Jaroslav Polak

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/2613486/publications.pdf

Version: 2024-02-01

222 papers

4,850 citations

71102 41 h-index 58 g-index

229 all docs 229 docs citations

times ranked

229

1557 citing authors

#	Article	IF	CITATIONS
1	Extrusions and intrusions in fatigued metals. Part 1. State of the art and historyâ€. Philosophical Magazine, 2009, 89, 1295-1336.	1.6	154
2	On the role of point defects in fatigue crack initiation. Materials Science and Engineering, 1987, 92, 71-80.	0.1	131
3	Atomic force microscopy of surface relief in individual grains of fatigued 316L austenitic stainless steel. Acta Materialia, 2002, 50, 3767-3780.	7.9	129
4	Dislocation structures in 316L stainless steel cycled with plastic strain amplitudes over a wide interval. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1994, 187, 1-9.	5.6	112
5	Study of surface relief evolution in fatigued 316L austenitic stainless steel by AFM. Materials Science & Structural Materials: Properties, Microstructure and Processing, 2003, 351, 123-132.	5.6	104
6	Dislocation structures in the bands of localised cyclic plastic strain in austenitic 316L and austenitic-ferritic duplex stainless steels. Acta Materialia, 1997, 45, 5145-5151.	7.9	94
7	Electrical resistivity of cyclically deformed copper. European Physical Journal D, 1969, 19, 315-322.	0.4	88
8	AFM evidence of surface relief formation and models of fatigue crack nucleation. International Journal of Fatigue, 2003, 25, 1027-1036.	5.7	86
9	High cycle fatigue life of metals. Materials Science and Engineering, 1974, 15, 239-245.	0.1	85
10	AFM and TEM study of cyclic slip localization in fatigued ferritic X10CrAl24 stainless steel. Acta Materialia, 2004, 52, 5551-5561.	7.9	80
11	Mechanisms of extrusion and intrusion formation in fatigued crystalline materials. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 596, 15-24.	5.6	79
12	Short crack growth and fatigue life in austenitic-ferritic duplex stainless steel. Fatigue and Fracture of Engineering Materials and Structures, 2005, 28, 923-935.	3.4	77
13	Extrusions and intrusions in fatigued metals. Part 2. AFM and EBSD study of the early growth of extrusions and intrusions in 316L steel fatigued at room temperature. Philosophical Magazine, 2009, 89, 1337-1372.	1.6	77
14	Study of cyclic strain localization and fatigue crack initiation using FIB technique. International Journal of Fatigue, 2012, 39, 44-53.	5.7	77
15	NUCLEATION AND SHORT CRACK GROWTH IN FATIGUED POLYCRYSTALLINE COPPER. Fatigue and Fracture of Engineering Materials and Structures, 1990, 13, 119-133.	3.4	74
16	Short fatigue crack behaviour in 316L stainless steel. International Journal of Fatigue, 1997, 19, 471-475.	5.7	74
17	Surface topography and crack initiation in emerging persistent slip bands in copper single crystals. Materials Science and Engineering, 1985, 74, 85-91.	0.1	70
18	CYCLIC PLASTICITY IN TYPE 316L AUSTENITIC STAINLESS STEEL. Fatigue and Fracture of Engineering Materials and Structures, 1994, 17, 773-782.	3.4	70

#	Article	IF	CITATIONS
19	THE HYSTERESIS LOOP 1. A STATISTICAL THEORY. Fatigue and Fracture of Engineering Materials and Structures, 1982, 5, 19-32.	3.4	67
20	The shape of extrusions and intrusions and initiation of stage I fatigue cracks. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 517, 204-211.	5 . 6	63
21	Cyclic stress-strain response and dislocation structures in polycrystalline copper. Materials Science and Engineering, 1984, 63, 189-196.	0.1	62
22	The role of extrusions and intrusions in fatigue crack initiation. Engineering Fracture Mechanics, 2017, 185, 46-60.	4.3	60
23	Inhomogeneous dislocation structure in fatigued INCONEL 713 LC superalloy at room and elevated temperatures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 400-401, 485-488.	5. 6	58
24	Cyclic stress-strain response of polycrystalline copper in a wide range of plastic strain amplitudes. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1992, 151, 19-27.	5 . 6	57
25	Low cycle fatigue behavior of Sanicro25 steel at room and at elevated temperature. Materials Science & Samp; Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 615, 175-182.	5. 6	56
26	Growth of extrusions in localized cyclic plastic straining. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 500, 122-129.	5.6	55
27	Fatigue crack initiation – The role of point defects. International Journal of Fatigue, 2014, 65, 18-27.	5.7	53
28	Dislocation structures in cyclically strained X10CrAl24 ferritic steelâ ⁺ †. Acta Materialia, 2006, 54, 3429-3443.	7.9	51
29	High cycle plastic stress-strain response of metals. Materials Science and Engineering, 1974, 15, 231-237.	0.1	50
30	Experimental evidence and physical models of fatigue crack initiation. International Journal of Fatigue, 2016, 91, 294-303.	5 . 7	49
31	On the cyclic stress-strain curve evaluation in low cycle fatigue. Materials Science and Engineering, 1977, 28, 109-117.	0.1	47
32	Resistivity of fatigued copper single crystals. Materials Science and Engineering, 1987, 89, 35-43.	0.1	47
33	Nucleation stress for persistent slip bands in fatigued copper single crystals. Materials Science & Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1988, 101, 7-12.	5. 6	47
34	Analysis of the hysteresis loop in stainless steels I. Austenitic and ferritic steels. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 297, 144-153.	5. 6	47
35	Plastic strain-controlled short crack growth and fatigue life. International Journal of Fatigue, 2005, 27, 1192-1201.	5.7	47
36	Microstructure and dislocation arrangements in Sanicro 25 steel fatigued at ambient and elevated temperatures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 680, 168-181.	5.6	47

