Martin Dahlqvist

List of Publications by Year
in descending order

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66 papers	3,876 citations	156536 32 h-index	139680 61 g-index
67 all docs	67 docs citations	67 times ranked	2571 citing authors

#	Article	IF	Citations
1	Correlation strength, orbital-selective incoherence, and local moments formation in the magnetic MAX-phase<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Mn</mml:mi><mml:mn>2</mml:mn></m Physical Review B, 2022, 105, .	1.1	3
2	Chemical order or disorder â€“ a theoretical stability expose for expanding the compositional space of quaternary metal borides. Materials Advances, 2022, 3, 2908-2917.	2.6	9
3	Investigation of out-of-plane ordered Ti4MoSiB2 from first principles. Journal of Physics Condensed Matter, 2022, , .	0.7	2
4	Theoretical predictions of phase stability for orthorhombic and hexagonal ternary MAB phases. Physical Chemistry Chemical Physics, 2022, 24, 11249-11258.	1.3	18
5	First-principles study on the superconductivity of doped zirconium diborides. Physical Review Materials, 2022, 6, .	0.9	2
6	On the nature of planar defects in transition metal diboride line compounds. Materialia, 2022, 24, 101478.	1.3	4
7	Synthesis, characterization and first principle modelling of the MAB phase solid solutions: (Mn1-xCrx)2AlB2 and (Mn1-xCrx)3AlB4. Materials Research Letters, 2021, 9, 112-118.	4.1	17
8	Where is the unpaired transition metal in substoichiometric diboride line compounds?. Acta Materialia, 2021, 204, 116510.	3.8	21
9	In-plane ordered quaternary M4/3â€²M2/3â€³AlB2 phases (i-MAB): electronic structure and mechanical properties from first-principles calculations. Journal of Physics Condensed Matter, 2021, 33, 255402.	0.7	4
10	Boridene: Two-dimensional Mo _{4/3} B _{2-x} with ordered metal vacancies obtained by chemical exfoliation. Science, 2021, 373, 801-805.	6.0	126
11	Outâ€Ofâ€Plane Ordered Laminate Borides and Their 2D Tiâ€Based Derivative from Chemical Exfoliation. Advanced Materials, 2021, 33, e2008361.	11.1	14
12	Predictions of attainable compositions of layered quaternary i-MAB phases and solid solution MAB phases. Nanoscale, 2021, 13, 18311-18321.	2.8	12
13	Phase Stability of Nanolaminated Epitaxial (Cr_{1â€“x}Fe_x)₂AlC MAX Phase Thin Films on MgO(111) and Al₂O₃(0001) for Use as Conductive Coatings. ACS Applied Nano Materials, 2021, 4, 13761-13770.	2.4	6
14	Predictive theoretical screening of phase stability for chemical order and disorder in quaternary 312 and 413 MAX phases. Nanoscale, 2020, 12, 785-794.	2.8	56
15	Ta-based 413 and 211 MAX phase solid solutions with Hf and Nb. Journal of the European Ceramic Society, 2020, 40, 1829-1838.	2.8	31
16	Theoretical Prediction and Experimental Verification of the Chemically Ordered Atomic-Laminate i-MAX Phases (Cr_{2/3}Sc_{1/3})₂GaC and (Mn_{2/3}Sc_{1/3})₂GaC. Crystal Growth and Design, 2020, 20, 55-61.	1.4	16
17	Theoretical Prediction and Synthesis of a Family of Atomic Laminate Metal Borides with In-Plane Chemical Ordering. Journal of the American Chemical Society, 2020, 142, 18583-18591.	6.6	55
18	Impact of strain, pressure, and electron correlation on magnetism and crystal structure of Mn2GaC from first-principles. Scientific Reports, 2020, 10, 11384.	1.6	13

