David F Cox

List of Publications by Year
in descending order

87 papers	3,040 citations	117625 34 h-index	175258 52 g-index
88 all docs	88 docs citations	88 times ranked	3063 citing authors

#	Article	IF	Citations
1	CO adsorption on MnO(100): Experimental benchmarks compared to DFT. Surface Science, 2021, 707, 121808.	1.9	8
2	Synthesis of a planar, multicomponent catalytic surface of Na2CO3/MnO. Surface Science, 2021, 707, 121807.	1.9	4
3	The incompressibility of atoms at high pressures. American Mineralogist, 2020, 105, 1761-1768.	1.9	2
4	Oxidation of MnO(100) and NaMnO2 formation: Characterization of Mn2+ and Mn3+ surfaces via XPS and water TPD. Surface Science, 2018, 675, 47-53.	1.9	20
5	Sulfide bonded atomic radii. Physics and Chemistry of Minerals, 2017, 44, 561-566.	0.8	3
6	Na Deposition on MnO(100). Surface Science, 2016, 645, 23-29.	1.9	11
7	Bond length estimates for oxide crystals with a molecular power law expression. Physics and Chemistry of Minerals, 2015, 42, 587-593.	0.8	7
8	Reactions of methyl groups on a non-reducible metal oxide: The reaction of iodomethane on stoichiometric Î±-Cr2O3(0001). Surface Science, 2015, 641, 148-153.	1.9	3
9	Methylene migration and coupling on a non-reducible metal oxide: The reaction of dichloromethane on stoichiometric Î±-Cr2O3(0001). Surface Science, 2015, 632, 28-38.	1.9	4
10	Pauling bond strength, bond length and electron density distribution. Physics and Chemistry of Minerals, 2014, 41, 17-25.	0.8	15
11	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
12	Bonded Radii and the Contraction of the Electron Density of the Oxygen Atom by Bonded Interactions. Journal of Physical Chemistry A, 2013, 117, 1632-1640.	2.5	35
13	Properties of atoms under pressure: Bonded interactions of the atoms in three perovskites. Journal of Chemical Physics, 2012, 137, 164313.	3.0	12
14	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
15	Thioarsenides: a case for long-range Lewis acidâ€“base-directed van der Waals interactions. Physics and Chemistry of Minerals, 2011, 38, 267-291.	0.8	12
16	Reactions of ethylidene on a model chromia surface: 1,1-dichloroethane on stoichiometric Î±-Cr2O3		

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19	Reactions of ethyl groups on a model chromia surface: Ethyl chloride on stoichiometric Î±-Cr2O3 (102). Surface Science, 2009, 603, 523-528.	1.9	4
20	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
21	Bonded interactions in silica polymorphs, silicates, and siloxane molecules. American Mineralogist, 2009, 94, 1085-1102.	1.9	37
22	Experimental Bond Critical Point and Local Energy Density Properties Determined for Mnâˆ’O, Feâˆ’O, and Coâˆ’O Bonded Interactions for Tephroite, Mn2SiO4, Fayalite, Fe2SiO4, and Co2SiO4 Olivine and Selected Organic Metal Complexes: Comparison with Properties Calculated for Non-Transition and Transition Metal Mâˆ’O Bonded Interactions for Silicates and Oxides. Journal of Physical Chemistry A, 2008, 112, 8811-8823.	2.5	35
23	Bonded interactions and the crystal chemistry of minerals: a review. Zeitschrift Fur Kristallographie - Crystalline Materials, 2008, 223, 01-40.	0.8	43
24	Shared and Closed-Shell Oâˆ’O Interactions in Silicates. Journal of Physical Chemistry A, 2008, 112, 3693-3699.	2.5	43
25	Effect of Symmetry and Hâ€bond Strength of Hard Segments on the Structureâ€Property Relationships of Segmented, Nonchain Extended Polyurethanes and Polyureas. Journal of Macromolecular Science - Physics, 2007, 46, 853-875.	1.0	94
26	Theoretical Electron Density Distributions for Fe- and Cu-Sulfide Earth Materials:Â 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
27	Siâˆ’O Bonded Interactions in Silicate Crystals and Molecules:Â A Comparison. Journal of Physical Chemistry A, 2006, 110, 12678-12683.	2.5	14
28	Bond Length and Local Energy Density Property Connections for Non-Transition-Metal Oxide-Bonded Interactions. Journal of Physical Chemistry A, 2006, 110, 12259-12266.	2.5	33
29	ELF isosurface maps for the Al2SiO5 polymorphs. Physics and Chemistry of Minerals, 2006, 33, 138-144.	0.8	6
30	A simple chemical view of relaxations at stoichiometric (110) surfaces of rutile-structure type oxides: A first-principles study of stishovite, SiO2. Surface Science, 2005, 594, 70-82.	1.9	10
31	Experimental and theoretical bond critical point properties for model electron density distributions for earth materials. Physics and Chemistry of Minerals, 2005, 32, 114-125.	0.8	14
32	A mapping of the electron localization function for earth materials. Physics and Chemistry of Minerals, 2005, 32, 208-221.	0.8	19
33	Electron density distribution and bond critical point properties for forsterite, Mg2 SiO4, determined with synchrotron single crystal X-ray diffraction data. Physics and Chemistry of Minerals, 2005, 32, 301-313.	0.8	64
34	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
35	Electron Density Distributions Calculated for the Nickel Sulfides Millerite, Vaesite, and Heazlewoodite and Nickel Metal:Â A Case for the Importance of Niâˆ’Ni Bond Paths for Electron Transport. Journal of Physical Chemistry B, 2005, 109, 21788-21795.	2.6	41
36	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

