Hryhoriy Nykyforchyn

List of Publications by Year
in descending order

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140 papers	1,551 citations	304743 22 h-index	377865 34 g-index
142 all docs	142 docs citations	142 times ranked	570 citing authors

#	Article	IF	Citations
1	Influence of electrolyte on corrosion properties of plasma electrolytic conversion coated magnesium alloys. Surface and Coatings Technology, 2007, 201, 8709-8714.	4.8	92
2	Spectral analysis of an electrolytic plasma in the process of synthesis of aluminum oxide. Materials Science, 1995, 30, 333-343.	0.9	91
3	Influence of process parameters on the corrosion properties of electrolytic conversion plasma coated magnesium alloys. Surface and Coatings Technology, 2005, 200, 68-72.	4.8	84
4	Environmentally assisted â€œin-bulkâ€•steel degradation of long term service gas trunkline. Engineering Failure Analysis, 2010, 17, 624-632.	4.0	83
5	In-service degradation of gas trunk pipeline X52 steel. Materials Science, 2008, 44, 104.	0.9	48
6	Effect of the long-term service of the gas pipeline on the properties of the ferrite-pearlite steel. Materials and Corrosion - Werkstoffe Und Korrosion, 2009, 60, 716-725.	1.5	46
7	Specific features of hydrogen-induced corrosion degradation of steels of gas and oil pipelines and oil storage reservoirs. Materials Science, 2011, 47, 127-136.	0.9	43
8	Computer analysis of characteristic elements of fractographic images. Materials Science, 2013, 48, 474-481.	0.9	42
9	Stress corrosion cracking of gas pipeline steels of different strength. Procedia Structural Integrity, 2016, 2, 509-516.	0.8	41
10	Influence of operation of Kh52 steel on corrosion processes in a model solution of gas condensate. Materials Science, 2008, 44, 619-629.	0.9	38
11	Analysis and mechanical properties characterization of operated gas main elbow with hydrogen assisted large-scale delamination. Engineering Failure Analysis, 2017, 82, 364-377.	4.0	37
12	Evaluation of the influence of shutdowns of a technological process on changes in the in-service state of the metal of main steam pipelines of thermal power plants. Materials Science, 2010, 46, 177-189.	0.9	32
13	Properties of synthesised oxide-ceramic coatings in electrolyte plasma on aluminium alloys. Surface and Coatings Technology, 1998, 100-101, 219-221.	4.8	31
14	Production of conversion oxide-ceramic coatings on zirconium and titanium alloys. Materials Science, 2006, 42, 277-286.	0.9	30
15	Mechanical analysis at different scales of gas pipelines. Engineering Failure Analysis, 2018, 90, 434-439.	4.0	30
16	Hydrogen degradation of steels in gas mains after long periods of operation. Materials Science, 2007, 43, 708-717.	0.9	27
17	Plasma Electrolytic Oxidation of Arc-Sprayed Aluminum Coatings. Journal of Thermal Spray Technology, 2007, 16, 998-1004.	3.1	26
18	Corrosion Degradation of Steel of an Elbow of Gas Pipeline with Large-Scale Delamination after Long-Term Operation. Materials Science, 2017, 52, 861-865.	0.9	26