#	Article	IF	Citations
37	Fatigue softening of X10CrAl24 ferritic steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 319-321, 564-568.	5.6	46
38	Thermomechanical fatigue and damage mechanisms in Sanicro 25 steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 650, 52-62.	5.6	46
39	FATIGUE DAMAGE IN AUSTENITIC-FERRITIC DUPLEX STAINLESS STEELS. Fatigue and Fracture of Engineering Materials and Structures, 1995, 18, 65-77.	3.4	44
40	Mechanical properties of high niobium TiAl alloys doped with Mo and C. Materials and Design, 2016, 99, 284-292.	7.0	44
41	Microstructure in 316LN stainless steel fatigued at low temperature. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2000, 293, 275-280.	5.6	43
42	Profiles of persistent slip markings and internal structure of underlying persistent slip bands. Fatigue and Fracture of Engineering Materials and Structures, 2017, 40, 1101-1116.	3.4	42
43	The effect of intermediate annealing on the electrical resistivity and shear stress of fatigued copper. Scripta Metallurgica, 1970, 4, 761-764.	1.2	41
44	THE HYSTERESIS LOOP 2. AN ANALYSIS OF THE LOOP SHAPE. Fatigue and Fracture of Engineering Materials and Structures, 1982, 5, 33-44.	3.4	41
45	Stability of austenitic 316L steel against martensite formation during cyclic straining. Procedia Engineering, 2011, 10, 1279-1284.	1.2	39
46	TENSILE AND LCF PROPERTIES OF AISI 316LN SS AT 300 AND 77 $\hat{a} \in f$ K. Fatigue and Fracture of Engineering Materials and Structures, 1998, 21, 651-660.	3.4	38
47	Atomic resolution characterization of strengthening nanoparticles in a new high-temperature-capable 43Fe-25Ni-22.5Cr austenitic stainless steel. Materials Science & 2018; Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 719, 49-60.	5.6	38
48	LOW CYCLE FATIGUE DAMAGE ACCUMULATION IN ARMCO-IRON. Fatigue and Fracture of Engineering Materials and Structures, 1991, 14, 193-204.	3.4	37
49	Effective and internal stresses in cyclic straining of 316 stainless steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1996, 215, 104-112.	5.6	37
50	Cyclic Deformation, Crack Initiation, and Low-cycle Fatigue., 2003, , 1-39.		36
51	Half-cycle slip activity of persistent slip bands at different stages of fatigue life of polycrystalline nickel. Materials Science & Description A: Structural Materials: Properties, Microstructure and Processing, 2008, 492, 118-127.	5.6	35
52	AFM and SEM-FEG study on fundamental mechanisms leading to fatigue crack initiation. International Journal of Fatigue, 2015, 76, 11-18.	5.7	35
53	Small fatigue crack growth in aluminium alloy EN-AW 6082/T6. International Journal of Fatigue, 2010, 32, 1913-1920.	5.7	34
54	Fatigue crack initiation and growth in 43Fe-25Ni-22.5Cr austenitic steel at a temperature of 700 °C. International Journal of Fatigue, 2018, 114, 11-21.	5.7	32

