

Brian E Hayden

List of Publications by Year in descending order

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135
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docs citations

135
times ranked

4345
citing authors

#	ARTICLE	IF	CITATIONS
1	Roadmap on inorganic perovskites for energy applications. JPhys Energy, 2021, 3, 031502.	2.3	40
2	Growth of amorphous, anatase and rutile phase TiO ₂ thin films on Pt/TiO ₂ /SiO ₂ /Si (SSTOP) substrate for resistive random access memory (ReRAM) device application. Ceramics International, 2020, 46, 16310-16320.	2.3	16
3	Origin of improved tunability and loss in N_2 annealed barium strontium titanate films. Physical Review Materials, 2020, 4, .	0.9	4
4	ABO ₃ and A _{1-x} C _x B _{1-y} D _y (O _{1-z} E _z) ₃ : review of experimental optimisation of thin film perovskites by high-throughput evaporative physical vapour deposition. Chemical Communications, 2019, 55, 10047-10055.	2.2	8
5	Electronically Beam-steerable Dual-band Reflectarray for Satellite Communications. , 2019, , .		2
6	Multibeam Dual-Circularly Polarized Reflectarray for Connected and Autonomous Vehicles. IEEE Transactions on Vehicular Technology, 2019, 68, 3574-3585.	3.9	25
7	Reversible perovskite electrocatalysts for oxygen reduction/oxygen evolution. Chemical Science, 2019, 10, 4609-4617.	3.7	41
8	Stoichiometric Engineering of Chalcogenide Semiconductor Alloys for Nanophotonic Applications. Advanced Materials, 2019, 31, e1807083.	11.1	32
9	The particle size dependence of CO oxidation on model planar titania supported gold catalysts measured by parallel thermographic imaging. Journal of Catalysis, 2019, 369, 175-180.	3.1	7
10	Oxygen reduction and oxygen evolution on SrTi _{1-x} FexO _{3-y} (STFO) perovskite electrocatalysts. Journal of Electroanalytical Chemistry, 2018, 819, 275-282.	1.9	21
11	Photonic Metamaterials: Optical Response of Nanohole Arrays Filled with Chalcogenide Low-Epsilon Media (Advanced Optical Materials 22/2018). Advanced Optical Materials, 2018, 6, 1870088.	3.6	0
12	Optical Response of Nanohole Arrays Filled with Chalcogenide Low-Epsilon Media. Advanced Optical Materials, 2018, 6, 1800395.	3.6	12
13	Combinatorial synthesis and screening of (Ba,Sr)(Ti,Mn)O ₃ thin films for optimization of tunable co-planar waveguides. Journal of Materials Chemistry C, 2018, 6, 6222-6228.	2.7	9
14	Compositionally controlled plasmonics in amorphous semiconductor metasurfaces. Optics Express, 2018, 26, 20861.	1.7	12
15	High-Throughput Synthesis and Characterization of Eu Doped Ba _x Sr _{2-x} SiO ₄ Thin Film Phosphors. ACS Combinatorial Science, 2018, 20, 451-460.	3.8	5
16	Synthesis and Screening of Phase Change Chalcogenide Thin Film Materials for Data Storage. ACS Combinatorial Science, 2017, 19, 478-491.	3.8	35
17	Structural, dielectric and ferroelectric properties of (Bi,Na)TiO ₃ -BaTiO ₃ system studied by high throughput screening. Thin Solid Films, 2016, 603, 108-114.	0.8	8
18	A High-Throughput Approach Developing Lithium-Niobium-Tantalum Oxides as Electrolyte/Cathode Interlayers for High-Voltage All-Solid-State Lithium Batteries. Journal of the Electrochemical Society, 2015, 162, A722-A726.	1.3	32

