

Juhyoun Kwak

List of Publications by Year in descending order

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95
papers

7,183
citations

117625

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84
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95
docs citations

95
times ranked

7876
citing authors

#	ARTICLE	IF	CITATIONS
1	Ordered nanoporous arrays of carbon supporting high dispersions of platinum nanoparticles. <i>Nature</i> , 2001, 412, 169-172.	27.8	2,439
2	Scanning electrochemical microscopy. Introduction and principles. <i>Analytical Chemistry</i> , 1989, 61, 132-138.	6.5	1,039
3	Scanning electrochemical microscopy. Theory of the feedback mode. <i>Analytical Chemistry</i> , 1989, 61, 1221-1227.	6.5	566
4	Scanning electrochemical microscopy. Apparatus and two-dimensional scans of conductive and insulating substrates. <i>Analytical Chemistry</i> , 1989, 61, 1794-1799.	6.5	196
5	Single Molecule Electrochemistry. <i>Journal of the American Chemical Society</i> , 1996, 118, 9669-9675.	13.7	188
6	Enzyme-Amplified Electrochemical Detection of DNA Using Electrocatalysis of Ferrocenyl-Tethered Dendrimer. <i>Analytical Chemistry</i> , 2003, 75, 5665-5672.	6.5	133
7	Electrochemical Detection of DNA Hybridization Using Biometallization. <i>Analytical Chemistry</i> , 2005, 77, 579-584.	6.5	133
8	An electrochemical impedance biosensor with aptamer-modified pyrolyzed carbon electrode for label-free protein detection. <i>Sensors and Actuators B: Chemical</i> , 2008, 129, 372-379.	7.8	133
9	Time-Resolved In Situ Spectroelectrochemical Study on Reduction of Sulfur in N,N[^{sup} Ê ¹]-Dimethylformamide. <i>Journal of the Electrochemical Society</i> , 2004, 151, E283.	2.9	112
10	Application of scanning electrochemical microscopy to biological samples.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1990, 87, 1740-1743.	7.1	105
11	Electrochemical impedance sensing of DNA at PNA self assembled monolayer. <i>Journal of Electroanalytical Chemistry</i> , 2008, 612, 37-41.	3.8	82
12	Monodisperse PtRu Nanoalloy on Carbon as a High-Performance DMFC Catalyst. <i>Chemistry of Materials</i> , 2006, 18, 4209-4211.	6.7	74
13	Faradaic impedance titration of pure 3-mercaptopropionic acid and ethanethiol mixed monolayers on gold. <i>Journal of Electroanalytical Chemistry</i> , 2001, 512, 83-91.	3.8	70
14	Enhanced Adhesion of Preosteoblasts inside 3D PCL Scaffolds by Polydopamine Coating and Mineralization. <i>Macromolecular Bioscience</i> , 2013, 13, 1389-1395.	4.1	69
15	Subcellular Neural Probes from Single-Crystal Gold Nanowires. <i>ACS Nano</i> , 2014, 8, 8182-8189.	14.6	61
16	Application of scanning electrochemical microscopy to generation/collection experiments with high collection efficiency. <i>Analytical Chemistry</i> , 1991, 63, 1501-1504.	6.5	60
17	Anion Exchange-Promoted Ru ^{3+/2+} Redox Switch in Self-Assembled Monolayers of Imidazolium Ions on a Gold Electrode. <i>Langmuir</i> , 2005, 21, 4268-4271.	3.5	58
18	Characterization and electrocatalytic properties of Prussian blue electrochemically deposited on nano-Au/PAMAM dendrimer-modified gold electrode. <i>Biosensors and Bioelectronics</i> , 2008, 23, 1519-1526.	10.1	57

