

Miladin Radovic

List of Publications by Year in descending order

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116
papers

7,299
citations

81743

39
h-index

58464

82
g-index

117
all docs

117
docs citations

117
times ranked

5820
citing authors

#	ARTICLE	IF	CITATIONS
1	Elastic and Mechanical Properties of the MAX Phases. Annual Review of Materials Research, 2011, 41, 195-227.	4.3	894
2	Electrochemical etching of Ti_2AlC to Ti_2CT_x (MXene) in low-concentration hydrochloric acid solution. Journal of Materials Chemistry A, 2017, 5, 21663-21668.	5.2	445
3	Antioxidants Unlock Shelf-Stable $Ti_3C_2T_x$ (MXene) Nanosheet Dispersions. Matter, 2019, 1, 513-526.	5.0	436
4	Fully reversible, dislocation-based compressive deformation of Ti_3SiC_2 to 1 GPa. Nature Materials, 2003, 2, 107-111.	13.3	342
5	Oxidation stability of $Ti_3C_2T_x$ MXene nanosheets in solvents and composite films. Npj 2D Materials and Applications, 2019, 3, .	3.9	312
6	Template-free 3D titanium carbide ($Ti_3C_2T_x$) MXene particles crumpled by capillary forces. Chemical Communications, 2017, 53, 400-403.	2.2	271
7	Surface-agnostic highly stretchable and bendable conductive MXene multilayers. Science Advances, 2018, 4, eaaq0118.	4.7	229
8	On the elastic properties and mechanical damping of Ti_3SiC_2 , Ti_3GeC_2 , $Ti_3Si_0.5Al_0.5C_2$ and Ti_2AlC in the 300–1573K temperature range. Acta Materialia, 2006, 54, 2757-2767.	3.8	218
9	Mechanical properties of tape cast nickel-based anode materials for solid oxide fuel cells before and after reduction in hydrogen. Acta Materialia, 2004, 52, 5747-5756.	3.8	209
10	Comparison of different experimental techniques for determination of elastic properties of solids. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 368, 56-70.	2.6	203
11	Water Sorption in MXene/Polyelectrolyte Multilayers for Ultrafast Humidity Sensing. ACS Applied Nano Materials, 2019, 2, 948-955.	2.4	173
12	Effect of temperature, strain rate and grain size on the mechanical response of Ti_3SiC_2 in tension. Acta Materialia, 2002, 50, 1297-1306.	3.8	129
13	Effects of Water Content and Chemical Composition on Structural Properties of Alkaline Activated Metakaolin-Based Geopolymers. Journal of the American Ceramic Society, 2012, 95, 2169-2177.	1.9	129
14	Tensile properties of Ti_3SiC_2 in the 25–1300°C temperature range. Acta Materialia, 2000, 48, 453-459.	3.8	120
15	Mechanical properties of sodium and potassium activated metakaolin-based geopolymers. Journal of Materials Science, 2012, 47, 2607-2616.	1.7	116
16	Microstructure and Residual Stress of Alumina Scale Formed on Ti_2AlC at High Temperature in Air. Oxidation of Metals, 2007, 68, 97-111.	1.0	102
17	pH, Nanosheet Concentration, and Antioxidant Affect the Oxidation of $Ti_3C_2T_x$ and Ti_2CT_x MXene Dispersions. Advanced Materials Interfaces, 2020, 7, 2000845.	1.9	99
18	Elastic properties, thermal stability, and thermodynamic parameters of $MoAlB$. Physical Review B, 2017, 95, .	1.1	95