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19	High-Throughput Synthesis and Characterization of Thin Film High Entropy Alloys Based on the Fe-Ni-Co-Cu-Ga System. , 2015, , 1139-1146.		1
20	High-Throughput Synthesis and Characterization of (Ba _x Sr _{1-x}) _{1-y} Ti _{1-y} O _{3-δ} and (Ba _x Sr _{1-x}) _{1-y} Ti _{1-y} O _{3-δ} Perovskite Thin Films. Crystal Growth and Design, 2014, 14, 523-532.	1.4	19
21	The Particle Size Dependence of the Oxygen Reduction Reaction for Carbon-Supported Platinum and Palladium. ChemSusChem, 2013, 6, 1973-1982.	3.6	48
22	A simultaneous screening of the corrosion resistance of Ni-W thin film alloys. Electrochimica Acta, 2013, 111, 930-936.	2.6	22
23	Particle Size and Support Effects in Electrocatalysis. Accounts of Chemical Research, 2013, 46, 1858-1866.	7.6	142
24	High throughput optimisation of PdCu alloy electrocatalysts for the reduction of nitrate ions. Journal of Catalysis, 2013, 305, 27-35.	3.1	59
25	Innovative catalyst supports to address fuel cell stack durability. International Journal of Hydrogen Energy, 2013, 38, 640-645.	3.8	25
26	Novel metal gates for high $\hat{\rho}$ applications. Journal of Applied Physics, 2013, 113, .	1.1	3
27	High throughput physical vapour deposition and dielectric and ferroelectric screening of (Bi,Na)TiO ₃ thin-film libraries. Journal of Applied Physics, 2013, 113, .	1.1	12
28	The high throughput electrochemical screening of the corrosion resistance of Ni-Cr thin film alloys. Electrochimica Acta, 2012, 76, 389-393.	2.6	14
29	High Throughput Methodology for Synthesis, Screening, and Optimization of Solid State Lithium Ion Electrolytes. ACS Combinatorial Science, 2011, 13, 375-381.	3.8	38
30	Non-Noble Intertransition Binary Metal Alloy Electrocatalyst for Hydrogen Oxidation and Hydrogen Evolution. Journal of Physical Chemistry C, 2011, 115, 19226-19230.	1.5	15
31	Hydrogen Evolution and Hydrogen Oxidation on Palladium Bismuth Alloys. Topics in Catalysis, 2011, 54, 77-82.	1.3	35
32	High throughput synthesis and characterization of the PbnNb ₂ O _{5+n} (0.5<n<4.1) system on a single chip. Acta Materialia, 2011, 59, 2201-2209.	3.8	9
33	TiO ₂ (110)-(1Å-1) supported Cu particles: An FT-RAIRS investigation. Surface Science, 2011, 605, 174-178.	0.8	5
34	The hydrogen evolution reaction and hydrogen oxidation reaction on thin film PdAu alloy surfaces. Physical Chemistry Chemical Physics, 2010, 12, 11398.	1.3	48
35	The influence of Pt particle size on the surface oxidation of titania supported platinum. Physical Chemistry Chemical Physics, 2009, 11, 1564.	1.3	44
36	The influence of support and particle size on the platinum catalysed oxygen reduction reaction. Physical Chemistry Chemical Physics, 2009, 11, 9141.	1.3	64

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37	High-Throughput Synthesis and Screening of Hydrogen-Storage Alloys. ACS Combinatorial Science, 2008, 10, 37-43.	3.3	22
38	High-Throughput Structure/Function Screening of Materials and Catalysts with Multiple Spectroscopic Techniques. AIP Conference Proceedings, 2007, , .	0.3	3
39	Synthesis of the Ferroelectric Solid Solution, Pb(Zr $_{1-x}$ Ti $_x$)O $_3$ on a Single Substrate Using a Modified Molecular Beam Epitaxy Technique. Materials Research Society Symposia Proceedings, 2007, 1034, 134.	0.1	0
40	CO Oxidation on Gold in Acidic Environments: Particle Size and Substrate Effects. Journal of Physical Chemistry C, 2007, 111, 17044-17051.	1.5	59
41	Enhanced Activity for Electrocatalytic Oxidation of Carbon Monoxide on Titania-Supported Gold Nanoparticles. Angewandte Chemie - International Edition, 2007, 46, 3530-3532.	7.2	66
42	A Combinatorial Approach to the Study of Particle Size Effects on Supported Electrocatalysts: Oxygen Reduction on Gold. ACS Combinatorial Science, 2006, 8, 679-686.	3.3	81
43	High-Throughput Synthesis and Screening of Ternary Metal Alloys for Electrocatalysis. Journal of Physical Chemistry B, 2006, 110, 14355-14362.	1.2	71
44	Physical Vapor Deposition Method for the High-Throughput Synthesis of Solid-State Material Libraries. ACS Combinatorial Science, 2006, 8, 66-73.	3.3	94
45	Combinatorial Approach to the Study of Particle Size Effects in Electrocatalysis: Synthesis of Supported Gold Nanoparticles. ACS Combinatorial Science, 2006, 8, 791-798.	3.3	38
46	The stability and electro-oxidation of carbon monoxide on model electrocatalysts: Pt(111)Sn(2Å-2) and Pt(111)Sn(3Å-3)R30Å°. Journal of Molecular Catalysis A, 2005, 228, 55-65.	4.8	10
47	Material Optimisation for Optical Data Storage. , 2005, , .		0
48	Electrocatalytic Reduction of Nitrate on Activated Rhodium Electrode Surfaces. Journal of Applied Electrochemistry, 2004, 34, 781-796.	1.5	73
49	Combinatorial Electrochemical Screening of Fuel Cell Electrocatalysts.. ChemInform, 2004, 35, no.	0.1	1
50	Combinatorial Electrochemical Screening of Fuel Cell Electrocatalysts. ACS Combinatorial Science, 2004, 6, 149-158.	3.3	164
51	Electro-oxidation of Carbon Monoxide on Well-Ordered Pt(111)/Sn Surface Alloys. Journal of the American Chemical Society, 2003, 125, 7738-7742.	6.6	100
52	The dynamics of the dissociative adsorption of methane on Pt(533). Journal of Chemical Physics, 2003, 118, 3334-3341.	1.2	48
53	Direct and indirect channels to molecular dissociation at metal and metal alloy surfaces. Chemical Physics of Solid Surfaces, 2003, 11, 177-221.	0.3	2
54	Single-Crystal Surfaces as Model Platinum-Based Hydrogen Fuel Cell Electrocatalysts. , 2003, , .		0

