

James Metson

List of Publications by Year in descending order

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62
papers

4,328
citations

201674

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docs citations

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times ranked

7068
citing authors

#	ARTICLE	IF	CITATIONS
1	The effect of gold loading and particle size on photocatalytic hydrogen production from ethanol over Au/TiO ₂ nanoparticles. <i>Nature Chemistry</i> , 2011, 3, 489-492.	13.6	1,090
2	The Raman spectrum of brookite, TiO ₂ (Pbca, Z = 8). <i>Journal of Raman Spectroscopy</i> , 1995, 26, 57-62.	2.5	466
3	The thermal decomposition of silver (I, III) oxide: A combined XRD, FT-IR and Raman spectroscopic study. <i>Physical Chemistry Chemical Physics</i> , 2001, 3, 3838-3845.	2.8	392
4	Oxidation of a polycrystalline silver foil by reaction with ozone. <i>Applied Surface Science</i> , 2001, 183, 191-204.	6.1	238
5	Formation and Structural Properties of Layered LiMnO ₂ Cathode Materials. <i>Journal of the Electrochemical Society</i> , 2000, 147, 4078.	2.9	130
6	Properties of nano-ZnO/poly(vinyl alcohol)/poly(ethylene oxide) composite thin films. <i>Current Applied Physics</i> , 2008, 8, 42-47.	2.4	126
7	Nucleation and Growth of Fe Nanoparticles in SiO ₂ : A TEM, XPS, and Fe L-Edge XANES Investigation. <i>Journal of Physical Chemistry C</i> , 2011, 115, 20978-20985.	3.1	122
8	On the role of metal particle size and surface coverage for photo-catalytic hydrogen production: A case study of the Au/CdS system. <i>Applied Catalysis B: Environmental</i> , 2016, 182, 266-276.	20.2	115
9	Oxygen chemisorption on an electrolytic silver catalyst: a combined TPD and Raman spectroscopic study. <i>Applied Surface Science</i> , 2003, 214, 36-51.	6.1	105
10	The surface reactivity of a magnesium-aluminium alloy in acidic fluoride solutions studied by electrochemical techniques and XPS. <i>Applied Surface Science</i> , 2004, 235, 513-524.	6.1	97
11	Physical and Optical Properties of Inverse Opal CeO ₂ Photonic Crystals. <i>Chemistry of Materials</i> , 2008, 20, 1183-1190.	6.7	96
12	Photoreaction of ethanol on Au/TiO ₂ anatase: Comparing the micro to nanoparticle size activities of the support for hydrogen production. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2010, 216, 250-255.	3.9	87
13	An electrochemical and SEM study of the mechanism of formation, morphology, and composition of titanium or zirconium fluoride-based coatings. <i>Surface and Coatings Technology</i> , 2006, 200, 2955-2964.	4.8	77
14	Mechanism and active sites for the partial oxidation of methanol to formaldehyde over an electrolytic silver catalyst. <i>Applied Catalysis A: General</i> , 2004, 265, 85-101.	4.3	64
15	Polarity effects in the x-ray photoemission of ZnO and other wurtzite semiconductors. <i>Applied Physics Letters</i> , 2011, 98, .	3.3	64
16	Dental implant materials. II. Preparative procedures and surface spectroscopic studies. <i>Journal of Biomedical Materials Research Part B</i> , 1991, 25, 1069-1084.	3.1	60
17	Suppression of molecular ions in the secondary ion mass spectra of minerals. <i>Surface and Interface Analysis</i> , 1983, 5, 181-185.	1.8	57
18	In situ Raman studies of the selective oxidation of methanol to formaldehyde and ethene to ethylene oxide on a polycrystalline silver catalyst. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1995, 91, 4149.	1.7	56