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19	Abnormal manifestation of the high-temperature degradation of the weld metal of a low-alloy steel welded joint. Materials Science, 2007, 43, 77-84.	0.9	25
20	Degradation of steels used in gas main pipelines during their 40-year operation. Strength of Materials, 2009, 41, 501-505.	0.5	25
21	Non-destructive evaluation of brittle fracture resistance of operated gas pipeline steel using electrochemical fracture surface analysis. Engineering Failure Analysis, 2019, 104, 617-625.	4.0	24
22	Embrittlement of the steel of an oil-trunk pipeline. Materials Science, 2004, 40, 302-304.	0.9	23
23	Assessment of Operational Degradation of Pipeline Steels. Materials, 2021, 14, 3247.	2.9	23
24	Effect of crack closure and evaluation of the cyclic crack resistance of constructional alloys. Soviet Materials Science, 1983, 19, 212-225.	0.0	22
25	Feature of stress corrosion cracking of degraded gas pipeline steels. Procedia Structural Integrity, 2019, 16, 153-160.	0.8	22
26	Corrosion Resistance of Pipe Steel in Oilâ€“Water Media. Materials Science, 2002, 38, 424-429.	0.9	21
27	Wear Resistance of Steels with Surface Nanocrystalline Structure Generated by Mechanical-Pulse Treatment. Nanoscale Research Letters, 2017, 12, 150.	5.7	20
28	Porosity and Corrosion Properties of Electrolyte Plasma Coatings on Magnesium Alloys. Materials Science, 2004, 40, 585-590.	0.9	19
29	Role of hydrogen in operational degradation of pipeline steel. Procedia Structural Integrity, 2020, 28, 896-902.	0.8	19
30	Effect of damage in service of 12Kh1MF steam-pipe steel on its crack resistance characteristics. Materials Science, 1998, 34, 110-114.	0.9	18
31	Electrochemical fracture analysis of in-service natural gas pipeline steels. Procedia Structural Integrity, 2018, 13, 1215-1220.	0.8	17
32	Assessment of the In-Service Degradation of Pipeline Steel by Destructive and Nondestructive Methods. Materials Science, 2012, 47, 583-589.	0.9	16
33	Effect of Nanostructurisation of Structural Steels on its Wear Resistance and Hydrogen Embittlement Resistance. Solid State Phenomena, 0, 225, 65-70.	0.3	14
34	Formation of Surface Corrosion-Resistant Nanocrystalline Structures on Steel. Nanoscale Research Letters, 2016, 11, 51.	5.7	13
35	Structural steels surface modification by mechanical pulse treatment for corrosion protection and wear resistance. Surface and Coatings Technology, 1998, 100-101, 125-127.	4.8	12
36	Effect of high-temperature degradation of heat-resistant steel on the mechanical and fractographic characteristics of fatigue crack growth. Materials Science, 1999, 35, 499-508.	0.9	12

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37	Degradation of Welded Joints of Steam Pipelines of Thermal Electric Power Plants in Hydrogenating Media. Materials Science, 2004, 40, 836-843.	0.9	12
38	Simultaneous Reduction of Wear and Corrosion of Titanium, Magnesium and Zirconium Alloys by Surface Plasma Electrolytic Oxidation Treatment. Advanced Materials Research, 0, 38, 27-35.	0.3	12
39	Fatigue Crack Growth Rates of S235 and S355 Steels after Friction Stir Processing. Materials Science Forum, 0, 726, 203-210.	0.3	12
40	Hydrogen assisted macrodelamination in gas lateral pipe. Procedia Structural Integrity, 2016, 2, 501-508.	0.8	12
41	Effect of hydrogen on the kinetics and mechanism of fatigue crack growth in structural steels. Materials Science, 1997, 33, 504-515.	0.9	11
42	Fractographic Signs of the In-Service Degradation of Welded Joints of Oil Mains. Materials Science, 2015, 51, 165-171.	0.9	11
43	Influence of Hydrogen on the Formation of Fatigue Thresholds in Structural Steels. Materials Science, 2001, 37, 252-263.	0.9	10
44	Automated determination of grain geometry in an exploited steam-pipeline steel. Materials Science, 2009, 45, 350-357.	0.9	10
45	Hydrogen Permeability of the Surface Nanocrystalline Structures of Carbon Steel. Materials Science, 2015, 50, 698-705.	0.9	9
46	Influence of Hydrogen on the Mechanical Properties of Steels with the Surface Nanostructure. Springer Proceedings in Physics, 2015, , 457-465.	0.2	9
47	Structural sensitivity of the cyclic crack resistance of rotor steel in gaseous hydrogen. Soviet Materials Science, 1985, 20, 424-429.	0.0	8
48	Micro and macro mechanical analysis of gas pipeline steels. Procedia Structural Integrity, 2017, 5, 627-632.	0.8	8
49	Physical and Mechanical Properties of Surface Nanocrystalline Structures Generated by Severe Thermal-Plastic Deformation. Springer Proceedings in Physics, 2015, , 31-41.	0.2	8
50	In-Service Degradation of Pipeline Steels. Lecture Notes in Civil Engineering, 2021, , 15-29.	0.4	8
51	Influence of fatigue crack closure and geometry on the structural sensitivity of the near-threshold fatigue of steels. Soviet Materials Science, 1984, 20, 62-67.	0.0	7
52	Specific features of the influence of hydrogen on the properties and mechanism of fracture of the metal of welded joints of steam pipelines at thermal power plants. Materials Science, 2006, 42, 451-460.	0.9	7
53	Effect of hydrogenation on the fracture mode of a reactor pressure-vessel steel. Materials Science, 2009, 45, 613-625.	0.9	7
54	In-service degradation of 20Kh13 steel for blades of steam turbines of thermal power plants. Materials Science, 2012, 47, 447-456.	0.9	7