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19	Tensile creep of coarse-grained Ti ₃ SiC ₂ in the 1000–1200°C temperature range. Journal of Alloys and Compounds, 2003, 361, 299-312.	2.8	91
20	Long-Term Oxidation of Ti ₂ AlC in Air and Water Vapor at 1000–1300°C Temperature Range. Journal of the Electrochemical Society, 2011, 159, C90-C96.	1.3	90
21	Long Time Oxidation Study of Ti ₃ SiC ₂ , Ti ₃ SiC ₂ /SiC, and Ti ₃ SiC ₂ /TiC Composites in Air. Journal of the Electrochemical Society, 2003, 150, B166.	1.3	89
22	Process Safety Analysis for Ti ₃ C ₂ T _x MXene Synthesis and Processing. Industrial & Engineering Chemistry Research, 2019, 58, 1570-1579.	1.8	89
23	Tensile creep of fine grained (3–5 μm) Ti ₃ SiC ₂ in the 1000–1200°C temperature range. Acta Materialia, 2001, 49, 4103-4112.	3.8	83
24	Processing and characterization of porous Ti ₂ AlC with controlled porosity and pore size. Acta Materialia, 2012, 60, 6266-6277.	3.8	77
25	Layer-by-Layer Assembly of Reduced Graphene Oxide and MXene Nanosheets for Wire-Shaped Flexible Supercapacitors. ACS Applied Materials & Interfaces, 2021, 13, 14068-14076.	4.0	74
26	Compressive creep of fine and coarse-grained T ₃ SiC ₂ in air in the 1100–1300°C temperature range. Acta Materialia, 2005, 53, 4963-4973.	3.8	69
27	Isothermal and Cyclic Oxidation of MoAlB in Air from 1100°C to 1400°C. Journal of the Electrochemical Society, 2017, 164, C930-C938.	1.3	67
28	Elastic Properties of Nickel-Based Anodes for Solid Oxide Fuel Cells as a Function of the Fraction of Reduced NiO. Journal of the American Ceramic Society, 2004, 87, 2242-2246.	1.9	63
29	Structural, physical and mechanical properties of Ti ₃ (Al _{1-x} Si _x)C ₂ solid solution with x=0–1. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 676, 197-208.	2.6	60
30	Water-dispersible Ti ₃ C ₂ T _z MXene nanosheets by molten salt etching. IScience, 2021, 24, 103403.	1.9	60
31	Elastic properties and phonon conductivities of Ti ₃ Al(C _{0.5} N _{0.5}) ₂ and Ti ₂ Al(C _{0.5} N _{0.5}) solid solutions. Journal of Materials Research, 2008, 23, 1517-1521.	1.2	59
32	Thermal and mechanical properties of Al/Al ₂ O ₃ composites at elevated temperatures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 531, 18-27.	2.6	58
33	Ti ₃ SiC ₂ and ice. Applied Physics Letters, 2001, 79, 479-481.	1.5	50
34	Tape Casting, Pressureless Sintering, and Grain Growth in Ti ₃ SiC ₂ Compacts. Journal of the American Ceramic Society, 2004, 87, 550-556.	1.9	49
35	Mechanical properties and residual stresses in ZrB ₂ -SiC spark plasma sintered ceramic composites. Journal of the European Ceramic Society, 2016, 36, 1527-1537.	2.8	49
36	Synthesis and characterization of the atomic laminate Mn ₂ AlB ₂ . Journal of the European Ceramic Society, 2018, 38, 5333-5340.	2.8	49

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37	Annealed Ti ₃ C ₂ T _z MXene Films for Oxidation-Resistant Functional Coatings. ACS Applied Nano Materials, 2020, 3, 10578-10585.	2.4	49
38	Thermal, mechanical and phase stability of LaCoO ₃ in reducing and oxidizing environments. Journal of Power Sources, 2008, 184, 77-83.	4.0	46
39	Thermal and mechanical properties of LaCoO ₃ and La _{0.8} Ca _{0.2} CoO ₃ perovskites. Journal of Power Sources, 2008, 182, 230-239.	4.0	40
40	The Reactivity of Ti ₂ AlC and Ti ₃ SiC ₂ with SiC Fibers and Powders up to Temperatures of 1550°C. Journal of the American Ceramic Society, 2011, 94, 1737-1743.	1.9	40
41	Compressive performance and crack propagation in Al alloy/Ti ₂ AlC composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 672, 247-256.	2.6	40
42	High-throughput combinatorial study of the effect of M-site alloying on the solid solution behavior of Ti ₃ SiC ₂ phases. Physical Review B, 2016, 94, .	1.1	38
43	Room temperature stress-strain hysteresis in Ti ₂ AlC revisited. Acta Materialia, 2016, 105, 294-305.	3.8	38
44	Layer-by-Layer Assembly of Polyaniline Nanofibers and MXene Thin-Film Electrodes for Electrochemical Energy Storage. ACS Applied Materials & Interfaces, 2019, 11, 47929-47938.	4.0	38
45	Finite-temperature elasticity of fcc Al: Atomistic simulations and ultrasonic measurements. Physical Review B, 2011, 84, .	1.1	37
46	Effects of microstructure on the mechanical properties of Ti ₂ AlC in compression. Acta Materialia, 2018, 143, 130-140.	3.8	37
47	One-step hydrothermal synthesis of porous Ti ₃ C ₂ T _z MXene/rGO gels for supercapacitor applications. Nanoscale, 2021, 13, 16543-16553.	2.8	36
48	Fabrication and characterization of NiTi/Ti ₃ SiC ₂ and NiTi/Ti ₂ AlC composites. Journal of Alloys and Compounds, 2014, 610, 635-644.	2.8	35
49	A new electrolyte based on Tm ³⁺ -doped $\tilde{\Gamma}$ -Bi ₂ O ₃ -type phase with enhanced conductivity. Solid State Ionics, 2015, 280, 18-23.	1.3	35
50	Heating of Ti ₃ C ₂ T _x MXene/polymer composites in response to Radio Frequency fields. Scientific Reports, 2019, 9, 16489.	1.6	32
51	Mechanical properties and microstructure evolution of Ti ₂ AlC under compression in 25–1100°C temperature range. Acta Materialia, 2020, 189, 154-165.	3.8	32
52	Electron-backscattered diffraction and transmission electron microscopy study of post-creep Ti ₃ SiC ₂ . Journal of Alloys and Compounds, 2009, 488, 181-189.	2.8	30
53	Interfacial study of NiTi–Ti ₃ SiC ₂ solid state diffusion bonded joints. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 622, 168-177.	2.6	30
54	Rapid Heating of Silicon Carbide Fibers under Radio Frequency Fields and Application in Curing Pre ceramic Polymer Composites. ACS Applied Materials & Interfaces, 2019, 11, 46132-46139.	4.0	29

