

Bonding-property relationships in intermetallic alloys

Journal of Materials Research

8, 438-448

DOI: [10.1557/jmr.1993.0438](https://doi.org/10.1557/jmr.1993.0438)

Citation Report

#	ARTICLE	IF	CITATIONS
1	Charge density topology and its relationship to properties in intermetallic alloys. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1993, 68, 455-464.	0.6	18
2	A topological definition of a Wigner-Seitz cell and the atomic scattering factor. Acta Crystallographica Section A: Foundations and Advances, 1994, 50, 714-725.	0.3	102
3	Principle of stationary action and the definition of a proper open system. Physical Review B, 1994, 49, 13348-13356.	1.1	235
4	Comparison of experimental and theoretical electronic charge distribution in $\hat{\Gamma}^3$ -TiAl. Acta Metallurgica Et Materialia, 1994, 42, 3929-3943.	1.9	22
5	Dislocations and Charge Density Distributions of $\hat{\Gamma}^3$ Phase in Ti _{47.5} Al _{2.5} V Deformed at Room Temperature and 400°C. Materials Research Society Symposia Proceedings, 1994, 364, 641.	0.1	3
6	Simulation of short-range order in f.c.c. alloys. Acta Crystallographica Section A: Foundations and Advances, 1995, 51, 153-158.	0.3	14
7	Topological definition of crystal structure: determination of the bonded interactions in solid molecular chlorine. Acta Crystallographica Section A: Foundations and Advances, 1995, 51, 143-153.	0.3	192
8	Kinetics of the first-order phase transition in CuAu from atomistic Landau theory. Physical Review B, 1995, 52, 12473-12476.	1.1	6
9	Effect of Mn doping on charge density in $\hat{\Gamma}^3$ -TiAl by quantitative convergent beam electron diffraction. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1995, 72, 579-601.	0.8	42
10	A possible route to improving the ductility of brittle intermetallic compounds. Journal of Alloys and Compounds, 1995, 228, 105-111.	2.8	12
11	Requirements for activation of surface oxygen atoms in MgO using the Laplacian of the electron density. Surface Science, 1996, 351, 233-249.	0.8	41
12	From topology to geometry. Canadian Journal of Chemistry, 1996, 74, 1229-1235.	0.6	23
13	Electronic structure and elastic properties of the Ni ₃ X (X=Mn, Al, Ga, Si, Ge) intermetallics. Physical Review B, 1996, 54, 14413-14422.	1.1	65
14	Study of NO and CO dissociation on the (100) Cu surface using density functional theory and the topological analysis of the electronic density and its Laplacian. Canadian Journal of Chemistry, 1996, 74, 1014-1020.	0.6	14
15	Structural homeomorphism between the electron density and the virial field. International Journal of Quantum Chemistry, 1996, 57, 183-198.	1.0	178
16	The metallic bond: Elastic properties. Acta Materialia, 1996, 44, 2495-2504.	3.8	59
17	A chemical approach to ductile versus brittle phenomena. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1996, 73, 47-60.	0.8	15
18	Properties of atoms in molecules: Atoms under pressure. Journal of Chemical Physics, 1997, 107, 4271-4285.	1.2	77

#	ARTICLE	IF	CITATIONS
19	Characterization of an $\langle i \rangle F \langle i \rangle$ -center in an alkali halide cluster. <i>Journal of Chemical Physics</i> , 1997, 107, 8545-8553.	1.2	52
20	Numerical Determination of the Topological Properties of the Electronic Charge Density in Molecules and Solids Using Density Functional Theory. <i>Journal of Physical Chemistry A</i> , 1997, 101, 6976-6982.	1.1	16
21	A Numerical Method for the Topological Analysis of the Laplacian of the Electronic Charge Density in Molecules and Solids. <i>Journal of Physical Chemistry A</i> , 1997, 101, 2178-2184.	1.1	19
22	Ions in crystals: The topology of the electron density in ionic materials. I. Fundamentals. <i>Physical Review B</i> , 1997, 55, 4275-4284.	1.1	125
23	Ions in crystals: The topology of the electron density in ionic materials.II. The cubic alkali halide perovskites. <i>Physical Review B</i> , 1997, 55, 4285-4297.	1.1	110
24	Implications of a Pressure Induced Phase Transition in the Search for Cubic Ti ₃ Al. <i>Physical Review Letters</i> , 1997, 78, 1054-1057.	2.9	24
25	Correlation between electronic structure, mechanical properties and phase stability in intermetallic compounds. <i>Bulletin of Materials Science</i> , 1997, 20, 613-622.	0.8	107
26	Physical constants, deformation twinning, and microcracking of titanium aluminides. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 1998, 29, 49-63.	1.1	124
27	Formation and annihilation of a bond defect in silicon: An ab initio quantum-mechanical characterization. <i>Physical Review B</i> , 1998, 57, 170-177.	1.1	73
28	A Bond Path: A Universal Indicator of Bonded Interactions. <i>Journal of Physical Chemistry A</i> , 1998, 102, 7314-7323.	1.1	1,486
29	Charge-density determination in TiAl-Cr and TiAl-V using quantitative convergent-beam electron diffraction. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 1998, 77, 1231-1254.	0.8	13
30	STRUCTURAL PHASE STABILITY OF Ti ₃ Al UNDER HIGH PRESSURE. <i>International Journal of Modern Physics B</i> , 1999, 13, 841-845.	1.0	6
31	Anisotropic strain in nitrided austenitic stainless steel. <i>Journal of Applied Physics</i> , 2000, 88, 3323-3329.	1.1	78
32	Geometrical reconstructions and electronic relaxations of silicon surfaces. I. An electron density topological study of H-covered and clean Si(111)(1Å ⁻¹) surfaces. <i>Journal of Chemical Physics</i> , 2000, 112, 887-899.	1.2	16
33	Topology of the Electron Density and Cohesive Energy of the Face-Centered Cubic Transition Metals. <i>Journal of Physical Chemistry B</i> , 2000, 104, 4608-4612.	1.2	46
34	Functional groups expressed as graphs extracted from the Laplacian of the electron density. <i>International Journal of Quantum Chemistry</i> , 2003, 92, 326-336.	1.0	27
35	The full topology of the Laplacian of the electron density: scrutinising a physical basis for the VSEPR model. <i>Faraday Discussions</i> , 2003, 124, 353.	1.6	89
36	Ions in Crystals: The Topology of the Electron Density in Ionic Materials. 4. The Danburite (CaB ₂ Si ₂ O ₈) Case and the Occurrence of Oxide-Oxide Bond Paths in Crystals. <i>Journal of Physical Chemistry B</i> , 2003, 107, 4912-4921.	1.2	36