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55	Structure and Properties of the Steels of Hyperboloid Gridshell shukhovâ€™s Towers After Long-Term Operation. Materials Science, 2014, 49, 787-795.	0.9	7
56	Evaluation of the Residual Life of a Pipe of Oil Pipeline with an External Surface Stress-Corrosion Crack for a Laminar Flow of Oil with Repeated Hydraulic Shocks. Materials Science, 2017, 53, 216-225.	0.9	7
57	Laboratory method for simulating hydrogen assisted degradation of gas pipeline steels. Procedia Structural Integrity, 2019, 17, 568-575.	0.8	7
58	Evaluation of impact toughness of gas pipeline steels under operation using electrochemical method. Procedia Structural Integrity, 2019, 22, 299-304.	0.8	7
59	Wear resistance of the surface nanocrystalline structure under an action of diethylene glycol medium. Applied Nanoscience (Switzerland), 2019, 9, 1085-1090.	3.1	7
60	Hydrogen degradation of steels under long-term in-service conditions. , 2008, , 349-361.		7
61	Methodology of hydrogen embrittlement study of long-term operated natural gas distribution pipeline steels caused by hydrogen transport. Frattura Ed Integrita Strutturale, 2022, 16, 396-404.	0.9	7
62	Electrochemical Properties of Steels in a Model Hydrogen Galvanic Couple. Materials Science, 2005, 41, 223-229.	0.9	6
63	Electrochemical evaluation of the in-service degradation of an aircraft aluminum alloy. Materials Science, 2008, 44, 254-259.	0.9	6
64	Cyclic-corrosion crack resistance: Rules of the formation of thresholds and life capabilities of various structural alloys. Soviet Materials Science, 1985, 21, 195-207.	0.0	5
65	Cyclic crack resistance of constructional steels in gaseous hydrogen. Soviet Materials Science, 1987, 22, 439-450.	0.0	5
66	Realization of synergism in 1-, 2-, 3-benzotriazole trimolybdate, tungstate, and chromate corrosion inhibitors. Materials Science, 2006, 42, 589-600.	0.9	5
67	Specific features of the in-service bulk degradation of structural steels under the action of corrosive media. Strength of Materials, 2009, 41, 651-663.	0.5	5
68	Brittle-Fracture Resistance of the Metal of Hyperboloid Gridshell Shukhov Tower. Materials Science, 2015, 50, 578-584.	0.9	5
69	Analysis of the Plasticity Characteristics of Progressively Drawn Pearlitic Steel Wires. Materials Science, 2016, 51, 514-519.	0.9	5
70	Non-destructive evaluation of operated pipeline steel state taking into account degradation stage. Procedia Structural Integrity, 2020, 26, 219-224.	0.8	5
71	Factors in acceleration of crack growth during corrosion fatigue of high-strength steels. Soviet Materials Science, 1981, 16, 406-410.	0.0	4
72	Inhibitor protection of high-strength steels from corrosion cracking in the stage of crack propagation. Soviet Materials Science, 1981, 17, 42-49.	0.0	4

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73	Conditions of invariance of corrosion crack resistance characteristics. Soviet Materials Science, 1982, 17, 219-227.	0.0	4
74	Influence of hydrogenation on high-temperature corrosion fatigue of Î±-titanium alloys. Materials Science, 1998, 34, 390-397.	0.9	4
75	Wear Resistance of Mechanical-Pulse Treated 40Kh Steel during Abrasive Friction and Cavitation. Materials Science, 2002, 38, 873-879.	0.9	4
76	Analysis of Long-Term in-Service Degradation of the Shukhov Tower Elements. Strength of Materials, 2015, 47, 679-688.	0.5	4
77	Diagnostic Indications of the In-Service Degradation of the Pressure Regulator of a Gas-Transportation System. Materials Science, 2016, 52, 233-239.	0.9	4
78	SYNTHESIS OF OXIDE-CERAMIC COATINGS ON MAGNESIUM ALLOYS AND THEIR CORROSION PROPERTIES. High Temperature Material Processes, 2003, 7, 6.	0.6	4
79	Kinetic effects in the mechanics of delayed fracture of high-strength alloys. Soviet Materials Science, 1977, 12, 347-360.	0.0	3
80	An investigation of the j-integral method for rating the crack resistance of constructional materials (a review). Soviet Materials Science, 1978, 14, 296-308.	0.0	3
81	The applicability of criteria of fracture mechanics for evaluating the hydrogen embrittlement of high-strength steels. Soviet Materials Science, 1981, 16, 532-537.	0.0	3
82	Influence of the scale factor on the cyclic crack resistance of plastic steels in the low-amplitude area of loading. Soviet Materials Science, 1986, 21, 347-353.	0.0	3
83	The role of residual stresses and strain hardening in the change in corrosion-cyclic crack resistance of casing steels. Soviet Materials Science, 1987, 22, 386-395.	0.0	3
84	Relationship of acoustic emission to the kinetics and micromechanism of fatigue failure of high-strength steel with a martensitic structure. Soviet Materials Science, 1987, 23, 156-160.	0.0	3
85	Mechanical situation at the tip of a corrosion-fatigue crack and the cyclic crack resistance of steels. Soviet Materials Science, 1988, 24, 105-114.	0.0	3
86	Title is missing!. Materials Science, 2002, 38, 471-483.	0.9	3
87	Electrochemical and Corrosion Properties of Hydrogenated 45 and 12KH18N10T Steels. Materials Science, 2005, 41, 508-519.	0.9	3
88	Mechanical fabrication methods of nanostructured surfaces. , 2021, , 25-67.		3
89	Two features in rating the corrosion crack resistance of constructional alloys. Soviet Materials Science, 1982, 18, 30-40.	0.0	2
90	Kinetics and mechanism of corrosion-fatigue crack growth in ferritic-pearlitic class steels. Soviet Materials Science, 1983, 19, 22-30.	0.0	2

