of ligands on mixed monolayer-protected gold nanoparticles. <i>Analytical Chemistry</i> , 2010 , 82, 9268-74	7.8	34
74	Scanning electrochemical microscopy. 36. A combined scanning electrochemical microscope-quartz crystal microbalance instrument for studying thin films. <i>Analytical Chemistry</i> , 1998 , 70, 1993-8	7.8	32
73	Integration of Photosystem I with Graphene Oxide for Photocurrent Enhancement. <i>Advanced Energy Materials</i> , 2014 , 4, 1301953	21.8	31
72	Surface adsorption and electrochemical reduction of 2,4,6-trinitrotoluene on vanadium dioxide. <i>Analytical Chemistry</i> , 2015 , 87, 334-7	7.8	29
71	Neuron specific metabolic adaptations following multi-day exposures to oxygen glucose deprivation. <i>Biochimica Et Biophysica Acta - Molecular Basis of Disease</i> , 2010 , 1802, 1095-104	6.9	27
70	Kinetic model of the photocatalytic effect of a Photosystem I monolayer on a planar electrode surface. <i>Journal of Physical Chemistry A</i> , 2011 , 115, 3326-34	2.8	26

69	Continuous free-flow electrophoresis of water-soluble monolayer-protected clusters. <i>Analytical Chemistry</i> , 2005 , 77, 4348-53	7.8	25
68	Mediated approaches to Photosystem I-based biophotovoltaics. <i>Current Opinion in Electrochemistry</i> , 2017 , 5, 211-217	7.2	24
67	Photoreduction of catalytic platinum particles using immobilized multilayers of Photosystem I. <i>Langmuir</i> , 2012 , 28, 7952-6	4	24
66	Effect of Redox Mediator on the Photo-Induced Current of a Photosystem I Modified Electrode. <i>Journal of the Electrochemical Society</i> , 2013 , 160, H315-H320	3.9	24
65	Scanning electrochemical microscopy determination of organic soluble MPC electron-transfer rates. <i>Langmuir</i> , 2006 , 22, 10307-14	4	24
64	Real-Time Monitoring of Cellular Bioenergetics with a Multianalyte Screen-Printed Electrode. <i>Analytical Chemistry</i> , 2015 , 87, 7857-64	7.8	23
63	Hemagglutinin linear epitope presentation on monolayer-protected clusters elicits strong antibody binding. <i>Biomacromolecules</i> , 2005 , 6, 3419-24	6.9	23
62	Photosystem I in Langmuir-Blodgett and Langmuir-Schaefer monolayers. <i>Langmuir</i> , 2012 , 28, 15080-6	4	22
61	Chemical and electrochemical oxidation of C8-arylamine adducts of 2Tdeoxyguanosine. <i>Journal of the American Chemical Society</i> , 2007 , 129, 2074-81	16.4	22
60	Epitope mapping of the protective antigen of B. anthracis by using nanoclusters presenting conformational peptide epitopes. <i>Angewandte Chemie - International Edition</i> , 2006 , 45, 594-8	16.4	21
59	Imaging of voltage-gated alamethicin pores in a reconstituted bilayer lipid membrane via scanning electrochemical microscopy. <i>Analyst, The</i> , 2006 , 131, 311-6	5	21
58	Organs-on-Chips as Bridges for Predictive Toxicology. <i>Applied in Vitro Toxicology</i> , 2016 , 2, 97-102	1.3	20
57	Biomimetic monolayer-protected gold nanoparticles for immunorecognition. <i>Nanoscale</i> , 2012 , 4, 3843-51.7	5.7	20
56	Construction of a Semiconductor-Biological Interface for Solar Energy Conversion: p-Doped Silicon/Photosystem I/Zinc Oxide. <i>Langmuir</i> , 2015 , 31, 10002-7	4	19
55	The effects of cholera toxin on cellular energy metabolism. <i>Toxins</i> , 2010 , 2, 632-48	4.9	19
54	Electrochemical Impedance Spectroscopy of Synthetic Pyrite Doped with As, Co, and Ni. <i>Journal of the Electrochemical Society</i> , 2008 , 155, P61	3.9	19
53	Room-temperature reactions for self-cleaning molecular nanosensors. <i>Nano Letters</i> , 2013 , 13, 798-802	11.5	18
52	Nanoparticle-based biologic mimetics. <i>Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology</i> , 2009 , 1, 47-59	9.2	18

51	An Electrochemical Reaction-Diffusion Model of the Photocatalytic Effect of Photosystem I Multilayer Films. <i>Journal of Physical Chemistry B</i> , 2018 , 122, 117-125	3.4	18
50	Metabolic impact of 4-hydroxynonenal on macrophage-like RAW 264.7 function and activation. <i>Chemical Research in Toxicology</i> , 2012 , 25, 1643-51	4	17