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37	Photoemission and LEED characterization of Ni2P(). Surface Science, 2004, 552, 8-16.	1.9	64
38	A Connection between Empirical Bond Strength and the Localization of the Electron Density at the Bond Critical Points of the SiO Bonds in Silicates. Journal of Physical Chemistry A, 2004, 108, 7643-7645.	2.5	35
39	Dehalogenation of 1-chloro-1-fluoroethene to acetylene on Î±-Cr2O3 ?. Journal of Catalysis, 2003, 214, 273-283.	6.2	4
40	Reaction of methanol on stoichiometric and O-terminated Î±-Cr2O3 (): interconversion of oxygenated C1 surface intermediates. Catalysis Today, 2003, 85, 279-289.	4.4	20
41	Dehalogenation of 1,1,2-Trichloro-1-fluoroethane over Î±-Cr2O3(101Ì„2). Journal of Physical Chemistry B, 2003, 107, 5182-5189.	2.6	12
42	BF3Adsorption on Stoichiometric and Oxygen-Deficient SnO2(110) Surfaces. Journal of Physical Chemistry B, 2003, 107, 1814-1820.	2.6	10
43	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
44	Adsorption and reaction of thiophene on Î±-Mo 2 C(0001). Surface Science, 2002, 511, 294-302.	1.9	46
45	NH3 chemisorption on stoichiometric and oxygen-deficient SnO2(110) surfaces. Surface Science, 2002, 520, 65-77.	1.9	63
46	A tool for the interactive 3D visualization of electronic structure in molecules and solids. Computers & Chemistry, 2002, 26, 313-319.	1.2	47
47	BF3 Adsorption on Î±-Cr2O3 (101Ì„2):â€‰ Probing the Lewis Basicity of Surface Oxygen Anions. Journal of Physical Chemistry B, 2001, 105, 8375-8380.	2.6	20
48	CO2Adsorption on Î±-Cr2O3(101Ì„2) Surfaces. Journal of Physical Chemistry B, 2001, 105, 7755-7761.	2.6	37
49	Ni2P (0001) by XPS. Surface Science Spectra, 2001, 8, 220-224.	1.3	24
50	Stoichiometric and Oxygen-Terminated Î±-Cr2O3(101Ì„2) Surfaces. Surface Science Spectra, 2000, 7, 134-142.	1.3	1
51	CO and O2 adsorption on Î±-Mo2C (0001). Surface Science, 2000, 468, 62-76.	1.9	41
52	Surface characterization of Î±-Mo2C (0001). Surface Science, 1999, 426, 187-198.	1.9	103
53	Î±-Cr 2 O 3 (101Ì„2): surface characterization and oxygen adsorption. Surface Science, 1999, 437, 386-396.	1.9	37
54	Stoichiometric and Non-Stoichiometric Cu2O(111) Single Crystal Surfaces. Surface Science Spectra, 1996, 4, 279-287.	1.3	2

