Lubos Nahlik

List of Publications by Year
in descending order

126 papers	1,088 citations	393982 19 h-index	500791 28 g-index
127 all docs	127 docs citations	127 times ranked	500 citing authors

#	Article	IF	Citations
1	How hydrogen bonds influence the slow crack growth resistance of polyamide 12. Polymer, 2022, 239, 124437.	1.8	6
2	Residual stress determination by the layer removal and X-ray diffraction measurement â€“ correction method. MethodsX, 2022, , 101768.	0.7	0
3	Correlation of the cyclic cracked round bar test and hydrostatic pressure test for unplasticized polyvinylchloride. Polymer Testing, 2021, 95, 107125.	2.3	5
4	Crack Propagation Analysis of Compression Loaded Rolling Elements. Materials, 2021, 14, 2656.	1.3	1
5	Effect of Underload Cycles on Oxide-Induced Crack Closure Development in Cr-Mo Low-Alloy Steel. Materials, 2021, 14, 2530.	1.3	7
6	Structure-Property Relationships of Polyamide 12 Grades Exposed to Rapid Crack Extension. Materials, 2021, 14, 5899.	1.3	3
7	Mechanisms of rapid fracture in PA12 grades. Theoretical and Applied Fracture Mechanics, 2021, , 103145.	2.1	2
8	Slow crack growth resistance of modern PA-U12 grades measured by cyclic cracked round bar tests and strain hardening tests. Polymer Testing, 2020, 86, 106468.	2.3	8
9	Classically determined effective Î”K fails to quantify crack growth rates. Theoretical and Applied Fracture Mechanics, 2020, 108, 102608.	2.1	7
10	Numerical simulations of semi-elliptical fatigue crack propagation. AIP Conference Proceedings, 2020, , .	0.3	0
11	Stress intensity factors in novel specimens for crack propagation under loading conditions II+III in polymers. AIP Conference Proceedings, 2020, , .	0.3	0
12	Effect of the free surface on the fatigue crack front curvature at high stress asymmetry. International Journal of Fatigue, 2019, 118, 249-261.	2.8	19
13	Strategy of plasticity induced crack closure numerical evaluation. Theoretical and Applied Fracture Mechanics, 2019, 102, 59-69.	2.1	15
14	Quantitative dependence of oxide-induced crack closure on air humidity for railway axle steel. International Journal of Fatigue, 2019, 123, 213-224.	2.8	25
15	Methodology for estimation of residual stresses in hardened railway axle. Procedia Structural Integrity, 2019, 23, 185-190.	0.3	2
16	Numerical evaluation of plasticity induced crack closure in 3D structures. Procedia Structural Integrity, 2019, 23, 101-106.	0.3	1
17	Lifetime Calculation of Soil-Loaded Non-Pressure Polymer Pipes. Key Engineering Materials, 2019, 827, 141-146.	0.4	1
18	Fracture Mechanics Lifetime Prediction of Polyethylene Pipes. Journal of Pipeline Systems Engineering and Practice, 2019, 10, .	0.9	35

