

Su-Il Pyun

List of Publications by Year in descending order

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82
papers

1,629
citations

279701

23
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315616

38
g-index

85
all docs

85
docs citations

85
times ranked

1219
citing authors

#	ARTICLE	IF	CITATIONS
1	Corrosion mechanism of pure aluminium in aqueous alkaline solution. <i>Journal of Solid State Electrochemistry</i> , 2000, 4, 267-272.	1.2	134
2	The ac impedance study of electrochemical lithium intercalation into porous vanadium oxide electrode. <i>Electrochimica Acta</i> , 1996, 41, 919-925.	2.6	88
3	Theoretical approach to faradaic admittance of hydrogen absorption reaction on metal membrane electrode. <i>Electrochimica Acta</i> , 1993, 38, 2645-2652.	2.6	86
4	Hydrogen absorption and diffusion into and in palladium: ac-impedance analysis under impermeable boundary conditions. <i>Electrochimica Acta</i> , 1996, 41, 843-848.	2.6	76
5	Impedance analysis of hydrogen absorption reaction on Pd membrane electrode in 0.1 M LiOH solution under permeable boundary conditions. <i>Electrochimica Acta</i> , 1994, 39, 363-373.	2.6	69
6	Anomalous behaviour of hydrogen extraction from hydride-forming metals and alloys under impermeable boundary conditions. <i>Electrochimica Acta</i> , 2005, 50, 1777-1805.	2.6	69
7	The permeation of hydrogen through the passivating films on iron and nickel. <i>Corrosion Science</i> , 1989, 29, 485-496.	3.0	67
8	The inhibition mechanism of pitting corrosion of pure aluminum by nitrate and sulfate ions in neutral chloride solution. <i>Journal of Solid State Electrochemistry</i> , 1999, 3, 331-336.	1.2	63
9	Analysis of nonlinear Mott-Schottky plots obtained from anodically passivating amorphous and polycrystalline TiO ₂ films. <i>Journal of Applied Electrochemistry</i> , 1992, 22, 156-160.	1.5	57
10	A review of anomalous diffusion phenomena at fractal interface for diffusion-controlled and non-diffusion-controlled transfer processes. <i>Journal of Solid State Electrochemistry</i> , 2006, 11, 323-334.	1.2	56
11	Hydrogen transport through Pd electrode: current transient analysis. <i>Electrochimica Acta</i> , 1997, 42, 1701-1708.	2.6	52
12	An investigation of the hydrogen absorption reaction into, and the hydrogen evolution reaction from, a Pd foil electrode. <i>Journal of Electroanalytical Chemistry</i> , 1996, 414, 127-133.	1.9	50
13	Electrochemical lithium intercalation reaction of anodic vanadium oxide film. <i>Journal of Alloys and Compounds</i> , 1995, 217, 52-58.	2.8	32
14	Kinetics of double-layer charging/discharging of the activated carbon fiber cloth electrode: effects of pore length distribution and solution resistance. <i>Journal of Solid State Electrochemistry</i> , 2004, 8, 110-117.	1.2	32
15	Fundamentals of Rotating Disc and Ring Disc Electrode Techniques and their Applications to Study of the Oxygen Reduction Mechanism at Pt/C Electrode for Fuel Cells. <i>Israel Journal of Chemistry</i> , 2008, 48, 215-228.	1.0	32
16	Hydrogen transport through plasma enhanced chemical vapour-deposited TiO ₂ film-palladium bilayer by ac-impedance spectroscopy. <i>Electrochimica Acta</i> , 1995, 40, 999-1004.	2.6	31
17	Mixed Diffusion and Charge-Transfer-Controlled Oxygen Reduction on Dense La _{1-x} Sr _x Co _{0.2} Fe _{0.8} O _{3-δ} Electrodes with Various Sr Contents. <i>Journal of the Electrochemical Society</i> , 2007, 154, B802.	1.3	29
18	Electrochemical noise analysis of corrosion of pure aluminium in alkaline solution in the presence of SO ₄ ²⁻ ion, NO ₃ ⁻ ion and Na ₂ S additives. <i>Electrochimica Acta</i> , 2007, 52, 4363-4373.	2.6	28