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19	Single Crystal Growth and Structural Characterization of Theoretically Predicted Nanolaminates M2Al2C3, Where M = Sc and Er. Crystal Growth and Design, 2020, 20, 7640-7646.	1.4	3
20	Chemically stable new MAX phase V₂SnC: a damage and radiation tolerant TBC material. RSC Advances, 2020, 10, 43783-43798.	1.7	34
21	Compatibility of Zr2AlC MAX phase-based ceramics with oxygen-poor, static liquid leadâ€“bismuth eutectic. Corrosion Science, 2020, 171, 108704.	3.0	24
22	Possible monoclinic distortion of Mo2GaC under high pressure. Journal of Applied Physics, 2020, 127, 145103.	1.1	2
23	In- and Out-of-Plane Ordered MAX Phases and Their MXene Derivatives. , 2019, , 37-52.		9
24	Theoretical Analysis, Synthesis, and Characterization of 2D W_{1.33}C (MXene) with Ordered Vacancies. ACS Applied Nano Materials, 2019, 2, 6209-6219.	2.4	37
25	Atomically Layered and Ordered Rare-Earth i-MAX Phases: A New Class of Magnetic Quaternary Compounds. Chemistry of Materials, 2019, 31, 2476-2485.	3.2	89
26	Transmorphic epitaxial growth of AlN nucleation layers on SiC substrates for high-breakdown thin GaN transistors. Applied Physics Letters, 2019, 115, .	1.5	25
27	A Tungsten-Based Nanolaminated Ternary Carbide: (W,Ti)₄C_{4â€“x}. Inorganic Chemistry, 2019, 58, 1100-1106.	1.9	9
28	Materials synthesis, neutron powder diffraction, and first-principles calculations of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mo>(</mml:mo><mml:msub><mml:mi>Mo</mml:mi><mml:mi><mml:r <mml:math xmlns:mml="http://www.w3.org/1998/. Physical Review Materials, 2019, 3, .	0.9	14
29	Wâ€Based Atomic Laminates and Their 2D Derivative W_{1.33}C MXene with Vacancy Ordering. Advanced Materials, 2018, 30, e1706409.	11.1	240
30	Origin of Chemically Ordered Atomic Laminates (i-MAX): Expanding the Elemental Space by a Theoretical/Experimental Approach. ACS Nano, 2018, 12, 7761-7770.	7.3	99
31	Theoretical Prediction and Synthesis of (Cr_{2/3}Zr_{1/3})₂AlC i-MAX Phase. Inorganic Chemistry, 2018, 57, 6237-6244.	1.9	59
32	Electronic structure, bonding characteristics, and mechanical properties in (W_{2/3}Sc_{1/3})₂AlC and (W_{2/3}Y_{1/3})₂AlC i-MAX phases from first-principles calculations. Journal of Physics Condensed Matter, 2018, 30, 305502.	0.7	9
33	Synthesis of Ti3AuC2, Ti3Au2C2 and Ti3IrC2 by noble metal substitution reaction in Ti3SiC2 for high-temperature-stable Ohmic contacts to SiC. Nature Materials, 2017, 16, 814-818.	13.3	142
34	Two-dimensional Mo1.33C MXene with divacancy ordering prepared from parent 3D laminate with in-plane chemical ordering. Nature Communications, 2017, 8, 14949.	5.8	525
35	Theoretical stability and materials synthesis of a chemically ordered MAX phase, Mo2ScAlC2, and its two-dimensional derivate Mo2ScC2 MXene. Acta Materialia, 2017, 125, 476-480.	3.8	185
36	Dataset on the structure and thermodynamic and dynamic stability of Mo 2 ScAlC 2 from experiments and first-principles calculations. Data in Brief, 2017, 10, 576-582.	0.5	3