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19	Estimation of critical applied stress for crack initiation from a sharp V-notch. Theoretical and Applied Fracture Mechanics, 2018, 93, 247-262.	2.1	7
20	Numerical simulations of cracked round bar test: Effect of residual stresses and crack asymmetry. Engineering Fracture Mechanics, 2018, 203, 18-31.	2.0	8
21	Crack closure in near-threshold fatigue crack propagation in railway axle steel EA4T. Engineering Fracture Mechanics, 2017, 185, 2-19.	2.0	46
22	Short fatigue crack behaviour under low cycle fatigue regime. International Journal of Fatigue, 2017, 103, 207-215.	2.8	14
23	Fatigue lifetime estimation of railway axles. Engineering Failure Analysis, 2017, 73, 139-157.	1.8	29
24	3D Model of Crack Propagation in Particulate Ceramic Composite Containing Residual Stresses. Key Engineering Materials, 2017, 754, 103-106.	0.4	0
25	Effect of residual stresses on the fatigue lifetime of railway axle. Procedia Structural Integrity, 2017, 4, 42-47.	0.3	7
26	Accelerated Tests for Lifetime Prediction of PEâ€HD Pipe Grades. Macromolecular Symposia, 2017, 373, 1600096.	0.4	11
27	The Effect of the Free Surface on the Singular Stress Field at the Fatigue Crack Front. Strojnicky Casopis, 2017, 67, 69-76.	0.3	0
28	Influence of Residual Stresses and Particle Properties on Mechanical Response of the Material in Particulate Ceramic Composites. Key Engineering Materials, 2016, 713, 212-215.	0.4	1
29	Influence of Initial Inclined Surface Crack on Estimated Residual Fatigue Lifetime of Railway Axle. Journal of Multiscale Modeling, 2016, 07, 1640007.	1.0	2
30	Description of short fatigue crack propagation under low cycle fatigue regime. Procedia Structural Integrity, 2016, 2, 3010-3017.	0.3	6
31	Influence of variable stress ratio during train operation on residual fatigue lifetime of railway axles. Procedia Structural Integrity, 2016, 2, 3585-3592.	0.3	9
32	Residual stress in polyethylene pipes. Polymer Testing, 2016, 54, 288-295.	2.3	26
33	Point load effect on the buried polyolefin pipes lifetime. Polymer Engineering and Science, 2016, 56, 79-86.	1.5	6
34	A failure scenario of ceramic laminates with strong interfaces. Engineering Fracture Mechanics, 2016, 167, 56-67.	2.0	7
35	Residual fatigue lifetime estimation of railway axles for various loading spectra. Theoretical and Applied Fracture Mechanics, 2016, 82, 25-32.	2.1	41
36	Cyclic tests on cracked round bars as a quick tool to assess the long term behaviour of thermoplastics and elastomers. Polymer Testing, 2015, 45, 83-92.	2.3	27

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37	On crack propagation in the welded polyolefin pipes with and without the presence of weld beads. Materials and Design, 2015, 87, 95-104.	3.3	9
38	Influence of Threshold Values on Residual Fatigue Lifetime of Railway Axles under Variable Amplitude Loading. Procedia Engineering, 2015, 101, 380-385.	1.2	9
39	Estimation of stepwise crack propagation in ceramic laminates with strong interfaces. Frattura Ed Integrita Strutturale, 2015, 9, .	0.5	0
40	Critical applied stresses for a crack initiation from a sharp V-notch. Frattura Ed Integrita Strutturale, 2014, 8, 55-61.	0.5	1
41	Assessment of the Stability of a Surface Crack in Laminates. Mechanics of Composite Materials, 2014, 50, 9-16.	0.9	1
42	Comparison of Different Load Spectra on Residual Fatigue Lifetime of Railway Axle. Procedia Engineering, 2014, 74, 313-316.	1.2	17
43	Determination of slow crack growth behaviour of polyethylene pressure pipes with cracked round bar test. Polymer Testing, 2014, 40, 299-303.	2.3	27
44	Residual stress distribution in extruded polypropylene pipes. Polymer Testing, 2014, 40, 88-98.	2.3	22
45	Small fatigue crack propagation in Y2O3 strengthened steels. Journal of Nuclear Materials, 2014, 452, 370-377.	1.3	11
46	Investigation of slow crack growth initiation in polyethylene pipe grades with accelerated cyclic tests. Engineering Fracture Mechanics, 2013, 101, 2-9.	2.0	20
47	The effect of residual stress on polymer pipe lifetime. Engineering Fracture Mechanics, 2013, 108, 98-108.	2.0	26
48	Determination of the Effect of Interphase on the Fracture Toughness and Stiffness of a Particulate Polymer Composite. Mechanics of Composite Materials, 2013, 49, 475-482.	0.9	16
49	The effect of constraint level on a crack path. Engineering Failure Analysis, 2013, 29, 83-92.	1.8	13
50	Multilayer polymer pipes failure assessment based on a fracture mechanics approach. Engineering Failure Analysis, 2013, 33, 151-162.	1.8	16
51	The applicability of the Pennsylvania Notch Test for a new generation of PE pipe grades. Polymer Testing, 2013, 32, 106-114.	2.3	28
52	Numerical Modelling of Particulate Composite with a Hyperelastic Matrix. Key Engineering Materials, 2012, 525-526, 25-28.	0.4	1
53	The Estimation of Micro-Crack Behavior in Polymer Particulate Composite with Soft Interphase. Advanced Materials Research, 2012, 482-484, 1660-1663.	0.3	4
54	Numerical Assessment of PE 80 and PE 100 Pipe Lifetime Based on Parisâ€Erdogan Equation. Macromolecular Symposia, 2012, 311, 112-121.	0.4	32