49	Metabolic multianalyte microphysiometry reveals extracellular acidosis is an essential mediator of neuronal preconditioning. <i>ACS Chemical Neuroscience</i> , 2012 , 3, 510-8	5.7	17
48	Instrumenting a Fetal Membrane on a Chip as Emerging Technology for Preterm Birth Research. <i>Current Pharmaceutical Design</i> , 2017 , 23, 6115-6124	3.3	17
47	Improving the stability of photosystem I based bioelectrodes for solar energy conversion. <i>Current Opinion in Electrochemistry</i> , 2020 , 19, 27-34	7.2	16
46	Real-time Recognition of Mycobacterium tuberculosis and Lipoarabinomannan using the Quartz Crystal Microbalance. <i>Sensors and Actuators B: Chemical</i> , 2012 , 174, 245-252	8.5	15
45	Multichamber Multipotentiostat System for Cellular Microphysiometry. <i>Sensors and Actuators B: Chemical</i> , 2014 , 204, 536-543	8.5	14
44	Multifunctional nanoparticles as simulants for a gravimetric immunoassay. <i>Analytical and Bioanalytical Chemistry</i> , 2011 , 399, 1021-9	4.4	14
43	Effect of Cross-linking on the Performance and Stability of Photocatalytic Photosystem I Films. <i>Electrochimica Acta</i> , 2016 , 222, 926-932	6.7	14
42	Polyviologen as Electron Transport Material in Photosystem I-Based Biophotovoltaic Cells. <i>Langmuir</i> , 2018 , 34, 15658-15664	4	14
41	A printed superoxide dismutase coated electrode for the study of macrophage oxidative burst. <i>Biosensors and Bioelectronics</i> , 2012 , 33, 128-33	11.8	13
40	Modeling the measurements of cellular fluxes in microreactor devices using thin enzyme electrodes. <i>Journal of Mathematical Chemistry</i> , 2011 , 49, 251-275	2.1	13
39	Output analysis of materials inkjet printer. <i>Applied Physics Letters</i> , 2007 , 91, 113114	3.4	13
38	Photosystem I Multilayers within Porous Indium Tin Oxide Cathodes Enhance Mediated Electron Transfer. <i>ChemElectroChem</i> , 2020 , 7, 596-603	4.3	13
37	Multianalyte microphysiometry reveals changes in cellular bioenergetics upon exposure to fluorescent dyes. <i>Analytical Chemistry</i> , 2013 , 85, 11677-80	7.8	12
36	Photosystem I Multilayer Films for Photovoltage Enhancement in Natural Dye-Sensitized Solar Cells. <i>ACS Applied Energy Materials</i> , 2018 , 1, 301-305	6.1	11
35	Ionization-enhanced decomposition of 2,4,6-trinitrotoluene (TNT) molecules. <i>Journal of Physical Chemistry A</i> , 2011 , 115, 8142-6	2.8	11
34	Real-time cell dynamics with a multianalyte physiometer. <i>Methods in Molecular Biology</i> , 2005 , 303, 209-234	23.4	11

33	Reversing the Thermodynamics of Galvanic Replacement Reactions by Decreasing the Size of Gold Nanoparticles. <i>Journal of the American Chemical Society</i> , 2020 , 142, 19268-19277	16.4	10
32	Nanoscale Phase Segregation of Mixed Thiolates on Gold Nanoparticles. <i>Angewandte Chemie</i> , 2011 , 123, 10742-10747	3.6	9
31	Analysis of a Nitroreductase-Based Hypoxia Sensor in Primary Neuronal Cultures. <i>ACS Chemical Neuroscience</i> , 2016 , 7, 1188-91	5.7	8
30	Application of multianalyte microphysiometry to characterize macrophage metabolic responses to oxidized LDL and effects of an apoA-1 mimetic. <i>Biochemical and Biophysical Research Communications</i> , 2013 , 431, 181-5	3.4	8
29	Multianalyte Microphysiometry of Macrophage Responses to Phorbol Myristate Acetate, Lipopolysaccharide, and Lipoarabinomannan. <i>Electroanalysis</i> , 2013 , 25, 1706-1712	3	8
28	Electrochemical Microphysiometry Detects Cellular Glutamate Uptake. <i>Journal of the Electrochemical Society</i> , 2018 , 165, G3120-G3124	3.9	7
27	Elucidation of the Role of Lectin-Like oxLDL Receptor-1 in the Metabolic Responses of Macrophages to Human oxLDL. <i>Journal of Lipids</i> , 2017 , 2017, 8479482	2.7	6
26	Fibrotic Encapsulation Is the Dominant Source of Continuous Glucose Monitor Delays. <i>Diabetes</i> , 2019 , 68, 1892-1901	0.9	5
25	Photosystem I Enhances the Efficiency of a Natural, Gel-Based Dye-Sensitized Solar Cell.. <i>ACS Applied Bio Materials</i> , 2020 , 3, 4465-4473	4.1	5
