

David F Cox

List of Publications by Year in descending order

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87
papers

3,040
citations

117625

34
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175258

52
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88
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88
docs citations

88
times ranked

3063
citing authors

#	ARTICLE	IF	CITATIONS
1	Oxygen vacancies and defect electronic states on the SnO ₂ (110)-1Å ⁻¹ surface. <i>Physical Review B</i> , 1988, 38, 2072-2083.	3.2	376
2	Studies of silicoaluminophosphates with the sodalite structure. <i>Journal of the American Chemical Society</i> , 1988, 110, 2127-2135.	13.7	147
3	Photoemission and low-energy-electron-diffraction study of clean and oxygen-dosed Cu ₂ O (111) and (100) surfaces. <i>Physical Review B</i> , 1991, 43, 1610-1621.	3.2	115
4	Surface characterization of 1±-Mo ₂ C (0001). <i>Surface Science</i> , 1999, 426, 187-198.	1.9	103
5	Effect of Symmetry and Hâ€bond Strength of Hard Segments on the Structureâ€Property Relationships of Segmented, Nonchain Extended Polyurethanes and Polyureas. <i>Journal of Macromolecular Science - Physics</i> , 2007, 46, 853-875.	1.0	94
6	Surface reconstructions of oxygen deficient SnO ₂ (110). <i>Surface Science</i> , 1989, 224, 121-142.	1.9	93
7	Water adsorption on stoichiometric and defective SnO ₂ (110) surfaces. <i>Surface Science</i> , 1995, 322, 177-184.	1.9	93
8	Oxygen-vacancy-controlled chemistry on a metal oxide surface: methanol dissociation and oxidation on SnO ₂ (110). <i>Surface Science</i> , 1994, 306, 279-293.	1.9	74
9	Interaction of CO with Cu ⁺ cations: CO adsorption on Cu ₂ O(100). <i>Surface Science</i> , 1991, 249, 138-148.	1.9	71
10	Photoemission and LEED characterization of Ni ₂ P(). <i>Surface Science</i> , 2004, 552, 8-16.	1.9	64
11	Electron density distribution and bond critical point properties for forsterite, Mg ₂ SiO ₄ , determined with synchrotron single crystal X-ray diffraction data. <i>Physics and Chemistry of Minerals</i> , 2005, 32, 301-313.	0.8	64
12	NH ₃ chemisorption on stoichiometric and oxygen-deficient SnO ₂ (110) surfaces. <i>Surface Science</i> , 2002, 520, 65-77.	1.9	63
13	Computerâ€interfaced digital pulse counting circuit. <i>Review of Scientific Instruments</i> , 1982, 53, 1281-1284.	1.3	53
14	H ₂ O adsorption on Cu ₂ O(100). <i>Surface Science</i> , 1991, 256, 67-76.	1.9	51
15	Formic acid decomposition on SnO ₂ (110). <i>Surface Science</i> , 1994, 312, 106-114.	1.9	51
16	Fundamental characterization of clean and gas-dosed tin oxide. <i>Sensors and Actuators</i> , 1987, 12, 101-106.	1.7	50
17	A tool for the interactive 3D visualization of electronic structure in molecules and solids. <i>Computers & Chemistry</i> , 2002, 26, 313-319.	1.2	47
18	Adsorption and reaction of thiophene on 1±-Mo ₂ C (0001). <i>Surface Science</i> , 2002, 511, 294-302.	1.9	46