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55	Constraint effect on the slow crack growth in polyethylene. International Journal of Structural Integrity, 2012, 3, 118-126.	1.8	1
56	Crack propagation in a welded polyolefin pipe. International Journal of Structural Integrity, 2012, 3, 148-157.	1.8	11
57	Investigation of the Slow Crack Growth Behavior of Static and Cyclic Loaded Specimens of Polyethylene by 2D and 3D Optical Fracture Surface Analysis. Macromolecular Symposia, 2012, 311, 103-111.	0.4	8
58	Estimation of the critical configuration of a crack arrested at the interface between two materials. Computational Materials Science, 2012, 64, 225-228.	1.4	6
59	Estimation of the macroscopic stress-strain curve of a particulate composite with a crosslinked polymer matrix. Mechanics of Composite Materials, 2012, 47, 627-634.	0.9	2
60	Numerical estimation of the fatigue crack front shape for a specimen with finite thickness. International Journal of Fatigue, 2012, 39, 75-80.	2.8	29
61	A numerical methodology for lifetime estimation of HDPE pressure pipes. Engineering Fracture Mechanics, 2011, 78, 3049-3058.	2.0	65
62	The Effect of an Interphase on Micro-Crack Behaviour in Polymer Composites. Computational Methods in Applied Sciences (Springer), 2011, , 83-97.	0.1	6
63	Fatigue cracks in Eurofer 97 steel: Part II. Comparison of small and long fatigue crack growth. Journal of Nuclear Materials, 2011, 412, 7-12.	1.3	9
64	Fracture mechanics of the three-dimensional crack front: vertex singularity versus out of plain constraint descriptions. Procedia Engineering, 2010, 2, 2095-2102.	1.2	12
65	The effect of a free surface on fatigue crack behaviour. International Journal of Fatigue, 2010, 32, 1265-1269.	2.8	47
66	Prediction of crack propagation in layered ceramics with strong interfaces. Engineering Fracture Mechanics, 2010, 77, 2192-2199.	2.0	44
67	Influence of particle size on the fracture toughness of a PP-based particulate composite. Mechanics of Composite Materials, 2009, 45, 281-286.	0.9	22
68	A fracture mechanics concept for the accelerated characterization of creep crack growth in PE-HD pipe grades. Engineering Fracture Mechanics, 2009, 76, 2780-2787.	2.0	74
69	Quantification of the influence of vertex singularities on fatigue crack behavior. Computational Materials Science, 2009, 45, 653-657.	1.4	23
70	Estimation of apparent fracture toughness of ceramic laminates. Computational Materials Science, 2009, 46, 614-620.	1.4	19
71	Crack Propagation in the Vicinity of the Interface Between Two Elastic Materials. , 2009, , 255-263.		0
72	Estimation of the Crack Propagation Direction of a Crack Touching the Interface between Two Elastic Materials. Materials Science Forum, 2008, 567-568, 225-228.	0.3	2