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19	Protein Patterning Based on Electrochemical Activation of Bioinactive Surfaces with Hydroquinone-Caged Biotin. <i>Journal of the American Chemical Society</i> , 2004, 126, 15368-15369.	13.7	53
20	Label-free aptasensor for platelet-derived growth factor (PDGF) protein. <i>Analytica Chimica Acta</i> , 2008, 613, 163-168.	5.4	53
21	One-Dimensional Gold Nanostructures through Directed Anisotropic Overgrowth from Gold Decahedrons. <i>Journal of Physical Chemistry C</i> , 2009, 113, 3449-3454.	3.1	53
22	Mass Transport Investigated with the Electrochemical and Electrogravimetric Impedance Techniques. 2. Anion and Water Transport in PMPy and PPy Films. <i>Journal of Physical Chemistry B</i> , 1997, 101, 4656-4661.	2.6	50
23	Mass Transport Investigated with the Electrochemical and Electrogravimetric Impedance Techniques. 1. Water Transport in PPy/CuPTS Films. <i>Journal of Physical Chemistry B</i> , 1997, 101, 774-781.	2.6	49
24	A miniaturized low-power wireless remote environmental monitoring system based on electrochemical analysis. <i>Sensors and Actuators B: Chemical</i> , 2004, 102, 27-34.	7.8	48
25	An electrochemical immunosensor using p-aminophenol redox cycling by NADH on a self-assembled monolayer and ferrocene-modified Au electrodes. <i>Analyst, The</i> , 2008, 133, 1599.	3.5	48
26	An electrochemical immunosensor using ferrocenyl-tethered dendrimer. <i>Analyst, The</i> , 2006, 131, 402-406.	3.5	47
27	Monitoring the ejection and incorporation of ferricyanide [Fe(CN) ₆ ³⁻] and ferrocyanide [Fe(CN) ₆ ⁴⁻] counterions at protonated poly(4-vinylpyridine) coatings on electrodes with the scanning electrochemical microscope. <i>Analytical Chemistry</i> , 1992, 64, 250-256.	6.5	42
28	Scanning Electrochemical Microscopy: V . A Study of the Conductivity of a Polypyrrole Film. <i>Journal of the Electrochemical Society</i> , 1990, 137, 1481-1484.	2.9	41
29	Electrochemical determination of total alkaline phosphatase in human blood with a micropatterned ITO film. <i>Journal of Electroanalytical Chemistry</i> , 2005, 577, 243-248.	3.8	41
30	Electrodeposition of Epitaxial Cu(111) Thin Films on Au(111) Using Defect-Mediated Growth. <i>Journal of the American Chemical Society</i> , 2001, 123, 7176-7177.	13.7	40
31	Electrochemical Insertion of Lithium into Polyacrylonitrile-Based Disordered Carbons. <i>Journal of the Electrochemical Society</i> , 1997, 144, 4279-4284.	2.9	39
32	Polymer Films on Electrodes: XXIV . Ellipsometric Study of the Electrochemical Redox Processes of a Polypyrrole Film on a Platinum Electrode. <i>Journal of the Electrochemical Society</i> , 1989, 136, 3720-3724.	2.9	36
33	Mass Transport Investigated with the Electrochemical and Electrogravimetric Impedance Techniques. 3. Complex Charge Transport in PPy/PSS Films. <i>Journal of Physical Chemistry B</i> , 1998, 102, 1982-1988.	2.6	36
34	Ion and water transports in Prussian blue films investigated with electrochemical quartz crystal microbalance. <i>Electrochemistry Communications</i> , 2001, 3, 274-280.	4.7	35
35	Electrochemical deposition of Pd nanoparticles on indium-tin oxide electrodes and their catalytic properties for formic acid oxidation. <i>Electrochemistry Communications</i> , 2010, 12, 1442-1445.	4.7	34
36	Synthesis and Characterization of $\frac{1}{4}\text{-}\hat{1}\text{-}\hat{2}\text{-}\hat{1}\text{-}\hat{2}\text{-}\hat{1}\text{-}\hat{2}\text{-}\text{C60}$ Trirhenium Hydrido Cluster Complexes. <i>Organometallics</i> , 2001, 20, 3139-3144.	2.3	32