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55	Stoichiometric and Non-Stoichiometric SnO2(110) Surfaces. Surface Science Spectra, 1996, 4, 220-226.	1.3	3
56	Water adsorption on stoichiometric and defective SnO2(110) surfaces. Surface Science, 1995, 322, 177-184.	1.9	93
57	Oxygen-vacancy-controlled chemistry on a metal oxide surface: methanol dissociation and oxidation on SnO2(110). Surface Science, 1994, 306, 279-293.	1.9	74
58	Formic acid decomposition on SnO2(110). Surface Science, 1994, 312, 106-114.	1.9	51
59	Propene Oxidation over Cu2O Single-Crystal Surfaces: A Surface Science Study of Propene Activation at 1 atm and 300 K. Journal of Catalysis, 1993, 143, 464-480.	6.2	35
60	Metalorganic chemical vapor deposition of copper from copper(II) dimethylaminoethoxide. Chemistry of Materials, 1993, 5, 1701-1709.	6.7	30
61	Surface reactions of acrolein and propionaldehyde on cuprous oxide(100): nonselective oxidation and enolate-mediated side reactions to C3 products. The Journal of Physical Chemistry, 1993, 97, 3555-3564.	2.9	19
62	Oxidation, reduction, and isomerization of allyl alcohol and 1-propanol over cuprous oxide(100). The Journal of Physical Chemistry, 1993, 97, 647-655.	2.9	37
63	Reaction pathways of C3 carboxylates on copper(1+) oxide(100): acrylic and propionic acid decomposition. The Journal of Physical Chemistry, 1992, 96, 7394-7398.	2.9	23
64	Propene adsorption on Cu2O single-crystal surfaces. Surface Science, 1992, 262, 318-334.	1.9	38
65	Surface hydride formation on a metal oxide surface: the interaction of atomic hydrogen with Cu2O(100). Surface Science, 1992, 278, 9-18.	1.9	41
66	Interaction of CO with Cu+ cations: CO adsorption on Cu2O(100). Surface Science, 1991, 249, 138-148.	1.9	71
67	H2O adsorption on Cu2O(100). Surface Science, 1991, 256, 67-76.	1.9	51
68	Photoemission and low-energy-electron-diffraction study of clean and oxygen-dosedCu2O (111) and (100) surfaces. Physical Review B, 1991, 43, 1610-1621.	3.2	115
69	Silicoaluminophosphate Molecular Sieves. ACS Symposium Series, 1990, , 38-47.	0.5	5
70	Methanol decomposition on single crystal Cu2O. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1990, 8, 2599-2604.	2.1	26
71	Preferential isotopic labeling of lattice oxygen positions on the SnO2(110) surface. Surface Science, 1990, 227, L105-L108.	1.9	38
72	Surface reconstructions of oxygen deficient SnO2(110). Surface Science, 1989, 224, 121-142.	1.9	93

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73	Studies of silicoaluminophosphates with the sodalite structure. Journal of the American Chemical Society, 1988, 110, 2127-2135.	13.7	147
74	Oxygen vacancies and defect electronic states on theSnO2(110)-1Ã—1surface. Physical Review B, 1988, 38, 2072-2083.	3.2	376
75	Summary Abstract: Oxygenâ€vacancyâ€derived defect electronic states on the SnO2 (110) surface. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1988, 6, 828-829.	2.1	6
76	Summary Abstract: Surface properties of clean and gasâ€dosed SnO2(110). Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1987, 5, 1170-1171.	2.1	18
77	Fundamental characterization of clean and gas-dosed tin oxide. Sensors and Actuators, 1987, 12, 101-106.	1.7	50
78	A SIMS depth profiling study of the hydration layer formed at polycrystalline tin oxide surfaces by atmospheric exposure. Applied Surface Science, 1986, 26, 239-245.	6.1	14
79	Summary Abstract: Structural and electronic properties of clean and waterâ€dosed SnO2(110). Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1986, 4, 627-628.	2.1	13
80	An investigation of the interaction of polycrystalline zirconium with O2, N2, CO and N2O. Applications of Surface Science, 1985, 22-23, 252-258.	1.0	1
81	XPS investigation of tin oxide supported platinum. Langmuir, 1985, 1, 269-273.	3.5	32
82	An electronic and structural interpretation of tin oxide ELS spectra. Surface Science, 1985, 151, 202-220.	1.9	43
83	An ESD and SIMS study of the composition of platinized, antimony-doped tin oxide films. I. Applications of Surface Science, 1983, 14, 281-296.	1.0	14
84	An investigation of the interaction of polycrystalline zirconium with O2, N2, CO, and N2O. Part I. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1983, 1, 1837-1842.	2.1	31
85	Computerâ€interfaced digital pulse counting circuit. Review of Scientific Instruments, 1982, 53, 1281-1284.	1.3	53
86	Surface characteristics of antimony-doped tin oxide films. Thin Solid Films, 1981, 78, 357-363.	1.8	29
87	Preparation and surface characteristics of platinized antimony-doped tin oxide films. Thin Solid Films, 1981, 83, 261-265.	1.8	14