#	ARTICLE	IF	CITATIONS
37	Ab initio investigation of the electronic structure and bonding properties of the layered ternary compound Ti_3SiC_2 at high pressure. <i>Journal of Physics Condensed Matter</i> , 2003, 15, 1983-1991.	0.7	35
38	Quantum Chemical Topology: on Bonds and Potentials. <i>Structure and Bonding</i> , 2005, , 1-56.	1.0	90
39	Atoms in molecules theory for exploring the nature of the MoS_2 catalyst edges sites. <i>Journal of Molecular Catalysis A</i> , 2007, 265, 32-41.	4.8	16
40	Nature of the NiMoS catalyst edge sites: An atom in molecules theory and electrostatic potential studies. <i>Journal of Molecular Catalysis A</i> , 2007, 271, 105-116.	4.8	18
41	First Principles Study of Low Miller Index RuS_2 Surfaces in Hydrotreating Conditions. <i>Journal of Physical Chemistry C</i> , 2009, 113, 19545-19557.	1.5	23
42	First-Principles Study of Low Miller Index Ni_3S_2 Surfaces in Hydrotreating Conditions. <i>Journal of Physical Chemistry B</i> , 2009, 113, 3058-3070.	1.2	17
43	Modifications of $\text{Cu}_x\text{Zr}_{12-x}\text{Y}$ Icosahedra upon ($0 < x < 12$, $\text{Y} = \text{Be, Mg, Al, Si, P, Nb, Ag}$) substitutions by density functional theory computations. <i>Computational Materials Science</i> , 2011, 50, 2658-2662.	1.4	8
44	Perspectives for quantum chemical topology in crystallography. <i>Physica Scripta</i> , 2013, 87, 048106.	1.2	6
45	Mining for elastic constants of intermetallics from the charge density landscape. <i>Physica B: Condensed Matter</i> , 2015, 458, 1-7.	1.3	8
46	Ductile-to-brittle transition and materials' resistance to amorphization by irradiation damage. <i>RSC Advances</i> , 2016, 6, 44561-44568.	1.7	14
47	Effect of Hafnium Ternary Addition on Ductility of Aerospace Material Rh_3Ta – A Theoretical Study. <i>Materials Today: Proceedings</i> , 2016, 3, 2991-2996.	0.9	7
48	Origin of distinct hydrogen absorption behavior of Zr_2Pd and ZrPd_2 . <i>International Journal of Hydrogen Energy</i> , 2016, 41, 1736-1743.	3.8	4
49	Exploring the electron density localization in single MoS_2 monolayers by means of a localize-electrons detector and the quantum theory of atoms in molecules. <i>AIP Advances</i> , 2017, 7, 115106.	0.6	4
50	Chemical interaction and electronic structure in a compositionally complex alloy: A case study by means of X-ray absorption and X-ray photoelectron spectroscopy. <i>Journal of Alloys and Compounds</i> , 2021, 857, 157597.	2.8	9
51	High-entropy intermetallic compound with ultra-high strength and thermal stability. <i>Scripta Materialia</i> , 2021, 194, 113674.	2.6	34
52	Effect of Fe doping on structural, elastic and electronic properties of B_2ZrCu phase under hydrostatic pressure: A first-principles study. <i>Materials Chemistry and Physics</i> , 2021, 272, 124978.	2.0	3
54	Topology of Electron Density and Open Quantum Systems. <i>NATO ASI Series Series B: Physics</i> , 1995, , 237-272.	0.2	1
55	Microstructure Evolution in Ti -Alloys During Severe Deformation by Electric Upsetting and Impact Fused-Forging Modeling. , 2000, , 211-218.		2

#	ARTICLE	IF	CITATIONS
56	Computation-Motivated Design of Ternary Plasmonic Copper Chalcogenide Nanocrystals. Chemistry of Materials, 2021, 33, 117-125.	3.2	5
57	Characterization of an Fâ€center in an alkali halide cluster. , 0, .		8
58	Plastic deformation of ordered intermetallic alloys. , 2005, , 164-202.		0
59	Calculation on ductility of intermetallics based on a molecular orbital theory. , 1994, , 479-482.		0
60	Role of High Pressure in Identifying Alloying Elements for Modifying Material Properties.. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 1998, 7, 338-340.	0.1	0
61	Towards stacking fault energy engineering in FCC high entropy alloys. Acta Materialia, 2022, 224, 117472.	3.8	44