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19	An electronic and structural interpretation of tin oxide ELS spectra. <i>Surface Science</i> , 1985, 151, 202-220.	1.9	43
20	Bonded interactions and the crystal chemistry of minerals: a review. <i>Zeitschrift Fur Kristallographie - Crystalline Materials</i> , 2008, 223, 01-40.	0.8	43
21	Shared and Closed-Shell O ²⁺ O Interactions in Silicates. <i>Journal of Physical Chemistry A</i> , 2008, 112, 3693-3699.	2.5	43
22	Surface hydride formation on a metal oxide surface: the interaction of atomic hydrogen with Cu ₂ O(100). <i>Surface Science</i> , 1992, 278, 9-18.	1.9	41
23	CO and O ₂ adsorption on $\sqrt{3}\times\sqrt{3}$ -Mo ₂ C (0001). <i>Surface Science</i> , 2000, 468, 62-76.	1.9	41
24	Electron Density Distributions Calculated for the Nickel Sulfides Millerite, Vaesite, and Heazlewoodite and Nickel Metal: A Case for the Importance of Ni ²⁺ Ni Bond Paths for Electron Transport. <i>Journal of Physical Chemistry B</i> , 2005, 109, 21788-21795.	2.6	41
25	Preferential isotopic labeling of lattice oxygen positions on the SnO ₂ (110) surface. <i>Surface Science</i> , 1990, 227, L105-L108.	1.9	38
26	Propene adsorption on Cu ₂ O single-crystal surfaces. <i>Surface Science</i> , 1992, 262, 318-334.	1.9	38
27	Oxidation, reduction, and isomerization of allyl alcohol and 1-propanol over cuprous oxide(100). <i>The Journal of Physical Chemistry</i> , 1993, 97, 647-655.	2.9	37
28	$\sqrt{3}\times\sqrt{3}$ -Cr ₂ O ₃ (10 $\bar{1}$,2): surface characterization and oxygen adsorption. <i>Surface Science</i> , 1999, 437, 386-396.	1.9	37
29	CO ₂ Adsorption on $\sqrt{3}\times\sqrt{3}$ -Cr ₂ O ₃ (10 $\bar{1}$,2) Surfaces. <i>Journal of Physical Chemistry B</i> , 2001, 105, 7755-7761.	2.6	37
30	Bonded interactions in silica polymorphs, silicates, and siloxane molecules. <i>American Mineralogist</i> , 2009, 94, 1085-1102.	1.9	37
31	Propene Oxidation over Cu ₂ O Single-Crystal Surfaces: A Surface Science Study of Propene Activation at 1 atm and 300 K. <i>Journal of Catalysis</i> , 1993, 143, 464-480.	6.2	35
32	A Connection between Empirical Bond Strength and the Localization of the Electron Density at the Bond Critical Points of the SiO Bonds in Silicates. <i>Journal of Physical Chemistry A</i> , 2004, 108, 7643-7645.	2.5	35
33	Experimental Bond Critical Point and Local Energy Density Properties Determined for Mn ²⁺ O, Fe ²⁺ O, and Co ²⁺ O Bonded Interactions for Tephroite, Mn ₂ SiO ₄ , Fayalite, Fe ₂ SiO ₄ , and Co ₂ SiO ₄ Olivine and Selected Organic Metal Complexes: Comparison with Properties Calculated for Non-Transition and Transition Metal M ²⁺ O Bonded Interactions for Silicates and Oxides. <i>Journal of Physical Chemistry A</i> , 2008, 112, 8811-8823.	2.5	35
34	Bonded Radii and the Contraction of the Electron Density of the Oxygen Atom by Bonded Interactions. <i>Journal of Physical Chemistry A</i> , 2013, 117, 1632-1640.	2.5	35
35	Bond Length and Local Energy Density Property Connections for Non-Transition-Metal Oxide-Bonded Interactions. <i>Journal of Physical Chemistry A</i> , 2006, 110, 12259-12266.	2.5	33
36	XPS investigation of tin oxide supported platinum. <i>Langmuir</i> , 1985, 1, 269-273.	3.5	32