#	Article	IF	Citations
55	Cyclic strain localization in polycrystalline copper at room temperature and low temperatures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1991, 132, 67-76.	5.6	31
56	Short crack growth in polycrystalline materials. Procedia Engineering, 2010, 2, 883-892.	1.2	31
57	Analysis of the hysteresis loop in stainless steels II. Austenitic–ferritic duplex steel and the effect of nitrogen. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 297, 154-161.	5.6	30
58	Mechanisms and kinetics of the early fatigue damage in crystalline materials. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 468-470, 33-39.	5.6	30
59	Damage mechanism in austenitic steel during high temperature cyclic loading with dwells. International Journal of Fatigue, 2018, 113, 335-344.	5.7	30
60	The dynamics of cyclic plastic deformation and fatigue life of low carbon steel at low temperatures. Materials Science and Engineering, 1976, 26, 157-166.	0.1	28
61	Cyclic response and early damage evolution in multiaxial cyclic loading of 316L austenitic steel. International Journal of Fatigue, 2017, 100, 466-476.	5.7	27
62	Role of deformation twinning in fatigue of CrCoNi medium-entropy alloy at room temperature. Scripta Materialia, 2021, 202, 113985.	5.2	27
63	On the mechanism of fatigue crack initiation in high-angle grain boundaries. International Journal of Fatigue, 2022, 158, 106721.	5.7	27
64	Evolution of the cyclic plastic response of Sanicro 25 steel cycled at ambient and elevated temperatures. International Journal of Fatigue, 2016, 83, 75-83.	5.7	26
65	Effect of metallurgical variables on the austenite stability in fatigued AISI 304 type steels. Engineering Fracture Mechanics, 2017, 185, 139-159.	4.3	26
66	FATIGUE DAMAGE IN TWO-STEP LOADING OF 316L STEEL II. SHORT CRACK GROWTH. Fatigue and Fracture of Engineering Materials and Structures, 1996, 19, 157-163.	3.4	24
67	Fatigue crack initiation in fibre-metal laminate glare 2. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1997, 234-236, 621-624.	5.6	24
68	Influence of dwell times on the thermomechanical fatigue behavior of a directionally solidified Ni-base superalloy. International Journal of Fatigue, 2015, 80, 426-433.	5.7	24
69	Kinetics of Quenchedâ€in Vacancies in Pure Platinum. Physica Status Solidi (B): Basic Research, 1967, 21, 581-591.	1.5	23
70	FATIGUE DAMAGE IN TWO STEP LOADING OF 316L STEEL I. EVOLUTION OF PERSISTENT SLIP BANDS. Fatigue and Fracture of Engineering Materials and Structures, 1996, 19, 147-155.	3.4	23
71	Microstructural changes during deformation of AISI 300 grade austenitic stainless steels: Impact of chemical heterogeneity. Procedia Structural Integrity, 2016, 2, 2299-2306.	0.8	23
72	Microstructural stability of ODS steels in cyclic loading. Fatigue and Fracture of Engineering Materials and Structures, 2015, 38, 936-947.	3.4	22

#	Article	IF	Citations
73	The shape of extrusions and intrusions produced by cyclic straining. International Journal of Materials Research, 2003, 94, 1327-1330.	0.8	22
74	Stress and strain concentration factor evaluation using the equivalent energy concept. Materials Science and Engineering, 1983, 61, 195-200.	0.1	21
75	Fatigue behavior of coated and uncoated cast Inconel 713LC at 800°C. International Journal of Fatigue, 2012, 41, 101-106.	5.7	21
76	Dislocation substructure in fatigued duplex stainless steel. Scripta Metallurgica Et Materialia, 1993, 29, 1553-1558.	1.0	20
77	Surface Relief and Internal Structure in Fatigued Stainless Sanicro 25 Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 1907-1911.	2.2	20
78	Initiation and growth of short fatigue cracks in austenitic Sanicro 25 steel. Fatigue and Fracture of Engineering Materials and Structures, 2018, 41, 1529-1545.	3.4	20
79	Isothermal fatigue behavior of cast superalloy Inconel 792-5A at 23 and 900°C. Journal of Materials Science, 2009, 44, 3305-3314.	3.7	19
80	Cyclic plastic response and fatigue life in superduplex 2507 stainless steel. International Journal of Fatigue, 2010, 32, 279-287.	5.7	19
81	The shape of early persistent slip markings in fatigued 316L steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 564, 8-12.	5.6	19
82	Microstructure and martensitic transformation in 316L austenitic steel during multiaxial low cycle fatigue at room temperature. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 767, 138407.	5.6	19
83	Cyclic stress-strain curve evaluation using incremental step test procedure. International Journal of Fatigue, 1991, 13, 216-222.	5.7	18
84	Influence of niobium alloying on the low cycle fatigue of cast TiAl alloys at room and high temperatures. Procedia Engineering, 2010, 2, 2297-2305.	1.2	18
85	Surface profile evolution and fatigue crack initiation in Sanicro 25 steel at room temperature. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 658, 221-228.	5.6	18
86	On the origin of extraordinary cyclic strengthening of the austenitic stainless steel Sanicro 25 during fatigue at 700 °C. Journal of Materials Research, 2017, 32, 4342-4353.	2.6	18
87	CYCLIC PLASTICITY AND LOW CYCLE FATIGUE LIFE IN VARIABLE AMPLITUDE LOADING. Fatigue and Fracture of Engineering Materials and Structures, 1979, 1, 123-133.	3.4	17
88	Cyclic strain localization in copper single crystals and polycrystals. Scripta Metallurgica Et Materialia, 1990, 24, 415-419.	1.0	17
89	Fatigue damage in polycrystalline copper below the fatigue limit. International Journal of Fatigue, 1994, 16, 403-408.	5.7	17
90	Fatigue behaviour of ODS ferritic-martensitic Eurofer steel. Procedia Engineering, 2010, 2, 717-724.	1.2	16