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19	A critical evaluation of the stress-corrosion cracking mechanism in high-strength aluminum alloys. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1991, 22, 2407-2414.	1.4	27
20	Analysis of anodic current transient and beam deflection transient simultaneously measured from Pd foil electrode pre-charged with hydrogen. Journal of Electroanalytical Chemistry, 2001, 499, 152-160.	1.9	27
21	The kinetics of hydrogen transport through amorphous Pd ₈₂ ~ ^y Ni _y Si ₁₈ alloys (y=0~32) by analysis of anodic current transient. Electrochimica Acta, 2003, 48, 1603-1611.	2.6	26
22	Effect of annealing temperature on mixed proton transport and charge transfer-controlled oxygen reduction in gas diffusion electrode. Electrochimica Acta, 2007, 52, 6525-6533.	2.6	26
23	Assessment of corrosion resistance of surface-coated galvanized steel by analysis of the AC impedance spectra measured on the salt-spray-tested specimen. Journal of Solid State Electrochemistry, 2007, 11, 829-839.	1.2	25
24	Mechanism transition of mixed diffusion and charge transfer-controlled to diffusion-controlled oxygen reduction at Pt-dispersed carbon electrode by Pt loading, Nafion content and temperature. Electrochimica Acta, 2007, 53, 740-751.	2.6	23
25	Electrochemistry of Insertion Materials for Hydrogen and Lithium. Monographs in Electrochemistry, 2012, , .	0.2	22
26	Comparison of transmissive permeable and reflective impermeable interfaces between electrode and electrolyte. Journal of Solid State Electrochemistry, 2011, 15, 2447-2452.	1.2	21
27	Analysis of stresses generated during hydrogen transport through a Pd foil electrode under potential sweep conditions. Journal of Electroanalytical Chemistry, 2001, 506, 1-10.	1.9	19
28	A study of the hydrogen absorption reaction into $\hat{1}\pm$ - and $\hat{1}^2$ -LaNi ₅ H _x porous electrodes by using electrochemical impedance spectroscopy. Journal of Power Sources, 1996, 62, 175-178.	4.0	18
29	Hydrogen transport through nickel hydroxide film: current transient analysis. Electrochimica Acta, 1997, 42, 2465-2474.	2.6	18
30	Effects of applied anodic potential and pH on the repassivation kinetics of pure aluminium in aqueous alkaline solution. Journal of Solid State Electrochemistry, 1999, 3, 104-110.	1.2	18
31	Investigation of hydrogen transport through Mm(Ni _{3.6} Co _{0.7} Mn _{0.4} Al _{0.3}) _{1.12} and Zr _{0.65} Ti _{0.35} Ni _{1.2} V _{0.4} Mn _{0.4} hydride electrodes by analysis of anodic current transient. Electrochimica Acta, 2005, 50, 1121-1130.	2.6	18
32	Effect of hydrogen on impedance of the passivating film on iron. Journal of Applied Electrochemistry, 1991, 21, 181-183.	1.5	17
33	Analysis of impedance spectra of a pitted Inconel alloy 600 electrode in chloride ion-containing thiosulfate solution at temperatures of 298~573ÅK. Journal of Solid State Electrochemistry, 2003, 7, 380-388.	1.2	15
34	Electrochemical characteristics of the blended polymer electrolytes containing lithium salts. Journal of Polymer Science, Part B: Polymer Physics, 1996, 34, 2127-2137.	2.4	14
35	Impedance analysis of hydrogen adsorption on palladium in 0.1 M NaOH solution. Journal of Alloys and Compounds, 1991, 176, 97-103.	2.8	13
36	Hydrogen transport through Pd-Ni alloy electrodeposited on Pd substrate. Journal of Solid State Electrochemistry, 1997, 1, 120-125.	1.2	13