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55	The electro-oxidation of carbon monoxide on ruthenium modified Pt(). Surface Science, 2002, 496, 110-120.	0.8	112
56	The blocking of the step-mediated indirect channel to hydrogen dissociation by oxygen on Pt(533). Surface Science, 2002, 512, 165-172.	0.8	26
57	Vibrational Spectroscopy at Oxide Surfaces. Chemical Physics of Solid Surfaces, 2001, , 514-549.	0.3	6
58	Single crystal and high area titania supported rhodium: the interaction of supported Rh(CO) ₂ with NO. Journal of Molecular Catalysis A, 2001, 167, 33-46.	4.8	22
59	Electrode coatings from sprayed titanium dioxide nanoparticles " behaviour in NaOH solutions. Electrochemistry Communications, 2001, 3, 390-394.	2.3	35
60	Platinum catalysed nanoporous titanium dioxide electrodes in H ₂ SO ₄ solutions. Electrochemistry Communications, 2001, 3, 395-399.	2.3	59
61	The dynamics of O ₂ adsorption on Pt(533): Step mediated molecular chemisorption and dissociation. Journal of Chemical Physics, 2000, 113, 10333-10343.	1.2	61
62	The role of steps in the dynamics of hydrogen dissociation on Pt(533). Journal of Chemical Physics, 2000, 112, 7660-7668.	1.2	101
63	A comparison of the chemistry of RhI(acac)(CO) ₂ and RhI(CO) ₂ Cl adsorbed on TiO ₂ [110]: development of particulate Rh and oxidative disruption by CO. Surface Science, 2000, 462, 169-180.	0.8	31
64	The modification of Pt(110) by ruthenium: CO adsorption and electro-oxidation. Surface Science, 2000, 467, 118-130.	0.8	87
65	Substrate-Mediated Oxidation of Carbon Residues by TiO ₂ {110}-Supported Model Catalysts: Metal-, Precursor-, and Treatment-Dependent Labilization of Framework Oxygen. Journal of Physical Chemistry B, 2000, 104, 8548-8553.	1.2	7
66	Fourier Transform Reflection~Absorption IR Spectroscopy Study of Formate Adsorption on TiO ₂ (110). Journal of Physical Chemistry B, 1999, 103, 203-208.	1.2	147
67	Dissociation dynamics on ordered surface alloys. Journal of Physics Condensed Matter, 1999, 11, 8397-8415.	0.7	12
68	The electrooxidation of carbon monoxide on ruthenium modified Pt(110). Electrochimica Acta, 1998, 44, 1181-1190.	2.6	86
69	The reaction of hydrogen with TiO ₂ (110) supported rhodium gem-dicarbonyl. Surface Science, 1998, 397, 306-313.	0.8	31
70	In Situ STM Study of CdTe ECALE Bilayers on Gold. Journal of Physical Chemistry B, 1998, 102, 4897-4905.	1.2	37
71	In-Situ STM Study of Te UPD Layers on Low Index Planes of Gold. Journal of Physical Chemistry B, 1997, 101, 7751-7757.	1.2	31
72	The promotion of CO electro-oxidation on platinum-bismuth as a model for surface mediated oxygen transfer. Catalysis Today, 1997, 38, 473-481.	2.2	19