#	Article	IF	CITATIONS
91	Short crack growth kinetics and fatigue life of materials. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1997, 234-236, 970-973.	5.6	15
92	Low Cycle Fatigue of Cast Superalloy Inconel 738LC at High Temperature. Key Engineering Materials, 0, 385-387, 581-584.	0.4	15
93	AFM study of surface relief evolution in 316L steel fatigued at low and high temperatures. Procedia Engineering, 2010, 2, 1625-1633.	1.2	15
94	Stress dip technique for effective stress determination in cyclic straining. Scripta Metallurgica, 1979, 13, 847-850.	1.2	14
95	THE HYSTERESIS LOOP 3. STRESS-DIP EXPERIMENTS. Fatigue and Fracture of Engineering Materials and Structures, 1982, 5, 45-56.	3.4	14
96	Short crack growth close to the fatigue limit in low carbon steel. Scripta Metallurgica, 1984, 18, 1231-1234.	1.2	14
97	Microstructure of austenitic stainless steels of various phase stabilities after cyclic and tensile deformation. International Journal of Materials Research, 2011, 102, 1374-1377.	0.3	14
98	Short fatigue crack behaviour under low cycle fatigue regime. International Journal of Fatigue, 2017, 103, 207-215.	5.7	14
99	The effect of dwell on thermomechanical fatigue in superaustenitic steel Sanicro 25. Fatigue and Fracture of Engineering Materials and Structures, 2021, 44, 673-688.	3.4	14
100	The effect of the strain amplitude changes on the stress amplitude and resistivity of torsionally fatigued copper. European Physical Journal D, 1973, 23, 322-330.	0.4	13
101	FATIGUE GROWTH OF SURFACE CRACKS IN THE ELASTIC-PLASTIC REGION. Fatigue and Fracture of Engineering Materials and Structures, 1985, 8, 23-31.	3.4	13
102	Orientation dependence of surface relief topography in fatigued copper single crystals. Materials Science & Science & Properties, Microstructure and Processing, 1997, 234-236, 727-730.	5.6	13
103	Fatigue cracks in Eurofer 97 steel: Part I. Nucleation and small crack growth kinetics. Journal of Nuclear Materials, 2011, 412, 2-6.	2.7	13
104	Cyclic plastic response and fatigue life in symmetric and asymmetric cyclic loading. Procedia Engineering, 2011, 10, 568-577.	1.2	13
105	Fatigue behavior of ferritic–pearlitic–bainitic steel in loading with positive mean stress. International Journal of Fatigue, 2012, 39, 103-108.	5.7	13
106	High Temperature Low Cycle Fatigue of Superalloys Inconel 713LC and Inconel 792-5A. Key Engineering Materials, 2007, 348-349, 101-104.	0.4	12
107	Precipitate microstructure evolution in exposed IN738LC superalloy. Journal of Alloys and Compounds, 2014, 589, 462-471.	5 . 5	12
108	Surface relief evolution and fatigue crack initiation in Ren $\tilde{\mathbb{A}}$ \mathbb{Q} 41 superalloy cycled at room temperature. Materials Science & Science & Structural Materials: Properties, Microstructure and Processing, 2021, 819, 141520.	5.6	12