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37	The kinetics of lithium transport through a composite electrode made of mesocarbon-microbeads heat-treated at 800°C investigated by current transient analysis. <i>Journal of Solid State Electrochemistry</i> , 2003, 7, 374-379.	1.2	12
38	Oxygen Reduction Kinetics at Dense (La _{0.85} Sr _{0.15}) _{0.9} MnO ₃ /YSZ Composite Electrodes Investigated Using Potentiostatic Current Transient Method. <i>Journal of the Electrochemical Society</i> , 2008, 155, B762.	1.3	12
39	Kinetics of oxygen reduction on porous mixed conducting (La _{0.85} Sr _{0.15}) _{0.9} MnO ₃ electrode by ac-impedance analysis. <i>Journal of Solid State Electrochemistry</i> , 2006, 11, 117-125.	1.2	10
40	Effects of Secondary Phase and Thickness on Mixed Controlled Oxygen Reduction at Dense Composite Electrode. <i>Journal of the Electrochemical Society</i> , 2008, 155, B8.	1.3	10
41	Kinetics of Cathodic Reaction at Porous Composite Electrode under Mixed Control of Migration and Oxygen Exchange. <i>Journal of the Electrochemical Society</i> , 2009, 156, B620.	1.3	10
42	Anomalous behaviour in diffusion impedance of intercalation electrodes. <i>International Journal of Materials Research</i> , 2005, 96, 117-123.	0.8	9
43	Critical assessment of a new in situ spectroelectrochemical cell designed for the study of interfacial reactions between a porous graphite anode and alkyl carbonate solution. <i>Journal of Solid State Electrochemistry</i> , 2003, 7, 201-207.	1.2	8
44	Oxygen Reduction Kinetics in Nafion-Impregnated Gas Diffusion Electrode under Mixed Control Using EIS and PCT. <i>Journal of the Electrochemical Society</i> , 2008, 155, B1274.	1.3	8
45	Thermodynamic and electro-kinetic analyses of direct electron transfer (DET) and mediator-involved electron transfer (MET) with the help of a redox electron mediator. <i>Journal of Solid State Electrochemistry</i> , 2020, 24, 2685-2693.	1.2	8
46	Strategies of metal corrosion protection. <i>ChemTexts</i> , 2021, 7, 1.	1.0	8
47	Application of Electrochemical Quartz Crystal Microbalance Technique to Hydrogen/Lithium Insertion into MnO ₂ /LiCoO ₂ Electrode in Aqueous/Non-aqueous Solution. <i>Metals and Materials International</i> , 1998, 4, 193-201.	0.2	7
48	Thermodynamic Approach to Electrochemical Lithium Intercalation into Li _{1-x} Mn ₂ O ₄ Electrode Prepared by Sol-Gel Method. <i>Molecular Crystals and Liquid Crystals</i> , 2000, 341, 155-162.	0.3	7
49	Lithium Transport Through Sputter Deposited Lithium Cobalt Dioxide Thin Film Electrode. <i>Molecular Crystals and Liquid Crystals</i> , 2000, 341, 147-154.	0.3	7
50	Kinetics of oxygen reduction at composite electrodes with controlled three-phase boundaries by patterning YSZ column. <i>Electrochimica Acta</i> , 2009, 54, 952-960.	2.6	7
51	Compositional analysis of passivating surface film formed on carbon electrode in organic electrolytic solution using in-situ spectroelectrochemical technique. <i>Metals and Materials International</i> , 1999, 5, 101-108.	0.2	6
52	Transport of alkaline cation and neutral species through the Ni(OH) ₂ /NiOOH film electrode. <i>Journal of Solid State Electrochemistry</i> , 2001, 5, 459-465.	1.2	6
53	Kinetics of lithium transport through a hard carbon electrode studied by analysis of current transients. <i>Journal of Solid State Electrochemistry</i> , 2003, 7, 368-373.	1.2	6
54	Fractal analysis of pit morphology of Inconel alloy 600 in sulphate, nitrate and bicarbonate ion-containing sodium chloride solution at temperatures of 25-100°C. <i>Journal of Solid State Electrochemistry</i> , 2004, 8, 296-307.	1.2	6