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55	On the origin of kinking in layered crystalline solids. <i>Materials Today</i> , 2021, 43, 45-52.	8.3	28
56	Residual stresses in spot welded new generation aluminium alloys Part A – thermophysical and thermomechanical properties of 6111 and 5754 aluminium alloys. <i>Science and Technology of Welding and Joining</i> , 2005, 10, 82-87.	1.5	27
57	Thermal expansion and elastic moduli of electrolyte materials for high and intermediate temperature solid oxide fuel cell. <i>Solid State Ionics</i> , 2017, 300, 1-9.	1.3	27
58	Compressive deformation of MoAlB up to 1100 °C. <i>Journal of Alloys and Compounds</i> , 2019, 774, 1216-1222.	2.8	26
59	Current-Activated, Pressure-Assisted Infiltration: A Novel, Versatile Route for Producing Interpenetrating Ceramic–Metal Composites. <i>Materials Research Letters</i> , 2014, 2, 124-130.	4.1	25
60	High strain-rate response and deformation mechanisms in polycrystalline Ti ₂ AlC. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014, 598, 319-326.	2.6	25
61	Influence of porosity on elastic properties of Ti ₂ AlC and Ti ₃ SiC ₂ MAX phase foams. <i>Journal of Alloys and Compounds</i> , 2018, 764, 24-35.	2.8	25
62	On characterizing the mechanical properties of aluminum–alumina composites. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014, 590, 352-359.	2.6	24
63	High-Performance Metal/Carbide Composites with Far-From-Equilibrium Compositions and Controlled Microstructures. <i>Scientific Reports</i> , 2016, 6, 35523.	1.6	24
64	pH-Response of polycation/Ti ₃ C ₂ T _x MXene layer-by-layer assemblies for use as resistive sensors. <i>Molecular Systems Design and Engineering</i> , 2020, 5, 366-375.	1.7	24
65	Sustainability Benefits Assessment of Metakaolin-Based Geopolymer Treatment of High Plasticity Clay. <i>Sustainability</i> , 2020, 12, 10495.	1.6	23
66	Phase Evaluation in Al ₂ O ₃ /Ti ₂ AlC During Sintering in the 1300 °C–1500 °C Temperature Range. <i>Journal of the American Ceramic Society</i> , 2011, 94, 3327-3334.	1.9	22
67	Spark Plasma Sintered B ₄ C Structural, Thermal, Electrical and Mechanical Properties. <i>Materials</i> , 2020, 13, 1612.	1.3	22
68	Oxidative Stability of Nb _{1-x} C _x T _z MXenes. <i>Journal of Physical Chemistry C</i> , 2021, 125, 13990-13996.	1.5	21
69	Synthesis and Electronic Applications of Particle-Templated Ti ₃ C ₂ T _x MXene–Polymer Films via Pickering Emulsion Polymerization. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 51556-51566.	4.0	21
70	Does aluminum play well with others? Intrinsic Al–A alloying behavior in 211/312 MAX phases. <i>Materials Research Letters</i> , 2017, 5, 170-178.	4.1	20
71	Non-classical crystallographic slip in a ternary carbide – Ti ₂ AlC. <i>Materials Research Letters</i> , 2020, 8, 275-281.	4.1	20
72	Carbon Additive-Free Crumpled Ti ₃ C ₂ T _x MXene-Encapsulated Silicon Nanoparticle Anodes for Lithium-Ion Batteries. <i>ACS Applied Energy Materials</i> , 2021, 4, 10762-10773.	2.5	20