#	Article	IF	CITATIONS
109	Low-cycle fatigue properties of TiAl alloy with high Nb content. International Journal of Materials Research, 2009, 100, 349-352.	0.3	12
110	Intergranular fatigue crack initiation in polycrystalline copper. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 848, 143357.	5.6	12
111	Stage III Recovery of Copper Heavily Deformed in Torsion. Physica Status Solidi (B): Basic Research, 1970, 40, 677-685.	1.5	11
112	On the analysis of the hysteresis loop of ferritic steel in cyclic straining. Scripta Materialia, 2002, 47, 731-736.	5.2	11
113	Initiation and short crack growth in austenitic–ferritic duplex steelâ€effect of positive mean stress. Fatigue and Fracture of Engineering Materials and Structures, 2012, 35, 257-268.	3.4	11
114	Initiation of Stage I Fatigue Cracks – Experiments and Models. Procedia Engineering, 2015, 101, 386-394.	1.2	11
115	Electrical resistance of platinum wires during annealing and quenching in air and helium. European Physical Journal D, 1971, 21, 269-274.	0.4	10
116	Internal and effective stress analysis in stainless steels using the statistical approach method. Materials Science & Deproach method. Processing, 1997, 234-236, 456-458.	5.6	10
117	Dislocation structure and surface relief in fatigued metals. Materials Science & Dislocation structure and Structural Materials: Properties, Microstructure and Processing, 2005, 400-401, 405-408.	5.6	10
118	LCF Behaviour of Ultrafine Grained 301LN Stainless Steel. Procedia Engineering, 2014, 74, 147-150.	1.2	10
119	Analysis of cyclic plastic response of nickel based IN738LC superalloy. International Journal of Fatigue, 2014, 65, 44-50.	5 . 7	10
120	Change of absolute thermoelectric power of gold and platinum due to lattice defects. European Physical Journal D, 1964, 14, 176-188.	0.4	9
121	On the fatigue crack growth rate evaluation from experimental data. International Journal of Fracture, 1975, 11, 693-696.	2.2	9
122	Fatigue cracks in Eurofer 97 steel: Part II. Comparison of small and long fatigue crack growth. Journal of Nuclear Materials, 2011, 412, 7-12.	2.7	9
123	Misfit in Inconel-Type Superalloy. Advances in Materials Science and Engineering, 2013, 2013, 1-7.	1.8	9
124	A Comparison of Microstructure Evolution due to Fatigue Loading in Eurofer 97 and ODS Eurofer Steels. Procedia Engineering, 2014, 74, 401-404.	1.2	9
125	Cyclic plastic response and damage mechanisms in superaustenitic steel Sanicro 25 in high temperature cycling – Effect of tensile dwells and thermomechanical cycling. Theoretical and Applied Fracture Mechanics, 2020, 108, 102641.	4.7	9
126	Dislocation structures in polycrystalline copper cycled at low plastic strain amplitudes. Scripta Metallurgica Et Materialia, 1993, 28, 495-499.	1.0	8

#	Article	IF	Citations
127	In situ neutron diffraction study of the low cycle fatigue of the $\hat{1}\pm\hat{a}^{\hat{1}}$ duplex stainless steel. Physica B: Condensed Matter, 2006, 385-386, 597-599.	2.7	8
128	Fatigue of Steels., 2007,, 504-537. Effect of Al-Si diffusion coating on the fatigue behavior of cast Inconel 713LC at <mml:math< td=""><td></td><td>8</td></mml:math<>		8
129	altimg="si1.gif" display="inline" overflow="scroll" xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:ml="http://www.w3.org/1998/Math/MathML"	1.2	8
130	Analysis of Cyclic Plastic Response of Heat Resistant Sanicro 25 Steel at Ambient and Elevated Temperatures. Procedia Engineering, 2014, 74, 68-73.	1.2	8
131	Least-square determination of the binding energy of a divacancy in platinum from the isothermal annealing curves. Physics Letters, Section A: General, Atomic and Solid State Physics, 1967, 24, 649-650.	2.1	7
132	Calculation of the electrical resistivity and the thermoelectric power of vacancies in copper and gold. European Physical Journal D, 1967, 17, 171-177.	0.4	7
133	On the cyclic stress-strain response of copper at low stress anplitudes. Scripta Metallurgica, 1982, 16, 1235-1238.	1.2	7
134	Monotonic and Cyclic Properties of TiAl Alloys Doped with Nb, Mo and C. Procedia Engineering, 2014, 74, 405-408.	1.2	7
135	Basic Mechanisms Leading to Fatigue Failure of Structural Materials. Transactions of the Indian Institute of Metals, 2016, 69, 289-294.	1.5	7
136	Fracture and Damage Behavior in an Advanced Heat Resistant Austenitic Stainless Steel During LCF, TMF and CF. Procedia Structural Integrity, 2018, 13, 843-848.	0.8	7
137	Production, annihilation and migration of point defects in cyclic straining. Materialia, 2020, 14, 100938.	2.7	7
138	Atomic Force Microscopy Study of the Early Fatigue Damage. Materials Science Forum, 2005, 482, 45-50.	0.3	6
139	Effect of Temperature on the Low Cycle Fatigue of Cast Inconel 792-5A. Key Engineering Materials, 2007, 345-346, 383-386.	0.4	6
140	Fatigue Crack Initiation in Crystalline Materials – Experimental Evidence and Models. Key Engineering Materials, 2007, 345-346, 379-382.	0.4	6
141	Low Cycle Fatigue Behaviour of ODS Steels for Nuclear Application. Key Engineering Materials, 0, 465, 556-559.	0.4	6
142	Cyclic plasticity and strain localization in cast \hat{I}^3 -TiAl based alloy. Procedia Engineering, 2011, 10, 1390-1395.	1.2	6
143	Fatigue behaviour and surface relief in ODS steels. Procedia Engineering, 2011, 10, 1685-1690.	1.2	6
144	Analysis of the Effective and Internal Cyclic Stress Components in the Inconel Superalloy Fatigued at Elevated Temperature. Advanced Materials Research, 0, 278, 393-398.	0.3	6