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73	Transverse Cracking of Layered Structures: Evaluation of Fatigue Crack Propagation. Materials Science Forum, 2008, 567-568, 221-224.	0.3	0
74	The Effect of the Singularity Induced by the Free Surface on Fatigue Crack Growth in Thin Structures. Key Engineering Materials, 2008, 385-387, 317-320.	0.4	4
75	Numerical Investigations of Corner Singularities in Cracked Bodies. Key Engineering Materials, 2007, 348-349, 377-380.	0.4	3
76	The Influence of Loading Ratio on Fatigue Crack Propagation Through a Bi-Material Interface. Key Engineering Materials, 2007, 348-349, 317-320.	0.4	0
77	Influence of Residual Stresses on Threshold Values for Crack Propagation Through an Interface Between Two Materials. Key Engineering Materials, 2006, 324-325, 1153-1156.	0.4	1
78	Interaction of a Crack in the Plasma-Sprayed Ceramic Coating with the Metal Substrate. Materials Science Forum, 2005, 482, 223-226.	0.3	0
79	Influence of interface on fatigue threshold values in elastic bimaterials. Computational Materials Science, 2003, 28, 620-627.	1.4	13
80	Numerical Investigation of Stress Singularities in Cracked Bimaterial Body. Key Engineering Materials, 0, 385-387, 125-128.	0.4	1
81	Fatigue Crack Propagation in Thin Structures. Key Engineering Materials, 0, 417-418, 257-260.	0.4	1
82	Crack Behaviour in Laminar Ceramics with Strong Interfaces. Key Engineering Materials, 0, 417-418, 301-304.	0.4	1
83	Fatigue Crack Propagation Rate in EUROFER 97 Estimated Using Small Specimens. Key Engineering Materials, 0, 452-453, 325-328.	0.4	2
84	Life Time Estimation of the Multilayer Plastic Pipes. Key Engineering Materials, 0, 452-453, 33-36.	0.4	5
85	Generalized Linear Elastic Fracture Mechanics: An Application to a Crack Touching the Bimaterial Interface. Key Engineering Materials, 0, 452-453, 445-448.	0.4	1
86	Damage of Multilayer Polymer Materials under Creep Loading. Key Engineering Materials, 0, 465, 153-156.	0.4	0
87	The Effect of Polymer Pipe Weld Geometry on Creep Lifetime. Key Engineering Materials, 0, 465, 175-178.	0.4	4
88	Numerical Modeling of Macroscopic Behavior of Particulate Composite with Crosslinked Polymer Matrix. Key Engineering Materials, 0, 465, 129-132.	0.4	0
89	Fatigue Crack Shape Prediction Based on the Stress Singularity Exponent. Key Engineering Materials, 0, 488-489, 178-181.	0.4	0
90	Crack Growth Modeling in a Specimen with Polymer Weld. Key Engineering Materials, 0, 488-489, 158-161.	0.4	1

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91	Basic Modes of Crack Propagation through the Interface in a Polymer Layered Structure. Key Engineering Materials, 0, 488-489, 162-165.	0.4	0
92	Pressure Pipe Damage: Numerical Estimation of Point Load Effect. Key Engineering Materials, 0, 525-526, 177-180.	0.4	4
93	Micro-Crack Propagation in Particulate Composite with Different Types of Matrix. Applied Mechanics and Materials, 0, 245, 138-143.	0.2	1
94	Inaccuracy in Residual Stress Estimation and its Influence on the Residual Lifetime of Polymer Pipes. Key Engineering Materials, 0, 592-593, 165-168.	0.4	0
95	Particulate Composite Damage: Numerical Estimation of Micro-Crack Propagation Direction. Key Engineering Materials, 0, 592-593, 445-448.	0.4	1
96	Pressure Pipe Damage: Numerical Estimation of Point Load Effect II. Key Engineering Materials, 0, 577-578, 533-536.	0.4	2
97	Influence of Interphase Imperfection on Micro-Crack Behavior in Polymer Composites Filled by Rigid Particles. Key Engineering Materials, 0, 586, 194-197.	0.4	0
98	Effects of Variable Loading on Residual Fatigue Life of the Railway Wheelset. Key Engineering Materials, 0, 577-578, 121-124.	0.4	2
99	Critical Value for Crack Propagation from Sharp V-Notch. Key Engineering Materials, 0, 592-593, 177-180.	0.4	0
100	Fatigue Crack Propagation in Steels for Railway Axles. Key Engineering Materials, 0, 592-593, 254-257.	0.4	0
101	A Description of Local Material Properties Close to a Butt Weld. Key Engineering Materials, 0, 586, 146-149.	0.4	0
102	Numerical Lifetime Prediction of Polymer Pipes Taking into Account Residual Stress. Key Engineering Materials, 0, 577-578, 169-172.	0.4	4
103	Estimation of Apparent Fracture Toughness of Alumina Based Ceramic Laminate. Key Engineering Materials, 0, 592-593, 405-408.	0.4	0
104	Estimation of the Crack Behaviour in the Compressive Layer of the Alumina-Zirconia Ceramic Laminate. Key Engineering Materials, 0, 627, 41-44.	0.4	0
105	Influence of the Interface and Residual Stresses on the Apparent Fracture Toughness of Layered Ceramic Composites Based on Alumina-Zirconia. Key Engineering Materials, 0, 606, 209-212.	0.4	0
106	The Effect of Specimen Size on the Determination of Residual Stress in Polymer Pipe Wall. Key Engineering Materials, 0, 627, 141-144.	0.4	2
107	Point Load Effect Determination for Different Pressure Pipe SDR Series. Key Engineering Materials, 0, 627, 373-376.	0.4	1
108	Influence of the V-Notch Opening Angle on Critical Applied Force Values for the Crack Initiation from the Sharp V-Notch. Key Engineering Materials, 0, 627, 165-168.	0.4	0