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73	The alignment of a surface species determined by FT-RAIRS: rhodium gem-dicarbonyl on TiO ₂ (110). Chemical Physics Letters, 1997, 269, 485-488.	1.2	27
74	The Structure and Reactivity of TiO ₂ (110) Supported Palladium and Rhodium. , 1997, , 215-235.		3
75	The adsorption of carbon monoxide on TiO ₂ (110) supported palladium. Surface Science, 1996, 360, 61-73.	0.8	66
76	Adsorption and thermal decomposition of Mo(CO) ₆ on TiO ₂ (110). Journal of the Chemical Society, Faraday Transactions, 1996, 92, 4733.	1.7	20
77	UHV and electrochemical transfer studies on Pt(110)-(1 Å ⁻²) : the influence of bismuth on hydrogen and oxygen adsorption, and the electro-oxidation of carbon monoxide. Journal of Electroanalytical Chemistry, 1996, 409, 51-63.	1.9	57
78	The indirect channel to hydrogen dissociation on W(100)-c(2 Å ⁻²)Cu. Evidence for a dynamical precursor. Chemical Physics Letters, 1995, 232, 542-546.	1.2	22
79	The dynamics of hydrogen dissociation on W(100)-c(2 Å ⁻²)Cu. Surface Science, 1995, 337, 67-78.	0.8	18
80	The dynamics of nitrogen dissociation on W(100)-c(2 Å ⁻²)Cu. Surface Science, 1995, 342, 21-28.	0.8	4
81	Rotational excitation in scattering of hyperthermal NO from Pt(111). Journal of Chemical Physics, 1995, 102, 3835-3847.	1.2	26
82	Precursor dynamics in dissociative hydrogen adsorption on W (100). Chemical Physics Letters, 1994, 217, 423-429.	1.2	44
83	The mechanism of the poisoning of ammonia synthesis catalysts by oxygenates O ₂ , CO and H ₂ O: an in situ method for active surface determination. Catalysis Letters, 1994, 24, 197-210.	1.4	30
84	Promotion in ammonia synthesis: A pressure dependent phenomenon. Topics in Catalysis, 1994, 1, 43-61.	1.3	5
85	On the mechanism of poisoning and promotion of ammonia synthesis. Topics in Catalysis, 1994, 1, 295-301.	1.3	14
86	Dynamics of direct and indirect channels to dissociative adsorption. Topics in Catalysis, 1994, 1, 343-351.	1.3	9
87	The chemistry of rhodium on TiO ₂ (110) deposited by MOCVD of [Rh(CO)2Cl] ₂ and MVD. Surface Science, 1994, 301, 61-82.	0.8	56
88	Survival mechanism for rotational rainbows in highly attractive molecule-surface systems: NO scattering from Pt(111). Chemical Physics Letters, 1993, 216, 93-99.	1.2	15
89	Bismuth adsorption on Pt(110) and the coadsorption of carbon monoxide. Surface Science, 1993, 294, 33-42.	0.8	24
90	Rotational rainbows in NO scattering from Pt(111). Faraday Discussions, 1993, 96, 297.	1.6	19

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91	Scattering and dissociation of H ₂ /D ₂ at Fe(110). Faraday Discussions, 1993, 96, 161.	1.6	20
92	An ellipsometric study of potassium adsorption on TiO ₂ (110). Surface Science, 1992, 274, 277-286.	0.8	23
93	Adsorbate induced phase changes of rhodium on TiO ₂ (110). Surface Science, 1992, 279, L159-L164.	0.8	40
94	A molecular beam study of the O ₂ Pt(111) interaction. Surface Science, 1992, 272, 256-263.	0.8	34
95	Rhodium geminal dicarbonyl on TiO ₂ (110). Journal of the American Chemical Society, 1992, 114, 6912-6913.	6.6	33
96	Adsorbate induced phase changes of rhodium on TiO ₂ (110). Surface Science Letters, 1992, 279, L159-L164.	0.1	1
97	Vibrational and translational energy partition and the barrier to dissociative H ₂ and D ₂ adsorption on Cu(110). Surface Science, 1991, 243, 31-42.	0.8	95
98	Dynamics of hydrogen adsorption on clean and alkali-metal covered Cu(110). Faraday Discussions of the Chemical Society, 1991, 91, 415.	2.2	10
99	Hayden and Lamont reply. Physical Review Letters, 1990, 65, 2834-2834.	2.9	3
100	The mechanism of sticking trapping and direct dissociation of carbon monoxide on Cu(110). Surface Science, 1990, 232, 24-34.	0.8	26
101	A vibrational study of the hydrogen induced reconstructions on Cu(110). Surface Science, 1990, 239, 119-126.	0.8	52
102	Coupled translational-vibrational activation in dissociative hydrogen adsorption on Cu(110). Physical Review Letters, 1989, 63, 1823-1825.	2.9	239
103	Dissociative hydrogen adsorption and its reaction with oxygen on Cu(110). Journal of Physics Condensed Matter, 1989, 1, SB33-SB37.	0.7	9
104	Adsorbate-mediated resonant energy transfer during inelastic scattering from Cu(110). Chemical Physics Letters, 1989, 158, 18-23.	1.2	2
105	The energy and angular dependence of dissociative hydrogen adsorption on Cu(110). Chemical Physics Letters, 1989, 160, 331-334.	1.2	61
106	Evidence for molecular reorientation of CO from RAIRS intensity measurements. Vacuum, 1988, 38, 357-359.	1.6	3
107	An IR study of the $\hat{\nu}$ -CO CO-adsorption state in the system CO/H/Ni(100). Surface Science Letters, 1987, 183, L279-L284.	0.1	0
108	Molecular beam scattering of CO from Cu(110): the effect of incident translational energy. Journal of Electron Spectroscopy and Related Phenomena, 1987, 45, 351-359.	0.8	14