#	Article	IF	Citations
145	Formation and Dissolution of $\hat{I}^3 \hat{a} \in \mathbb{M}$ Precipitates in IN792 Superalloy at Elevated Temperatures. Metals, 2016, 6, 37.	2.3	6
146	Frequency-dependent fatigue damage in polycrystalline copper analyzed by FIB tomography. Acta Materialia, 2021, 211, 116859.	7.9	6
147	Topography of the crack nuclei at the emerging persistent slip band in austenitic 316L steel. , 1998, , 559-564.		6
148	Influence of lattice imperfections on thermoelectric power of pure gold. European Physical Journal D, 1963, 13, 616-618.	0.4	5
149	Electrical Resistivity and Thermoelectric Power of Stacking Faults in Gold. Physica Status Solidi (B): Basic Research, 1965, 11, 673-681.	1.5	5
150	Change of electrical resistivity of polycrystalline copper during tensile deformation. European Physical Journal D, 1972, 22, 476-484.	0.4	5
151	CYCLIC STRESS-STRAIN RESPONSE OF 2 1/4Cr-1 Mo STEEL AT ELEVATED TEMPERATURES. Fatigue and Fracture of Engineering Materials and Structures, 1986, 9, 185-194.	3.4	5
152	Cyclic softening in annealed polycrystalline copper. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1992, 154, L15-L18.	5.6	5
153	Dislocation Structures in Nickel Based Superalloy Inconel 792-5A Fatigued at Room Temperature and 700°C. Materials Science Forum, 2008, 567-568, 429-432.	0.3	5
154	<i>In Situ</i> Study of the Mechanisms of High Temperature Damage in Elastic-Plastic Cyclic Loading of Nickel Superalloy. Advanced Materials Research, 0, 891-892, 530-535.	0.3	5
155	Cyclic Deformation, Crack Initiation, and Low-Cycle Fatigue. , 2016, , .		5
156	Low cycle fatigue of superalloy single crystals CMSX-4. , 1998, , 33-38.		5
157	Low Cycle Fatigue of Cast Î ³ -TiAl Based Alloys at High Temperature. Key Engineering Materials, 0, 452-453, 421-424.	0.4	4
158	Damage Evolution During Fatigue in Structural Materials. , 2012, 1, 3-12.		4
159	AFM and FIB Study of Cyclic Strain Localization and Surface Relief Evolution in Fatigued f.c.c. Polycrystals. Advanced Materials Research, 0, 891-892, 524-529.	0.3	4
160	Cyclic deformation behaviour and stability of grain-refined 301LN austenitic stainless structure. MATEC Web of Conferences, 2018, 165, 06005.	0.2	4
161	Advantageous Description of Short Fatigue Crack Growth Rates in Austenitic Stainless Steels with Distinct Properties. Metals, 2021, 11, 475.	2.3	4
162	Hardness of fatigued copper polycrystals and their relation to their dislocation structure. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1990, 124, L7-L10.	5.6	3