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19	Direct monitoring of photo-induced reactions on well-defined metal oxide surfaces using vibrational spectroscopy. <i>Chemical Physics Letters</i> , 2008, 460, 10-12.	2.6	56
20	Synthesis, vibrational spectra and thermal stability of Ag ₃ O ₄ and related Ag ₇ O ₈ X salts. <i>Polyhedron</i> , 2007, 26, 3310-3322.	2.2	47
21	Influence of catalyst morphology on the performance of electrolytic silver catalysts for the partial oxidation of methanol to formaldehyde. <i>Applied Catalysis A: General</i> , 2004, 266, 257-273.	4.3	46
22	Sputtered deposited nanocrystalline ZnO films: A correlation between electrical, optical and microstructural properties. <i>Applied Physics A: Materials Science and Processing</i> , 2005, 80, 1641-1646.	2.3	45
23	Characterization of AZ91 magnesium alloy and organosilane adsorption on its surface. <i>Applied Surface Science</i> , 2007, 253, 4197-4207.	6.1	45
24	Radiation damage in natural titanites. <i>Physics and Chemistry of Minerals</i> , 1985, 12, 255-260.	0.8	39
25	Study of a nitrogen-doped ZnO film with synchrotron radiation. <i>Applied Physics Letters</i> , 2009, 94, .	3.3	38
26	Analysis for rare earth elements in accessory minerals by specimen isolated secondary ion mass spectrometry. <i>Nature</i> , 1984, 307, 347-349.	27.8	35
27	Direct observation of grafting interlayer phosphate in Mg/Al layered double hydroxides. <i>Journal of Solid State Chemistry</i> , 2012, 186, 116-123.	2.9	32
28	DFT study of carbon monoxide adsorption on $\hat{I}\pm$ -Al ₂ O ₃ (0001). <i>Surface Science</i> , 2011, 605, 1694-1703.	1.9	28
29	Surface studies on a leached sphene glass. <i>Nature</i> , 1982, 299, 708-710.	27.8	26
30	Sulfur Speciation in Aluminum Smelting Anodes. <i>Industrial & Engineering Chemistry Research</i> , 2004, 43, 1690-1700.	3.7	24
31	Performance evaluation of Pd/TiO ₂ and Pt/TiO ₂ photocatalysts for hydrogen production from ethanol-water mixtures. <i>International Journal of Nanotechnology</i> , 2014, 11, 695.	0.2	24
32	Structural, electrical and transparent properties of ZnO thin films prepared by magnetron sputtering. <i>Current Applied Physics</i> , 2004, 4, 398-401.	2.4	22
33	Platinum and palladium hydrosols: Characterisation by X-ray photoelectron spectroscopy and transmission electron microscopy. <i>Colloids and Surfaces</i> , 1991, 60, 175-197.	0.9	21
34	Adsorptive Capacity and Evolution of the Pore Structure of Alumina on Reaction with Gaseous Hydrogen Fluoride. <i>Langmuir</i> , 2015, 31, 5387-5397.	3.5	20
35	Quantitative major- and trace-element whole-rock analyses by secondary-ion mass spectrometry using the specimen isolation technique. <i>Chemical Geology</i> , 1986, 55, 139-160.	3.3	18
36	Leaching studies of natural and synthetic titanites using secondary ion mass spectrometry. <i>Geochimica Et Cosmochimica Acta</i> , 1987, 51, 911-918.	3.9	18