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109	An infra-red study of CO adsorption on potassium-doped pt(110)-(1 Å ⁻²); the long range potassium-CO interaction. Journal of Electron Spectroscopy and Related Phenomena, 1987, 44, 297-304.	0.8	7
110	An IR reflection-absorption study of the CO/Ni(100) adsorption system. Journal of Electron Spectroscopy and Related Phenomena, 1986, 38, 187-195.	0.8	33
111	An infrared spectroscopic study of CO on Cu(111): The linear, bridging and physisorbed species. Surface Science, 1985, 155, 553-566.	0.8	127
112	An infrared study of the adsorption of CO on a stepped platinum surface. Surface Science, 1985, 149, 394-406.	0.8	274
113	Stepped single-crystal surfaces as models for small catalyst particles. Surface Science, 1985, 152-153, 338-345.	0.8	117
114	Photoemission band mapping via surface umklapp. Solid State Communications, 1984, 52, 937-940.	0.9	19
115	The adsorption of NO on Ru(001) and its co-adsorption with oxygen studied by vibrational spectroscopy. Journal of Electron Spectroscopy and Related Phenomena, 1983, 29, 261.	0.8	6
116	The adsorption of CO on Pt(111) studied by infrared-reflection-adsorption spectroscopy. Journal of Electron Spectroscopy and Related Phenomena, 1983, 30, 51.	0.8	14
117	A high resolution vibrational spectroscopic study of the formate intermediate on Cu(110). Vacuum, 1983, 33, 876-877.	1.6	6
118	Alkali metal-induced reconstruction of Ag(110). Solid State Communications, 1983, 48, 325-328.	0.9	203
119	An iras study of formic acid and surface formate adsorbed on Cu(110). Surface Science, 1983, 133, 589-604.	0.8	204
120	Ellipsometric evidence for optical anisotropy of oxygen covered silver (110) surfaces. Surface Science, 1983, 135, 374-382.	0.8	9
121	An infra-red reflection absorption study of the adsorption of NO on Pt(111). Surface Science, 1983, 131, 419-432.	0.8	190
122	A TPD and IR study of co-adsorption of NO and oxygen on Ru(001). Surface Science, 1983, 125, 366-376.	0.8	58
123	Infrared-Active Combination Band in a Surface Formate Species. Physical Review Letters, 1983, 51, 475-478.	2.9	52
124	ELLIPSO-METRIC STUDY OF OXYGEN ON A Ag(110) SURFACE AROUND THE PLASMA FREQUENCY OF SILVER. Journal De Physique Colloque, 1983, 44, C10-393-C10-393.	0.2	0
125	Ellipsometric study of oxygen on a Ag(110) surface around the plasma frequency of silver. Surface Science, 1982, 118, 649-658.	0.8	12
126	Dipole coupling and chemical shifts in IRAS of CO adsorbed on Cu(110). Surface Science, 1982, 123, 397-412.	0.8	209

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127	Application of spectroscopic ellipsometry to the adsorption of oxygen on silver (110). Surface Science, 1982, 117, 331-341.	0.8	8
128	Early stages in the oxidation of magnesium, aluminium and magnesium/aluminium alloys. Surface Science, 1981, 102, 207-226.	0.8	53
129	The early stages of oxidation of magnesium single crystal surfaces. Surface Science, 1981, 111, 26-38.	0.8	98
130	The interaction of oxygen with aluminium: Mainly ellipsometric aspects. Surface Science, 1981, 109, 207-220.	0.8	56
131	A Monte Carlo simulation of two-point adsorption on binary metal alloy surfaces. Surface Science, 1979, 80, 401-411.	0.8	11
132	Support and Particle Size Effects in Electrocatalysis. , 0, , 567-592.		7