#	Article	IF	Citations
163	Lattice Defects in the Process of Fatigue in Crystalline Materials. Solid State Phenomena, 1993, 35-36, 405-410.	0.3	3
164	Cyclic Plastic Response and Fatigue Life of Materials. Key Engineering Materials, 2007, 348-349, 113-116.	0.4	3
165	Cyclic Response and Fatigue Life of TiAl Alloys at High Temperatures. Key Engineering Materials, 0, 417-418, 585-588.	0.4	3
166	Extrusion and intrusion evolution in cyclically strained cast superalloy Inconel 738LC using confocal laser scanning microscope and AFM. Journal of Physics: Conference Series, 2010, 240, 012054.	0.4	3
167	Mechanisms of High Temperature Damage in Elastoplastic Cyclic Loading of Nickel Superalloys and TiAl Intermetallics. Procedia Engineering, 2013, 55, 114-122.	1.2	3
168	Damage Evolution in Thermomechanical Loading of Stainless Steel. Procedia Structural Integrity, 2016, 2, 3407-3414.	0.8	3
169	Behaviour of ODS Steels in Cyclic Loading. Transactions of the Indian Institute of Metals, 2016, 69, 309-313.	1.5	3
170	Thermoelectric power of quenched platinum. European Physical Journal D, 1962, 12, 492-493.	0.4	2
171	Thermal Quasiâ€Equilibrium of Vacancies, Divacancies, and Impurities in Platinum. Physica Status Solidi (B): Basic Research, 1968, 28, 773-782.	1.5	2
172	Method of calculating the endurance of specimens with a stress raiser. 2. Strength of Materials, 1989, 21, 1245-1248.	0.5	2
173	Dislocation Structures of Duplex Stainless Steel in Uniaxial and Biaxial Cyclic Loading. Materials Science Forum, 2005, 482, 179-182.	0.3	2
174	Cyclic Stress in 316L Austenitic Stainless Steel at Low Temperatures. Materials Science Forum, 2008, 567-568, 401-404.	0.3	2
175	Fatigue Crack Propagation Rate in EUROFER 97 Estimated Using Small Specimens. Key Engineering Materials, 0, 452-453, 325-328.	0.4	2
176	Effect of Al and Al-Si diffusion coating on the low cycle fatigue behavior of Inconel 713LC. Procedia Engineering, 2011, 10, 1360-1365.	1.2	2
177	Effect of Temperature on the Cyclic Stress Components of Gamma - TiAl Based Alloy with Niobium Alloying. Key Engineering Materials, 0, 465, 447-450.	0.4	2
178	The True Shape of Persistent Slip Markings in Fatigued Metals. Key Engineering Materials, 0, 592-593, 781-784.	0.4	2
179	Surface Relief Formation in Relation to the Underlying Dislocation Arrangement. Solid State Phenomena, 0, 258, 526-529.	0.3	2
180	Effective and internal stresses in 713LC and Rene 41 superalloys using analysis of the hysteresis loop shape. Procedia Structural Integrity, 2019, 23, 523-528.	0.8	2

#	Article	IF	Citations
181	Multiaxial elastoplastic cyclic loading of austenitic 316L steel. Frattura Ed Integrita Strutturale, 2017, 11, 162-169.	0.9	2
182	The role of cyclic slip localization in fatigue damage of materials. European Physical Journal Special Topics, 1993, 03, C7-679-C7-684.	0.2	2
183	Hysteresis Loop Analysis in Cyclically Strained Materials. Advanced Structured Materials, 2015, , 185-205.	0.5	2
184	Quenched-in vacancies in nickel. European Physical Journal D, 1969, 19, 133-135.	0.4	1
185	Anihilation of positrons in cold-worked copper polycrystals. European Physical Journal D, 1974, 24, 825-826.	0.4	1
186	Dislocation Arrangements in Cyclically Strained Inconel 713LC., 2006,, 883-884.		1
187	Growth of Short Fatigue Cracks Emanating from Notches in an Austenitic-Ferritic Stainless Steel. Key Engineering Materials, 2007, 348-349, 117-120.	0.4	1
188	Fatigue properties of high Nb TiAl alloy. Journal of Physics: Conference Series, 2010, 240, 012057.	0.4	1
189	Low Cycle Fatigue Behavior of Cast Superalloy Inconel 713LC with Al Coating at 800 °C. Key Engineering Materials, 0, 452-453, 265-268.	0.4	1
190	Cyclic plasticity, cyclic creep and fatigue life of duplex stainless steel in cyclic loading with positive mean stress. Metallic Materials, 2011, 49, 347-354.	0.3	1
191	Cyclic Slip Localization and Crack Initiation in Crystalline Materials. Advanced Materials Research, 0, 891-892, 452-457.	0.3	1
192	Cyclic Plastic Response and Damage in Materials for High Temperature Applications*. Strength of Materials, 2014, 46, 601-607.	0.5	1
193	SEM & STEM Multi-scale Characterization of Fatigue Damage in CrCoNi Medium-entropy Alloy with Fully Recrystallized Microstructure. Microscopy and Microanalysis, 2020, 26, 2224-2225.	0.4	1
194	Nucleation stress for persistent slip bands in fatigued copper single crystals. Materials Science and Engineering, 1988, 101, 7-12.	0.1	1
195	OS05W0314 Atomic force microscopy and high resolution scanning electron microscopy evidence concerning fatigue crack nucleation. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2003, 2003.2, OS05W0314- OS05W0314.	0.0	1
196	High Temperature Low Cycle Fatigue of Superalloys Inconel 713LC and Inconel 792-5A. Key Engineering Materials, 0, , 101-104.	0.4	1
197	Surface Relief and Dislocation Structure in Fatigued Copper Single Crystal. , 1989, , 761-766.		1
198	Fatigue life curves of materials and the growth of short cracks. , 1998, , 529-534.		1