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37	Prediction and synthesis of a family of atomic laminate phases with KagomÃ©-like and in-plane chemical ordering. Science Advances, 2017, 3, e1700642.	4.7	156
38	Ti₂Au₂C and Ti₃Au₂C₂ formed by solid state reaction of gold with Ti₂AlC and Ti₃AlC₂. Chemical Communications, 2017, 53, 9554-9557.	2.2	53
39	Benefits of oxygen incorporation in atomic laminates. Journal of Physics Condensed Matter, 2016, 28, 135501.	0.7	7
40	Phase stability of the nanolaminates V2Ga2C and (Mo1â”xVx)2Ga2C from first-principles calculations. Physical Chemistry Chemical Physics, 2016, 18, 12682-12688.	1.3	10
41	Magnetic MAX phases from theory and experiments; a review. Journal of Physics Condensed Matter, 2016, 28, 433003.	0.7	84
42	Long-range antiferromagnetic order in epitaxial<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Mn</mml:mi><mml:mn>2</mml:mn></mml: films from neutron reflectometry. Physical Review B, 2016, 94, .	1.1	28
43	Magnetically driven anisotropic structural changes in the atomic laminate<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">M</mml:mi><mml:msub><mml:mi mathvariant="normal">n</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mi>GaC</mml:mi></mml:mrow></mml:math>.	1.1	44
44	Magnetic exchange interactions and critical temperature of the nanolaminate<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">M</mml:mi><mml:msub><mml:mi mathvariant="normal">n</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mi>GaC</mml:mi></mml:mrow></mml:math>from first-principles supercell methods. Physical Review B, 2016, 93, .	1.1	12
45	Theoretical stability, thin film synthesis and transport properties of the Mo_{n+1}GaC_n MAX phase. Physica Status Solidi - Rapid Research Letters, 2015, 9, 197-201.	1.2	28
46	Experimental and theoretical characterization of ordered MAX phases Mo2TiAlC2 and Mo2Ti2AlC3. Journal of Applied Physics, 2015, 118, .	1.1	217
47	Influence of boron vacancies on phase stability, bonding and structure ofMB₂(Mâ€‰â€‰=â€‰â€‰Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W) with AlB₂type structure. Journal of Physics Condensed Matter, 2015, 27, 435702.	2.7	33
48	Order and disorder in quaternary atomic laminates from first-principles calculations. Physical Chemistry Chemical Physics, 2015, 17, 31810-31821.	1.3	71
49	A critical evaluation of GGA +Umodeling for atomic, electronic and magnetic structure of Cr₂AlC, Cr₂GaC and Cr₂GeC. Journal of Physics Condensed Matter, 2015, 27, 095601.	0.7	23
50	Structural and chemical determination of the new nanolaminated carbide Mo2Ga2C from first principles and materials analysis. Acta Materialia, 2015, 99, 157-164.	3.8	75
51	Effect of Ti-Al cathode composition on plasma generation and plasma transport in direct current vacuum arc. Journal of Applied Physics, 2014, 115, .	1.1	45
52	First-principles calculations of the electronic, vibrational, and elastic properties of the magnetic laminate Mn2GaC. Journal of Applied Physics, 2014, 116, .	1.1	23
53	A Nanolaminated Magnetic Phase: Mn₂GaC. Materials Research Letters, 2014, 2, 89-93.	4.1	128
54	Temperature dependent phase stability of nanolaminated ternaries from first-principles calculations. Computational Materials Science, 2014, 91, 251-257.	1.4	32

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55	Oxygen incorporation in Ti2AlC thin films studied by electron energy loss spectroscopy and ab initio calculations. Journal of Materials Science, 2013, 48, 3686-3691.	1.7	17
56	Synthesis andab initiocalculations of nanolaminated (Cr,Mn)<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>AlC compounds. Physical Review B, 2013, 87, .	1.1	93
57	Magnetic Self-Organized Atomic Laminate from First Principles and Thin Film Synthesis. Physical Review Letters, 2013, 110, 195502.	2.9	146
58	Phase stability of Cr_{n+ 1}GaC_n MAX phases from first principles and Cr₂GaC thinâ€film synthesis using magnetron sputtering from elemental targets. Physica Status Solidi - Rapid Research Letters, 2013, 7, 971-974.	1.2	32
59	Characterization of plasma chemistry and ion energy in cathodic arc plasma from Ti-Si cathodes of different compositions. Journal of Applied Physics, 2013, 113, 163304.	1.1	22
60	Correlation between magnetic state and bulk modulus of Cr2AlC. Journal of Applied Physics, 2013, 113, .	1.1	50
61	Discovery of the Ternary Nanolaminated Compound<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>Nb</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mi>GeC</mml:mi></mml:math>by a Systematic Theoretical-Experimental Approach. Physical Review Letters, 2012, 109, 035502.	2.9	73
62	Magnetic nanoscale laminates with tunable exchange coupling from first principles. Physical Review B, 2011, 84, .	1.1	75
63	Phase stability of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Ti</mml:mtext></mml:mrow><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>AlC upon oxygen incorporation: A first-principles investigation. Physical Review B, 2010, 81, .	1.1	101
64	Oxygen incorporation in Ti2AlC: Tuning of anisotropic conductivity. Applied Physics Letters, 2010, 97, .	1.5	44
65	Stability trends of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>M</mml:mi><mml:mi>A</mml:mi><mml:mi>X</mml:mi></mml:mrow></mml:math>phases from first principles. Physical Review B, 2010, 81, .	1.1	184
66	Dynamics of Polymer Adsorption from Bulk Solution onto Planar Surfaces. Macromolecules, 2009, 42, 3641-3649.	2.2	39