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37	An investigation of the interaction of polycrystalline zirconium with O ₂ , N ₂ , CO, and N ₂ O. Part I. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1983, 1, 1837-1842.	2.1	31
38	Metalorganic chemical vapor deposition of copper from copper(II) dimethylaminoethoxide. Chemistry of Materials, 1993, 5, 1701-1709.	6.7	30
39	Role of Directed van der Waals Bonded Interactions in the Determination of the Structures of Molecular Arsenate Solids. Journal of Physical Chemistry A, 2009, 113, 736-749.	2.5	30
40	Surface characteristics of antimony-doped tin oxide films. Thin Solid Films, 1981, 78, 357-363.	1.8	29
41	Bond Paths and van der Waals Interactions in Orpiment, As ₂ S ₃ . Journal of Physical Chemistry A, 2010, 114, 6550-6557.	2.5	29
42	Theoretical Electron Density Distributions for Fe- and Cu-Sulfide Earth Materials: A Connection between Bond Length, Bond Critical Point Properties, Local Energy Densities, and Bonded Interactions. Journal of Physical Chemistry B, 2007, 111, 1923-1931.	2.6	28
43	Methanol decomposition on single crystal Cu ₂ O. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1990, 8, 2599-2604.	2.1	26
44	Insights into the crystal chemistry of Earth materials rendered by electron density distributions: Pauling's rules revisited. American Mineralogist, 2014, 99, 1071-1084.	1.9	25
45	Ni ₂ P (0001) by XPS. Surface Science Spectra, 2001, 8, 220-224.	1.3	24
46	Reaction pathways of C ₃ carboxylates on copper(1+) oxide(100): acrylic and propionic acid decomposition. The Journal of Physical Chemistry, 1992, 96, 7394-7398.	2.9	23
47	A modeling of the structure and favorable H-docking sites and defects for the high-pressure silica polymorph stishovite. Physics and Chemistry of Minerals, 2004, 31, 232-239.	0.8	22
48	BF ₃ Adsorption on α -Cr ₂ O ₃ (101 $\bar{1}$,2): Probing the Lewis Basicity of Surface Oxygen Anions. Journal of Physical Chemistry B, 2001, 105, 8375-8380.	2.6	20
49	Reaction of methanol on stoichiometric and O-terminated α -Cr ₂ O ₃ (100): interconversion of oxygenated C ₁ surface intermediates. Catalysis Today, 2003, 85, 279-289.	4.4	20
50	Comparison of the Electron Localization Function and Deformation Electron Density Maps for Selected Earth Materials. Journal of Physical Chemistry A, 2005, 109, 10022-10027.	2.5	20
51	Role of Long-Range Intermolecular Forces in the Formation of Inorganic Nanoparticle Clusters. Journal of Physical Chemistry A, 2011, 115, 12933-12940.	2.5	20
52	Oxidation of MnO(100) and NaMnO ₂ formation: Characterization of Mn ²⁺ and Mn ³⁺ surfaces via XPS and water TPD. Surface Science, 2018, 675, 47-53.	1.9	20
53	Surface reactions of acrolein and propionaldehyde on cuprous oxide(100): nonselective oxidation and enolate-mediated side reactions to C ₃ products. The Journal of Physical Chemistry, 1993, 97, 3555-3564.	2.9	19
54	A mapping of the electron localization function for the silica polymorphs: evidence for domains of electron pairs and sites of potential electrophilic attack. Physics and Chemistry of Minerals, 2002, 29, 307-318.	0.8	19

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55	A mapping of the electron localization function for earth materials. <i>Physics and Chemistry of Minerals</i> , 2005, 32, 208-221.	0.8	19
56	Summary Abstract: Surface properties of clean and gas- ϵ -dosed SnO ₂ (110). <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1987, 5, 1170-1171.	2.1	18
57	Pauling bond strength, bond length and electron density distribution. <i>Physics and Chemistry of Minerals</i> , 2014, 41, 17-25.	0.8	15
58	Preparation and surface characteristics of platinized antimony-doped tin oxide films. <i>Thin Solid Films</i> , 1981, 83, 261-265.	1.8	14
59	An ESD and SIMS study of the composition of platinized, antimony-doped tin oxide films. I. Applications of <i>Surface Science</i> , 1983, 14, 281-296.	1.0	14
60	A SIMS depth profiling study of the hydration layer formed at polycrystalline tin oxide surfaces by atmospheric exposure. <i>Applied Surface Science</i> , 1986, 26, 239-245.	6.1	14
61	Experimental and theoretical bond critical point properties for model electron density distributions for earth materials. <i>Physics and Chemistry of Minerals</i> , 2005, 32, 114-125.	0.8	14
62	Si δ -O Bonded Interactions in Silicate Crystals and Molecules: A Comparison. <i>Journal of Physical Chemistry A</i> , 2006, 110, 12678-12683.	2.5	14
63	Summary Abstract: Structural and electronic properties of clean and water- ϵ -dosed SnO ₂ (110). <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1986, 4, 627-628.	2.1	13
64	Dehalogenation of 1,1,2-Trichloro-1-fluoroethane over γ -Cr ₂ O ₃ (101 $\bar{1}$,2). <i>Journal of Physical Chemistry B</i> , 2003, 107, 5182-5189.	2.6	12
65	Thioarsenides: a case for long-range Lewis acid-base-directed van der Waals interactions. <i>Physics and Chemistry of Minerals</i> , 2011, 38, 267-291.	0.8	12
66	Properties of atoms under pressure: Bonded interactions of the atoms in three perovskites. <i>Journal of Chemical Physics</i> , 2012, 137, 164313.	3.0	12
67	Na Deposition on MnO(100). <i>Surface Science</i> , 2016, 645, 23-29.	1.9	11
68	BF ₃ Adsorption on Stoichiometric and Oxygen-Deficient SnO ₂ (110) Surfaces. <i>Journal of Physical Chemistry B</i> , 2003, 107, 1814-1820.	2.6	10
69	A simple chemical view of relaxations at stoichiometric (110) surfaces of rutile-structure type oxides: A first-principles study of stishovite, SiO ₂ . <i>Surface Science</i> , 2005, 594, 70-82.	1.9	10
70	CO adsorption on MnO(100): Experimental benchmarks compared to DFT. <i>Surface Science</i> , 2021, 707, 121808.	1.9	8
71	Bond length estimates for oxide crystals with a molecular power law expression. <i>Physics and Chemistry of Minerals</i> , 2015, 42, 587-593.	0.8	7
72	Summary Abstract: Oxygen-vacancy-derived defect electronic states on the SnO ₂ (110) surface. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1988, 6, 828-829.	2.1	6