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73	<i>Ab initio</i> investigation of $Ti_{3-x}C_{2-x}T_x$ MXene solid solutions. <i>Physical Review B</i> , 2011, 84, .	1.1	19
74	Evaluation of defects in materials using resonant ultrasound spectroscopy. <i>Journal of Materials Science</i> , 2011, 46, 2548-2556.	1.7	19
75	Thermo-mechanical Response and Damping Behavior of Shape Memory Alloy/MAX Phase Composites. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014, 45, 2646-2658.	1.1	19
76	Radio Frequency and Microwave Heating of Pre-ceramic Polymer Nanocomposites with Applications in Mold-Free Processing. <i>Advanced Engineering Materials</i> , 2019, 21, 1900276.	1.6	19
77	Electronic and Optical Property Control of Polycation/MXene Layer-by-Layer Assemblies with Chemically Diverse MXenes. <i>Langmuir</i> , 2021, 37, 11338-11350.	1.6	19
78	Interparticle interactions and rheological signatures of $Ti_3C_2T_z$ MXene dispersions. <i>Journal of Colloid and Interface Science</i> , 2022, 605, 120-128.	5.0	19
79	Hexagonal OsB_2 : Sintering, microstructure and mechanical properties. <i>Journal of Alloys and Compounds</i> , 2015, 634, 168-178.	2.8	18
80	Active Cooling of a Microvascular Shape Memory Alloy-Polymer Matrix Composite Hybrid Material. <i>Advanced Engineering Materials</i> , 2016, 18, 1145-1153.	1.6	18
81	Minimizing two-dimensional $Ti_3C_2T_x$ MXene nanosheet loading in carbon-free silicon anodes. <i>Nanoscale</i> , 2020, 12, 20699-20709.	2.8	18
82	Effect of texturing on thermal, electric and elastic properties of $MoAlB$, Fe_2AlB_2 , and Mn_2AlB_2 . <i>Journal of the European Ceramic Society</i> , 2022, 42, 3183-3191.	2.8	18
83	Flocculation of MXenes and Their Use as 2D Particle Surfactants for Capsule Formation. <i>Langmuir</i> , 2021, 37, 2649-2657.	1.6	17
84	On the stochastic phase stability of Ti_2AlC - Cr_2AlC . <i>Scientific Reports</i> , 2017, 7, 5138.	1.6	16
85	The Role of Antioxidant Structure in Mitigating Oxidation in $Ti_3C_2T_x$ and Ti_2CT_x MXenes. <i>Advanced Materials Interfaces</i> , 2022, 9, .	1.9	16
86	Temperature-dependent thermal properties of a shape memory alloy/MAX phase composite: Experiments and modeling. <i>Acta Materialia</i> , 2014, 68, 267-278.	3.8	15
87	Improvement of Strength and Volume-Change Properties of Expansive Clays with Geopolymer Treatment. <i>Transportation Research Record</i> , 2021, 2675, 308-320.	1.0	15
88	Hydrogen evolution in acid solution at Pd electrodeposited onto Ti_2AlC . <i>Electrochimica Acta</i> , 2017, 224, 571-584.	2.6	14
89	High-temperature dependency of elastic mechanical behavior of two wrought magnesium alloys AZ31B and ZK60A studied by resonant ultrasound spectroscopy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 758, 86-95.	2.6	14
90	Conformal Layer-by-Layer Assembly of $Ti_3C_2T_z$ MXene-Only Thin Films for Optoelectronics and Energy Storage. <i>Chemistry of Materials</i> , 2022, 34, 4884-4895.	3.2	14