24	Optical and electrochemical tuning of hydrothermally synthesized nitrogen-doped carbon dots. <i>Nanoscale Advances</i> , 2020 , 2, 3375-3383	5.1	5
23	Prostaglandin E2 Regulation of Macrophage Innate Immunity. <i>Chemical Research in Toxicology</i> , 2016 , 29, 19-25	4	5
22	In vivo testing for gold nanoparticle toxicity. <i>Methods in Molecular Biology</i> , 2013 , 1026, 175-86	1.4	5
21	Scanning Electrochemical Microscopy of Individual Pancreatic Islets. <i>Journal of the Electrochemical Society</i> , 2016 , 163, H3077-H3082	3.9	5
20	Effect of Ligand Charge on Electron-Transfer Rates of Water-Soluble Gold Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 11296-11300	3.8	4
19	Pueraria lobata (Kudzu) Photosystem I Improves the Photoelectrochemical Performance of Silicon. <i>Industrial Biotechnology</i> , 2013 , 9, 37-41	1.3	4
18	Mercury-Free Analysis of Lead in Drinking Water by Anodic Stripping Square Wave Voltammetry. <i>Journal of Chemical Education</i> , 2007 , 84, 312	2.4	4
17	Multianalyte Physiological Microanalytical Devices. <i>Annual Review of Analytical Chemistry</i> , 2017 , 10, 93-111.5	11.5	3
16	Small gold nanoparticles presenting linear and looped Cilengitide analogues as radiosensitizers of cells expressing β integrin. <i>Journal of Nanoparticle Research</i> , 2017 , 19, 1	2.3	3

15	A low-interference, high-resolution multianalyte electrochemical biosensor. <i>Analytical Methods</i> , 2020 , 12, 3873-3882	3.2	3
14	Carbon-supported AuPt and AuPd bimetallic nanocomposites as formic acid electrooxidation catalysts. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2015 , 212, 2903-2909	1.6	3
13	Epitope Mapping of the Protective Antigen of B. Anthracis by Using Nanoclusters Presenting Conformational Peptide Epitopes. <i>Angewandte Chemie</i> , 2006 , 118, 608-612	3.6	3
12	Layer-by-Layer Assembly of Photosystem I and PEDOT:PSS Biohybrid Films for Photocurrent Generation. <i>Langmuir</i> , 2021 , 37, 10481-10489	4	3
11	A bistable, multiport valve enables microformulators creating microclinical analyzers that reveal aberrant glutamate metabolism in astrocytes derived from a tuberous sclerosis patient. <i>Sensors and Actuators B: Chemical</i> , 2021 , 341, 129972-129972	8.5	3
10	Preface Semiconductor Electrochemistry and Photoelectrochemistry in Honor of Krishnan Rajeshwar. <i>Journal of the Electrochemical Society</i> , 2019 , 166, Y5-Y6	3.9	2
9	Design and synthesis of an antigenic mimic of the Ebola glycoprotein. <i>Journal of Materials Research</i> , 2008 , 23, 3161-3168	2.5	2
8	Chlorpyrifos Disrupts Acetylcholine Metabolism Across Model Blood-Brain Barrier. <i>Frontiers in Bioengineering and Biotechnology</i> , 2021 , 9, 622175	5.8	2
7	Communication Microfluidic Electrochemical Acetylcholine Detection in the Presence of Chlorpyrifos. <i>Journal of the Electrochemical Society</i> , 2019 , 166, G178-G181	3.9	1
6	Electrochemical Detection of 2,4,6-Trinitrotoluene at Colloidal Gold Nanoparticle Film Assemblies. <i>NATO Science for Peace and Security Series A: Chemistry and Biology</i> , 2015 , 147-160	0.1	1
5	Photosystem I Multilayers within Porous Indium Tin Oxide Cathodes Enhance Mediated Electron Transfer. <i>ChemElectroChem</i> , 2020 , 7, 585-585	4.3	0
4	NanoLiterBioReactor: Monitoring of Long-Term Mammalian Cell Physiology at Nanofabricated Scale. <i>Materials Research Society Symposia Proceedings</i> , 2004 , 823, W9.5.1/O5.5.1		
3	NanoLiterBioReactor: Monitoring of Long-Term Mammalian Cell Physiology at Nanofabricated Scale. <i>Materials Research Society Symposia Proceedings</i> , 2004 , 820, 126		
2	Trace Oxygen Affects Osmium Redox Polymer Synthesis for Wired Enzymatic Biosensors. <i>Journal of the Electrochemical Society</i> , 2022 , 169, 016506	3.9	
1	Electron Transfer at Photosystem I - Electrode Interfaces: Porous & Translucent Indium Tin Oxide Cathodes. <i>ECS Meeting Abstracts</i> , 2020 , MA2020-01, 2526-2526	0	