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73	ELF isosurface maps for the Al ₂ SiO ₅ polymorphs. <i>Physics and Chemistry of Minerals</i> , 2006, 33, 138-144.	0.8	6
74	Silicoaluminophosphate Molecular Sieves. <i>ACS Symposium Series</i> , 1990, , 38-47.	0.5	5
75	Dehalogenation of 1-chloro-1-fluoroethene to acetylene on $\hat{1}\pm$ -Cr ₂ O ₃ ?. <i>Journal of Catalysis</i> , 2003, 214, 273-283.	6.2	4
76	Reactions of ethyl groups on a model chromia surface: Ethyl chloride on stoichiometric $\hat{1}\pm$ -Cr ₂ O ₃ (102). <i>Surface Science</i> , 2009, 603, 523-528.	1.9	4
77	Methylene migration and coupling on a non-reducible metal oxide: The reaction of dichloromethane on stoichiometric $\hat{1}\pm$ -Cr ₂ O ₃ (0001). <i>Surface Science</i> , 2015, 632, 28-38.	1.9	4
78	Synthesis of a planar, multicomponent catalytic surface of Na ₂ CO ₃ /MnO. <i>Surface Science</i> , 2021, 707, 121807.	1.9	4
79	Stoichiometric and Non-Stoichiometric SnO ₂ (110) Surfaces. <i>Surface Science Spectra</i> , 1996, 4, 220-226.	1.3	3
80	Reactions of vinyl groups on a model chromia surface: Vinyl chloride on stoichiometric $\hat{1}\pm$ -Cr ₂ O ₃ . <i>Surface Science</i> , 2009, 603, 265-272.	1.9	3
81	Reactions of methyl groups on a non-reducible metal oxide: The reaction of iodomethane on stoichiometric $\hat{1}\pm$ -Cr ₂ O ₃ (0001). <i>Surface Science</i> , 2015, 641, 148-153.	1.9	3
82	Sulfide bonded atomic radii. <i>Physics and Chemistry of Minerals</i> , 2017, 44, 561-566.	0.8	3
83	Stoichiometric and Non-Stoichiometric Cu ₂ O(111) Single Crystal Surfaces. <i>Surface Science Spectra</i> , 1996, 4, 279-287.	1.3	2
84	The incompressibility of atoms at high pressures. <i>American Mineralogist</i> , 2020, 105, 1761-1768.	1.9	2
85	An investigation of the interaction of polycrystalline zirconium with O ₂ , N ₂ , CO and N ₂ O. <i>Applications of Surface Science</i> , 1985, 22-23, 252-258.	1.0	1
86	Stoichiometric and Oxygen-Terminated $\hat{1}\pm$ -Cr ₂ O ₃ (101̄,2) Surfaces. <i>Surface Science Spectra</i> , 2000, 7, 134-142. Reactions of ethylidene on a model chromia surface: 1,1-dichloroethane on stoichiometric $\hat{1}\pm$-Cr₂O₃	1.3	1
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