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91	Mechanical response of fine grained Ti ₂ AlC under extreme thermo-mechanical loading conditions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 658, 176-184.	2.6	13
92	On the non-classical crystallographic slip in Ti _n +1AlC _n MAX phases. Scripta Materialia, 2021, 194, 113698.	2.6	13
93	High-throughput reaction engineering to assess the oxidation stability of MAX phases. Npj Computational Materials, 2021, 7, .	3.5	13
94	The Effect of Grain Size on Deformation and Failure of Ti ₂ AlC MAX Phase under Thermo-Mechanical Loading. Experimental Mechanics, 2017, 57, 675-685.	1.1	11
95	On thermal and vibrational properties of LaGaO ₃ single crystals. Acta Materialia, 2009, 57, 2984-2992.	3.8	9
96	Low-temperature Formation of Ultra-high-temperature Transition Metal Carbides from Salt-Polymer Precursors. Journal of the American Ceramic Society, 2010, 93, 2222-2228.	1.9	9
97	Ab-initio investigation of the finite-temperatures structural, elastic, and thermodynamic properties of Ti ₃ AlC ₂ and Ti ₃ SiC ₂ . Computational Materials Science, 2016, 124, 420-427.	1.4	9
98	The effect of microstructural morphology on the elastic, inelastic, and degradation behaviors of aluminum-alumina composites. Mechanics Research Communications, 2014, 57, 49-56.	1.0	8
99	Room temperature crack-healing in an atomically layered ternary carbide. Science Advances, 2021, 7, .	4.7	8
100	Room temperature constant-stress creep of a brittle solid studied by spherical nanoindentation. Journal of Applied Physics, 2008, 104, .	1.1	7
101	A nonlinear constitutive model for describing cyclic mechanical responses of BaTiO_3/Ag composites. Acta Mechanica, 2017, 228, 2017-2032.	1.1	7
102	Design and development of ring-on-ring jig for biaxial strength testing of brittle ceramic composite materials: ZrB ₂ -30wt-%SiB ₆ . Advances in Applied Ceramics, 2019, 118, 159-168.	0.6	7
103	Evaluation of Geopolymer for Stabilization of Sulfate-Rich Expansive Soils for Supporting Pavement Infrastructure. Transportation Research Record, 2022, 2676, 230-245.	1.0	7
104	Out-of-plane ordering in quaternary MAX alloys: an alloy theoretic perspective. Materials Research Letters, 2018, 6, 1-12.	4.1	5
105	Spark plasma sintering of hydrothermally synthesized bismuth ferrite. Processing and Application of Ceramics, 2016, 10, 257-264.	0.4	5
106	Utilization of Metakaolin-Based Geopolymers for Stabilization of Sulfate-Rich Expansive Soils. , 2022, , .		5
107	Time and frequency dependent mechanical properties of LaCoO ₃ -based perovskites: Internal friction and negative creep. Journal of Applied Physics, 2018, 124, .	1.1	4
108	Rapid Synthesis of Patterned Silicon Carbide Coatings Using Laser-Induced Pyrolysis and Crystallization of Polycarbosilane. Advanced Engineering Materials, 2022, 24, .	1.6	4

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109	Anion Identity and Time Scale Affect the Cation Insertion Energy Storage Mechanism in $\text{Ti}_3\text{C}_2\text{Tx}$ MXene Multilayers. ACS Energy Letters, 2022, 7, 1828-1834.	8.8	4
110	Characterization of thermal transport properties of Ag/BaTiO ₃ composites using hot disk: Numerical simulations. International Journal of Heat and Mass Transfer, 2018, 116, 599-608.	2.5	3
111	Minimal effect of stacking number on intrinsic cleavage and shear behavior of Ti_nAlC_n and Ta_nAlC_n MAX phases. Journal of Applied Physics, 2018, 123, .	1.1	3
112	Fabrication and characterization of aluminum - magnetic shape memory alloy composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 805, 140549.	2.6	2
113	Effect of Sand Type and PVA Fiber Content on the Properties of Metakaolin Based Engineered Geopolymer Composites. Transportation Research Record, 2021, 2675, 475-491.	1.0	1
114	Evaluation of Alternative Sources of Supplementary Cementitious Materials for Concrete Materials. Transportation Research Record, 2022, 2676, 287-301.	1.0	1
115	Effect of Student-Led Undergraduate Research Experience on Learning and Attitudes –A Practice in An Introductory Materials Science Course. Materials Research Society Symposia Proceedings, 2014, 1657, 38.	0.1	0
116	Processing and properties of ceramic yttrium manganite sintered by different methods. Science of Sintering, 2021, 53, 485-496.	0.5	0