#	Article	IF	CITATIONS
199	Cyclic plastic response of nickel-based superalloy at room and at elevated temperatures*. Materialpruefung/Materials Testing, 2015, 57, 119-125.	2.2	1
200	Quantitative Model of the Surface Relief Formation in Cyclic Straining. Acta Physica Polonica A, 2015, 128, 675-681.	0.5	1
201	Short Crack Growth in 1441 and 1450 Al-Li Alloys. Materials Science Forum, 1996, 217-222, 1429-1434.	0.3	0
202	Effect Of Hardcor Surface Treatment On Fatigue Behaviour of 316L Austenitic Stainless Steel. Journal of the Mechanical Behavior of Materials, 1999, 10, 311-324.	1.8	0
203	Effect of Plasma Nitriding on Fatigue Behavior of 316L Stainless Steel. , 2006, , 224-228.		0
204	Fatigue Behavior of Ferritic-Pearlitic-Bainitic Steel – Effect of Positive Mean Stress. Key Engineering Materials, 0, 417-418, 577-580.	0.4	0
205	Cyclic plasticity and internal dislocation structure in two-phase alloy. Journal of Physics: Conference Series, 2010, 240, 012045.	0.4	0
206	Application of FIB technique to study of early fatigue damage in polycrystals. Journal of Physics: Conference Series, 2010, 240, 012058.	0.4	0
207	Influence of Al-Si Diffusion Coating on Low Cycle Fatigue Properties of Cast Superalloy Inconel 738LC at 800 °C. Key Engineering Materials, 0, 488-489, 307-310.	0.4	0
208	Cyclic Plasticity and Cyclic Creep in Austenitic-Ferritic Duplex Steel. Key Engineering Materials, 0, 465, 431-434.	0.4	0
209	Effect of Tensile Dwell on Low Cycle Fatigue of Cast Superalloy Inconel 792-5A at 800°C. Key Engineering Materials, 0, 488-489, 735-738.	0.4	0
210	Slip Activity of Persistent Slip Bands in early Stages of Fatigue Life of Austenitic 316L Steel. Key Engineering Materials, 0, 592-593, 785-788.	0.4	0
211	Fatigue of Steels., 2016,,.		0
212	Early damage and fatigue crack initiation at ambient and elevated temperatures in heat resistant austenitic steel. MATEC Web of Conferences, 2018, 165, 04008.	0.2	0
213	Cyclic plastic response and damage in superaustenitic steel in high temperature cycling with dwells and in thermomechanical cycling. Procedia Structural Integrity, 2019, 23, 275-280.	0.8	0
214	OS5(3)-10(OS05W0314) Atomic Force Microscopy and High Resolution Scanning Electron Microscopy Evidence Concerning Fatigue Crack Nucleation. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2003, 2003, 96.	0.0	0
215	ANALYSIS OF THE CYCLIC STRESS-STRAIN RESPONSE IN VARIABLE AMPLITUDE LOADING USING THE RAIN-FLOW METHOD., 1992, , 123-131.		0
216	Dynamics of Cyclic Plastic Straining in Copper Single Crystals. , 1992, , 172-177.		0

#	Article	IF	CITATIONS
217	Cyclic strain localisation, crack nucleation and short crack growth. , 1998, , 493-504.		O
218	Low-cycle fatigue behaviour of A 316LN stainless steel at 77 K and associated structural transformation. , 1998, , 309-314.		0
219	The evaluation of internal and effective stresses during low cycle fatigue in stainless steels. , 1998, , 81-86.		O
220	Initiation and Early Growth of Fatigue Cracks. Minerals, Metals and Materials Series, 2019, , 1125-1135.	0.4	0
221	The shape of extrusions and intrusions produced by cyclic straining. International Journal of Materials Research, 2022, 94, 1327-1330.	0.3	O
222	Mechanisms of the Early Fatigue Damage in Metallic Materials. Communications - Scientific Letters of the University of Zilina, 2006, 8, 5-9.	0.6	0