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37	A hydrogel pen for electrochemical reaction and its applications for 3D printing. <i>Nanoscale</i> , 2015, 7, 994-1001.	5.6	31
38	Electrochemistry in liquid sulfur dioxide. 8. Oxidation of iron, ruthenium, and osmium bipyridine complexes at ultramicroelectrodes at very positive potentials. <i>Inorganic Chemistry</i> , 1988, 27, 4377-4382.	4.0	29
39	Atomic structure of highly ordered pyrolytic graphite doped with boron. <i>Electrochemistry Communications</i> , 2001, 3, 608-612.	4.7	28
40	Nitrate reduction catalyzed by nanocomposite layer of Ag and Pb on Au(111). <i>Journal of Electroanalytical Chemistry</i> , 2005, 579, 143-152.	3.8	27
41	Synthetic, crystallographic and electrochemical studies of thienyl-substituted corrole complexes of copper and cobalt. <i>Polyhedron</i> , 2006, 25, 1519-1530.	2.2	27
42	Electrochemically Induced and Controlled One-Step Covalent Coupling Reaction on Self-Assembled Monolayers. <i>Langmuir</i> , 2004, 20, 3821-3823.	3.5	26
43	Electrocatalytic dioxygen reduction on underpotentially deposited Pb on Au(111) studied by an active site blocking strategy. <i>Journal of Catalysis</i> , 2003, 213, 17-22.	6.2	24
44	Electrochemical Studies of C ₆₀ -Triosmium Complexes: First Evidence for a C ₆₀ -Mediated Electron Transfer to the Metal Center. <i>Inorganic Chemistry</i> , 1997, 36, 2698-2699.	4.0	23
45	Analysis of Heavy-Metal Ions Using Mercury Microelectrodes and a Solid-State Reference Electrode on a Si Wafer. <i>Japanese Journal of Applied Physics</i> , 2000, 39, 7159-7163.	1.5	23
46	Scanning Tunneling Microscopy Investigation of Silver Deposition upon Au(111) in the Presence of Chloride. <i>Langmuir</i> , 2002, 18, 8025-8032.	3.5	23
47	A Penicillamine Biosensor Based on Tyrosinase Immobilized on Nano-Au/ PAMAM Dendrimer Modified Gold Electrode. <i>Electroanalysis</i> , 2007, 19, 2428-2436.	2.9	23
48	High-level production of heme-containing holoproteins in <i>Escherichia coli</i> . <i>Applied Microbiology and Biotechnology</i> , 2001, 55, 187-191.	3.6	22
49	Aptamer-based electrochemical detection of protein using enzymatic silver deposition. <i>Electrochimica Acta</i> , 2009, 54, 6788-6791.	5.2	22
50	Mass transport behavior of polypyrrole and poly(N-methylpyrrole) films in acetonitrile solutions. <i>Journal of Electroanalytical Chemistry</i> , 1999, 468, 104-109.	3.8	21
51	Mass transport study of Nafion® coatings saturated with [Os(bpy) ₃] ²⁺ by an electrochemical quartz crystal microbalance. <i>Journal of Electroanalytical Chemistry</i> , 1995, 394, 87-92.	3.8	20
52	pH-Dependent rectification in self-assembled monolayers based on electrostatic interactions. <i>Chemical Communications</i> , 2006, , 183-185.	4.1	20
53	A study of nerve agent model organophosphonate binding with manganese-A ₂ B-corrole and -A ₂ B ₂ -porphyrin systems. <i>Polyhedron</i> , 2009, 28, 2418-2430.	2.2	20
54	Synthetic, Cyclic Voltammetric, Structural, EPR, and UV-Vis Spectroscopic Studies of Thienyl-Containing meso-A ₂ B-cor(CrV=O) Systems: Consideration of Three Interrelated Molecular Detection Modalities. <i>Inorganic Chemistry</i> , 2010, 49, 502-512.	4.0	20