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55	Effects of SO_4^{2-} , $\text{S}_2\text{O}_3^{2-}$ and HSO_4^- ion additives on the pitting corrosion of pure aluminium in 1M NaCl solution at 40–70°C. Journal of Solid State Electrochemistry, 2005, 9, 639-645.	1.2	6
56	Roles of adsorbed OH and adsorbed H in the oxidation of hydrogen and the reduction of UO_2^{2+} ions at Pt electrodes under non-conventional conditions. Journal of Applied Electrochemistry, 2007, 37, 905-912.	1.5	5
57	Theoretical and Experimental Approaches to Oxygen Reduction at Porous Composite Electrodes for Fuel Cells by Analyses of ac Impedance Spectra and Potentiostatic Current Transients. Israel Journal of Chemistry, 2008, 48, 277-286.	1.0	5
58	Pathways of diffusion mixed with subsequent reactions with examples of hydrogen extraction from hydride-forming electrode and oxygen reduction at gas diffusion electrode. Journal of Solid State Electrochemistry, 2011, 15, 2437-2445.	1.2	5
59	Gibbs Free Energies of Formations of the Magnesium and Calcium Germanates at High Temperatures. Journal of the American Ceramic Society, 1984, 67, 594-596.	1.9	4
60	The Role of Excess Water in Acidic Sol-Gel Polymerization of Tetraethoxysilane (TEOS) Using Molecular Dynamics Simulation. Molecular Simulation, 2003, 29, 489-494.	0.9	4
61	The Fundamentals and Advances of Solid-State Electrochemistry: Intercalation (Insertion) and Deintercalation (Extraction) in Solid-State Electrodes. , 0, , 133-177.		4
62	Chemical diffusion of electroactive species in ionic compounds: a focus on chemical equilibrium constraint. Journal of Solid State Electrochemistry, 2009, 13, 829-836.	1.2	4
63	Kinetics of mixed-controlled oxygen reduction at nafion-impregnated Pt-alloy-dispersed carbon electrode by analysis of cathodic current transients. Journal of Solid State Electrochemistry, 2010, 14, 775-786.	1.2	4
64	Thermodynamic aspects of energy conversion systems with focus on osmotic membrane and selectively permeable membrane (Donnan) systems including two applications of the Donnan potential. ChemTexts, 2021, 7, 1.	1.0	4
65	Equilibrium Thermodynamics of Chemical Reaction Coupled with Other Interfacial Reactions Such as Charge Transfer by Electron, Colligative Dissolution and Fine Dispersion: A Focus on Distinction between Chemical and Electrochemical Equilibria. Journal of the Korean Electrochemical Society, 2008, 11, 227-241.	0.1	4
66	Effects of tribologically-penetrated hydrogen on the abrasive wear of mild steel in H_2SO_4 solution. Steel Research = Archiv für Das Eisenhüttenwesen, 1991, 62, 314-319.	0.2	3
67	Cation Mixing During Lithium Intercalation into and Deintercalation from $\text{LiAl}_y\text{Ni}_{1-y}\text{O}_2$ ($0 \leq y \leq 0.25$) Electrodes. Molecular Crystals and Liquid Crystals, 2000, 341, 163-170.	0.3	3
68	Current status and advances in corrosion researches. Journal of Solid State Electrochemistry, 2009, 13, 1637-1638.	1.2	3
69	Some future works of research in electrochemistry. Journal of Solid State Electrochemistry, 2020, 24, 2165-2170.	1.2	3
70	Morphological studies of the mechanism of pit growth of pure aluminum in sulfate ion- or nitrate ion-containing 0.1M NaCl solutions. Journal of Solid State Electrochemistry, 2001, 5, 473-478.	1.2	2
71	Analysis of electrochemical impedance spectra of anodised pure aluminium foil with various etch tunnel length distributions used for electrolytic capacitors. Journal of Solid State Electrochemistry, 2004, 8, 935-940.	1.2	2
72	A Study on the Electrodeposition Mechanism of Palladium from Ammoniacal Solution Using a Rotating Pt Ring-Cu Disk Electrode. Transactions of the Institute of Metal Finishing, 1993, 71, 156-160.	0.6	1

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73	Application of electrochemical quartz crystal microbalance technique to investigation of the interfacial reactions at metal electrode/electrolyte. <i>Metals and Materials International</i> , 2000, 6, 331-343.	0.2	1
74	A contribution to the kinetics of hydrogen transport through Pd foil electrode during hydrogen extraction under self-discharge and potentiostatic conditions. <i>Journal of Solid State Electrochemistry</i> , 2001, 5, 466-472.	1.2	1
75	Some remarks on the Peltier heat in the thermoelectric phenomena. <i>Journal of Solid State Electrochemistry</i> , 2021, 25, 2737-2746.	1.2	1
76	Effects of intergranular phosphorus segregation on the hydrogen-assisted crack propagation rate of 3.5Ni-Cr steels in 3.5 wt% NaCl solution. <i>Journal of Materials Science Letters</i> , 1990, 9, 273-276.	0.5	0
77	Effect of Cobalt Additive on the NiOOH/Ni(OH) ₂ Phase Boundary Movement. <i>Molecular Crystals and Liquid Crystals</i> , 1998, 311, 123-128.	0.3	0
78	Hydrogen Transport through Rf-magnetron Sputtered Amorphous and Crystalline WO ₃ Films with Hydrogen Trap Sites. <i>Molecular Crystals and Liquid Crystals</i> , 1998, 311, 443-448.	0.3	0
79	Topical issue on "hybrid materials and design in electrochemistry". <i>Journal of Solid State Electrochemistry</i> , 2010, 14, 167-167.	1.2	0
80	Hydrogen Absorption into and Subsequent Diffusion Through Hydride-Forming Metals. <i>Monographs in Electrochemistry</i> , 2012, , 33-82.	0.2	0
81	Topical issue on "Electrochemistry of cathodic and anodic control of corrosion". <i>Journal of Solid State Electrochemistry</i> , 2014, 18, 291-291.	1.2	0
82	Topical issue on "Corrosion of metals and physicochemical characterization of passive and corroding surfaces" devoted to celebrate the 72nd birthday of Dr. Masahiro Seo. <i>Journal of Solid State Electrochemistry</i> , 2015, 19, 3425-3426.	1.2	0