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37	Evidence for high oxidation state character in tungsten alkyne complexes. <i>Polyhedron</i> , 1992, 11, 1419-1421.	2.2	18
38	An in Situ Fourier Transform Infrared Study of Formic Acid Adsorption on a Polycrystalline Silver Catalyst. <i>Journal of Catalysis</i> , 1994, 147, 404-416.	6.2	18
39	Stabilization of charge on electrically insulating surfaces during SIMS experiments—experimental and theoretical studies of the specimen isolation method. <i>Surface and Interface Analysis</i> , 1985, 7, 275-281.	1.8	16
40	In situ rare-earth element analysis of coexisting pyroxene and plagioclase by secondary ion mass spectrometry. <i>Chemical Geology</i> , 1985, 53, 325-333.	3.3	16
41	Implanted ZnO thin films: Microstructure, electrical and electronic properties. <i>Applied Surface Science</i> , 2007, 253, 4317-4321.	6.1	16
42	The Influence of Surface Structure on H ₄ SiO ₄ Oligomerization on Rutile and Amorphous TiO ₂ Surfaces: An ATR-IR and Synchrotron XPS Study. <i>Langmuir</i> , 2012, 28, 16890-16899.	3.5	16
43	Secondary ion mass spectrometry (SIMS) and its application to chemical weathering. <i>Reviews of Geophysics</i> , 1994, 32, 197.	23.0	15
44	Characterization of metallurgical-grade aluminas and their precursors by ²⁷ Al NMR and XRD. <i>Canadian Journal of Chemistry</i> , 2007, 85, 889-897.	1.1	15
45	Adhesion enhancement of titanium nitride coating on aluminum casting alloy by intrinsic microstructures. <i>Applied Surface Science</i> , 2016, 377, 174-179.	6.1	15
46	The Deposition of Diamond Films by Combustion Assisted CVD on Ti and Ti-6Al-4V. <i>Chemical Vapor Deposition</i> , 2002, 8, 29.	1.3	13
47	A DFT study on carbon monoxide adsorption onto hydroxylated α -Al ₂ O ₃ (0001) surfaces. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 14287-14297.	2.8	13
48	Filled and empty states of disordered GaN studied by x-ray absorption and emission. <i>Journal of Applied Physics</i> , 2004, 96, 3571-3573.	2.5	12
49	Static SIMS studies of the oxides and hydroxides of aluminium. <i>Journal of Mass Spectrometry</i> , 2007, 42, 11-19.	1.6	12
50	Factors Affecting Corrosion Resistance of Silicon Nitride Bonded Silicon Carbide Refractory Blocks. <i>Journal of the American Ceramic Society</i> , 2012, 95, 410-415.	3.8	12
51	Facile synthesis of platinum nanoparticle-containing porous carbons, and their application to amperometric glucose biosensing. <i>Mikrochimica Acta</i> , 2014, 181, 1871-1878.	5.0	12
52	X-ray photoelectron spectroscopy applications to corrosion and adhesion at metal oxide surfaces. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 1994, 93, 173-180.	4.7	11
53	Anionic surfactant enhanced phosphate desorption from Mg/Al-layered double hydroxides by micelle formation. <i>Journal of Colloid and Interface Science</i> , 2013, 411, 1-7.	9.4	11
54	Quantitative analyses of rare-earth elements in minerals by secondary ion mass spectrometry. <i>Chemical Geology</i> , 1987, 64, 269-278.	3.3	10

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55	XPS Study on the Carbonation Process of Ca(OH) ₂ , Journal of the Ceramic Society of Japan, 1993, 101, 725-727.	1.3	10
56	Spectroscopic study on plate- and sponge-type Raney nickel electrodes for fuel cells. Journal of Materials Chemistry, 1995, 5, 737.	6.7	10
57	Nanostructured Aniline Oxidation Products: Self-Assembled Films at the Air/Liquid Interface. Langmuir, 2011, 27, 7776-7782.	3.5	8
58	Effects of introduction of argon on structural and transparent conducting properties of ZnO/In ₂ O ₃ thin films prepared by pulsed laser deposition. Thin Solid Films, 2005, 486, 53-57.	1.8	7
59	Influence of oxidation and reduction conditions upon the morphology of silica-supported polycrystalline silver catalysts. Journal of the Chemical Society, Faraday Transactions, 1995, 91, 133.	1.7	6
60	Relationships Between Smelter Grade Alumina Characteristics and Strength Determined by Nanoindentation and Ultrasound-Mediated Particle Breakage. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 3046-3059.	2.2	6
61	Balancing Sodium Impurities in Alumina for Improved Properties. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2018, 49, 2809-2820.	2.1	3
62	Adsorption of HF on gibbsite calcined at various temperatures: A solid-state NMR study of low-level fluorinated systems. Journal of Physics and Chemistry of Solids, 2022, 160, 110355.	4.0	1