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55	Faradaic impedance titration and control of electron transfer of 1-(12-mercaptododecyl)imidazole monolayer on a gold electrode. <i>Electrochimica Acta</i> , 2008, 53, 2630-2636.	5.2	19
56	Electrochemical Deprotection for Site-Selective Immobilization of Biomolecules. <i>Langmuir</i> , 2002, 18, 1460-1462.	3.5	18
57	Bimetallic Clusters by Underpotential Deposition on Layered Au Nanoparticle Films. <i>Journal of Physical Chemistry B</i> , 2004, 108, 5372-5379.	2.6	18
58	Nanosieving of Anions and Cavity-Size-Dependent Association of Cyclodextrins on a 1-Adamantanethiol Self-Assembled Monolayer. <i>ACS Nano</i> , 2010, 4, 3949-3958.	14.6	17
59	Electrochemical detection of dopamine using a bare indium-tin oxide electrode and scan rate control. <i>Journal of Electroanalytical Chemistry</i> , 2013, 708, 7-12.	3.8	17
60	Slow and Fast Charge Transport Processes in PPy/NO ₃ Films. <i>Journal of the Electrochemical Society</i> , 2000, 147, 4239.	2.9	16
61	Effects of dopant anions and N-substituents on the electrochemical behavior of polypyrrole films in propylene carbonate solution. <i>Electrochemistry Communications</i> , 2002, 4, 128-133.	4.7	16
62	Dopamine Detection Using the Selective and Spontaneous Formation of Electrocatalytic Poly(dopamine) Films on Indium-Tin Oxide Electrodes. <i>Electroanalysis</i> , 2012, 24, 993-996.	2.9	16
63	Synthetic, ¹¹⁹ Sn NMR Spectroscopic, Electrochemical, and Reactivity Study of Organotin A ₃ Corrolates Including Chiral and Ferrocenyl Derivatives. <i>Inorganic Chemistry</i> , 2013, 52, 1991-1999.	4.0	16
64	Electrocatalytic Dioxide Reduction on Underpotentially Deposited Tl on Au(111) Studied by an Active Site Blocking Strategy. <i>Langmuir</i> , 2001, 17, 3704-3711.	3.5	15
65	The first observation of four-electron reduction in [60]fullerene-metal cluster self-assembled monolayers (SAMs) Electronic supplementary information (ESI) available: CV spectra, half-wave potentials and XPS data. See http://www.rsc.org/suppdata/cc/b2/b209024d/ . <i>Chemical Communications</i> , 2002, , 2966-2967.	4.1	15
66	Can Static Electricity on a Conductor Drive a Redox Reaction: Contact Electrification of Au by Polydimethylsiloxane, Charge Inversion in Water, and Redox Reaction. <i>Journal of the American Chemical Society</i> , 2018, 140, 14687-14695.	13.7	15
67	Lithium Insertion into Disordered Carbons Prepared from Organic Polymers. <i>Journal of the Electrochemical Society</i> , 1998, 145, 3123-3129.	2.9	14
68	Novel Families of Three-Component Reversible Redox Cycles Involving Cage Deformation via Intramolecular Redox Reaction: A Tetrathiolate-Bridged Dinuclear Molybda- and Tungstacarbonates. <i>Journal of the American Chemical Society</i> , 2001, 123, 9054-9063.	13.7	14
69	A direct analysis of nanomolar metal ions in environmental water samples with Nafion-coated microelectrodes. <i>Electrochimica Acta</i> , 2004, 50, 205-210.	5.2	13
70	Ordered Polymeric Microhole Array Made by Selective Wetting and Applications for Electrochemical Microelectrode Array. <i>Langmuir</i> , 2011, 27, 8548-8553.	3.5	12
71	Bench-top fabrication and electrochemical applications of a micro-gap electrode using a microbead spacer. <i>Electrochemistry Communications</i> , 2016, 68, 76-80.	4.7	12
72	Polymer films on electrodes. <i>Journal of Electroanalytical Chemistry and Interfacial Electrochemistry</i> , 1990, 282, 239-252.	0.1	11