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109	Particulate Composite Damage: Numerical Estimation of Micro-Crack Paths. Key Engineering Materials, 0, 606, 261-264.	0.4	0
110	Influence of Different Crack Propagation Rate Descriptions on the Residual Fatigue Lifetime of Railway Axles. Key Engineering Materials, 0, 627, 469-472.	0.4	2
111	The Effect of Soil Load on Fracture Behaviour of Three-Layer Polymer Pipe for Non-Pressurised Applications. Key Engineering Materials, 0, 627, 197-200.	0.4	2
112	Influence of Crack Retardation on Fatigue Crack Propagation in Steels for Railway Axles. Advanced Materials Research, 0, 891-892, 351-356.	0.3	1
113	Description of Small Fatigue Crack Propagation in ODS Steel. Advanced Materials Research, 0, 891-892, 911-916.	0.3	0
114	Description of Strengthening Mechanism in Layered Ceramic Composites. Key Engineering Materials, 0, 665, 93-96.	0.4	1
115	Particulate Composite Damage: The Influence of Particle Shape on Crack Path. Key Engineering Materials, 0, 662, 77-80.	0.4	0
116	The Role of Residual Stresses in Particulate Composite with Glass Matrix. Key Engineering Materials, 0, 665, 173-176.	0.4	1
117	Influence of Particle Attributes on Residual Stresses in Particulate Ceramic Composites. Solid State Phenomena, 0, 258, 190-193.	0.3	0
118	Influence of Extension of Load Spectrum on Estimation of Residual Fatigue Lifetime of Railway Axle. Solid State Phenomena, 0, 258, 607-610.	0.3	0
119	Study of Influence of Residual Stresses on Crack Propagation in Particulate Ceramic Composites. Solid State Phenomena, 0, 258, 178-181.	0.3	3
120	The Effect of Residual Stress on the Process of Crack Growth Rate Determination in Polymer Pipes. Solid State Phenomena, 0, 258, 174-177.	0.3	1
121	Residual Lifetime Determination of Low Temperature Co-Fired Ceramics. Key Engineering Materials, 0, 713, 266-269.	0.4	0
122	Lifetime Assessment of Particulate Ceramic Composite with Residual Stresses. Key Engineering Materials, 0, 754, 107-110.	0.4	1
123	Numerical Modelling of Cylindrical Specimen under Mixed-Mode Loading Conditions. Key Engineering Materials, 0, 774, 325-330.	0.4	0
124	Compression-Loaded Cracked Cylinder - Stress Intensity Factor Evaluation. Key Engineering Materials, 0, 774, 331-336.	0.4	3
125	Fatigue Crack Propagation under Mixed Mode I and III in Polyoxymethelene Homopolymer. Key Engineering Materials, 0, 827, 404-409.	0.4	2
126	On the slow crack growth process and associated structureâ€"property relationships in polyamide 12 grades. Journal of Applied Polymer Science, 0, , 52357.	1.3	0