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91	Static corrosion crack resistance of heat-resistant vessel steels and their weld joints. Soviet Materials Science, 1984, 20, 326-332.	0.0	2
92	Computation model of corrosion-fatigue crack growth in thin metallic plates. Materials Science, 1995, 30, 25-30.	0.9	2
93	Effect of pyrophosphate-polyphosphate inhibitors on the processes of corrosion and salt deposition in aqueous systems. Materials Science, 1997, 33, 346-357.	0.9	2
94	Estimation of Damage to the Collector of a Water Economizer by Thermal Fatigue Cracks. Materials Science, 2004, 40, 132-138.	0.9	2
95	Evaluation of corrosion defects in oil pipelines based on the approaches of fracture mechanics. Materials Science, 2011, 46, 619-627.	0.9	2
96	Corrosion cracking of high-strength steel in antiplane strain. Soviet Materials Science, 1977, 13, 35-38.	0.0	1
97	Adsorption reduction of the crack resistance of steel in static loading. Soviet Materials Science, 1977, 12, 20-25.	0.0	1
98	Rating the crack resistance of structural steels. Soviet Materials Science, 1978, 14, 139-143.	0.0	1
99	Influence of corrosive medium composition on crack development in high-strength steel with a martensitic structure. Soviet Materials Science, 1984, 20, 91-97.	0.0	1
100	A new method of increasing the cyclic crack resistance of structural parts. Soviet Materials Science, 1985, 21, 191-193.	0.0	1
101	Cyclic crack resistance of an anticorrosion surfacing ? 15Kh2MFA steel joint. Soviet Materials Science, 1986, 21, 432-440.	0.0	1
102	Principles of inhibiting of corrosion-static crack growth in constructional steels caused by hydrogen embrittlement. Soviet Materials Science, 1987, 23, 241-246.	0.0	1
103	Mechanism of the effect of hydrogen on fatigue crack propagation in structural steels. Soviet Materials Science, 1988, 24, 244-246.	0.0	1
104	A two-parameter failure criterion for fatigue-crack growth. Soviet Materials Science, 1990, 26, 43-49.	0.0	1
105	Influence of hydrogen on deformation and torsional fracture of high-strength steel. Materials Science, 1994, 29, 413-419.	0.9	1
106	Distinctive features of the effect of laser treatment on the corrosion-fatigue fracture of structural steel. Materials Science, 1995, 30, 653-662.	0.9	1
107	Evaluation of the rate of diffusion growth of voids with regard for the concentration of stresses in their vicinity. Materials Science, 1998, 34, 197-202.	0.9	1
108	Distinctive features of fatigue crack growth in 14Mo V63 pipe steel after service. Materials Science, 1999, 35, 381-388.	0.9	1