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73	Dependence of the Electrochemical Behavior of Poly(N-Phenylpyrrole) Films on the Type of Anion and Solvent Used in the Electropolymerization. <i>Journal of Physical Chemistry B</i> , 1999, 103, 6030-6035.	2.6	11
74	H ⁺ -Assisted fluorescent differentiation of Cu ⁺ and Cu ²⁺ : effect of Al ³⁺ -induced acidity on chemical sensing and generation of two novel and independent logic gating pathways. <i>Chemical Communications</i> , 2015, 51, 6357-6360.	4.1	11
75	A Label-Free Electrochemical Aptasensor for Thrombin Using a Single-Wall Carbon Nanotube (SWCNT) Casted Glassy Carbon Electrode (GCE). <i>Electroanalysis</i> , 2014, 26, 513-520.	2.9	10
76	A wet-chemistry-based hydrogel sensing platform for 2D imaging of pressure, chemicals and temperature. <i>Nanoscale</i> , 2018, 10, 13581-13588.	5.6	10
77	Electrochemistry on Alternate Structures of Gold Nanoparticles and Ferrocene-Tethered Polyamidoamine Dendrimers. <i>Bulletin of the Korean Chemical Society</i> , 2004, 25, 1681-1686.	1.9	10
78	Anion Transport in Prussian Blue Films in Acetonitrile and Propylene Carbonate Solutions. <i>Journal of the Electrochemical Society</i> , 2000, 147, 3801.	2.9	9
79	Protein micropatterning based on electrochemically switched immobilization of bioligand on electropolymerized film of a dually electroactive monomer. <i>Chemical Communications</i> , 2006, , 4723.	4.1	9
80	Electrochemical DNA Hybridization Detection Using DNA Cleavage. <i>Electroanalysis</i> , 2008, 20, 1204-1208.	2.9	9
81	C60Self-Assembled Monolayer Using Diamine as a Prelayer. <i>Chemistry Letters</i> , 2000, 29, 958-959.	1.3	8
82	Silicon Micromachined Infrared Thin-Layer Cell for In Situ Spectroelectrochemical Analysis of Aqueous and Nonaqueous Solvent System. <i>Electroanalysis</i> , 2005, 17, 959-964.	2.9	6
83	Aptamer Based Electrochemical Sensor System for Protein Using the Generation/Collection Mode of Scanning Electrochemical Microscope (SECM). <i>Journal of Nanoscience and Nanotechnology</i> , 2011, 11, 4305-4311.	0.9	6
84	Programmable Electrochemical Rectifier Based on a Thin-Layer Cell. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 20955-20962.	8.0	6
85	Microstructure and electrochemical properties of some synthetic carbons. <i>Synthetic Metals</i> , 1999, 100, 195-204.	3.9	5
86	Application of Polyaniline to an Enzyme-Amplified Electrochemical Immunosensor as an Electroactive Report Molecule. <i>Bulletin of the Korean Chemical Society</i> , 2010, 31, 3103-3108.	1.9	5
87	Label-Free Electrochemical DNA Detection Based on Electrostatic Interaction between DNA and Ferrocene Dendrimers. <i>Bulletin of the Korean Chemical Society</i> , 2010, 31, 3099-3102.	1.9	4
88	Electrochemical Detection of Biomolecule with Mixed Self-Assembled Monolayers of Ferrocene-Undecanethiol. <i>Journal of Nanoscience and Nanotechnology</i> , 2011, 11, 4194-4199.	0.9	3
89	Do-It-Yourself Pyramidal Mold for Nanotechnology. <i>ACS Omega</i> , 2019, 4, 14599-14604.	3.5	2
90	Sieving behaviour of nanoscopic pores by hydrated ions. <i>Chemical Communications</i> , 2006, , 2167.	4.1	1

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91	Soft colloidal lithography by strong physical contact using swollen magnetic microspheres and magnetic force. <i>Electrochemistry Communications</i> , 2013, 30, 99-102.	4.7	1
92	Synthesis of Gold Coated Magnetic Microparticles and Their Application for Electrochemical Glucose Sensing by the Enzymatically Precipitated Prussian Blue. <i>Journal of Biomedical Nanotechnology</i> , 2013, 9, 901-906.	1.1	1
93	Synthesis of triarylamine-containing poly(arylene ether)s by nucleophilic aromatic substitution reaction. <i>Journal of Polymer Science Part A</i> , 2014, 52, 2692-2702.	2.3	1
94	Digital Simulation of Linear Sweep Voltammetry of Quasi-Reversible Systems at Ultramicroelectrodes. <i>Journal of the Electrochemical Society</i> , 1987, 134, 57C-59C.	2.9	0
95	Pyrolyzed carbon biosensor for aptamer-protein interactions using electrochemical impedance spectroscopy. , 2007, , .		0