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109	Title is missing!. Materials Science, 2000, 36, 534-540.	0.9	1
110	Evaluation of heat release in the process of pulsed mechanical hardening of titanium alloys. Materials Science, 2008, 44, 418-422.	0.9	1
111	Electrochemical Characteristics of PEO Treated Electric Arc Coatings on Lightweight Alloys. Advanced Materials Research, 0, 138, 55-62.	0.3	1
112	Analysis of operational factors affecting the serviceability of seaport hoisting and transporting equipment. Procedia Structural Integrity, 2022, 41, 326-332.	0.8	1
113	Effect of water and humidity on the crack resistance of structural steels with brief loading. Soviet Materials Science, 1975, 10, 13-15.	0.0	0
114	Methodological aspects of determining fracture toughness of high-strength structural steels in operating media. Soviet Materials Science, 1976, 10, 555-560.	0.0	0
115	Installation for studying resistance of materials to cracking under prolonged loading in working environments. Soviet Materials Science, 1976, 11, 497-498.	0.0	0
116	Effect of aqueous medium on long-term crack stability of heat-hardened reinforcement. Soviet Materials Science, 1976, 11, 602-604.	0.0	0
117	Fracture toughness of high-strength bar reinforcement. Soviet Materials Science, 1976, 11, 696-700.	0.0	0
118	Fractographic investigations of the easing of crack propagation in hardened steels by water. Soviet Materials Science, 1976, 11, 143-148.	0.0	0
119	An effective hypothesis proposed for evaluating the effect of corrosive media on the cyclic crack resistance of metals and alloys. Soviet Materials Science, 1979, 14, 469-475.	0.0	0
120	Crack geometry factor and the structural sensitivity of the corrosion crack resistance of low-alloy steels in long-term loading. Soviet Materials Science, 1984, 19, 373-381.	0.0	0
121	Threshold of corrosion-static crack resistance as a characteristic of the competitive capacity of different constructional alloys. Soviet Materials Science, 1985, 21, 118-129.	0.0	0
122	Influence of test temperature on the crack resistance of high-strength steels in corrosive media and after preliminary hydrogen impregnation. Soviet Materials Science, 1986, 22, 245-252.	0.0	0
123	Method features of evaluation of the cyclic crack resistance of constructional steels in gaseous media. Soviet Materials Science, 1986, 22, 184-187.	0.0	0
124	Effect of the geometry of the tip of the preinduced fatigue crack on the level of KIscc. Soviet Materials Science, 1987, 22, 601-605.	0.0	0
125	Role of the adsorption factor in reduction of the long-term static crack resistance of high-strength steel in gaseous media. Soviet Materials Science, 1988, 23, 357-361.	0.0	0
126	Adequate methods of evaluating the service properties of metals with allowance for cyclic loading and corrosion effects. Strength of Materials, 1988, 20, 275-279.	0.5	0

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127	A crack growth criterion in research on cyclic cracking resistance in elevated-plasticity materials. Soviet Materials Science, 1990, 25, 560-564.	0.0	0
128	High-temperature cracking resistance in cast steel in reforming oven tubes. Soviet Materials Science, 1990, 26, 183-188.	0.0	0
129	A two-parameter damage criterion and high-temperature fatigue crack growth in a corrosion-resistant steel. Soviet Materials Science, 1991, 26, 497-505.	0.0	0
130	Double influence of hydrogen on fatigue crack growth in heat-resistant steels. Materials Science, 1995, 30, 403-409.	0.9	0
131	Some ambiguities in the experimental determination of the parameters of fracture mechanics. Materials Science, 1996, 32, 433-443.	0.9	0
132	Analytic evaluation of the pressure of methane in microvoids of 2.25Cr-1Mo steel subjected to hydrogen attack. Materials Science, 1998, 34, 512-520.	0.9	0
133	Percolation methods for the construction of curves of hydrogen-assisted corrosion of chromium-molybdenum steels. Materials Science, 1999, 35, 790-795.	0.9	0
134	Corrosion Symposia in Poland. Materials Science, 2000, 36, 943-944.	0.9	0
135	â€œPLAN-Eastâ€•International Project of the â€œInco-Copernicusâ€•Program. Materials Science, 2000, 36, 784-785.	0.9	0
136	Title is missing!. Materials Science, 2001, 37, 782-789.	0.9	0
137	Adsorption Effect in Corrosion Fracture Mechanics. Materials Science, 2005, 41, 295-303.	0.9	0
138	Degradation of a low-carbon steel in long operation in an oil-hydraulic unit. Materials Science, 2009, 45, 84-88.	0.9	0
139	Fatigue Characteristic of S355J2 Steel after Surface Frictional-Mechanical Treatment in Corrosive Environment. Solid State Phenomena, 0, 224, 21-26.	0.3	0
140	POROSITY AND CORROSION RESISTANCE OF PLASMA CONVERSION COATINGS ON MAGNESIUM ALLOYS. High Temperature Material Processes, 2004, 8, 635-643.	0.6	0