Oldrich Sevecek

List of Publications by Year
in descending order

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52	396	759055 12	839398 18
papers	citations	h-index	g-index

53	53	53	320
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Energy Harvesting Technologies for Structural Health Monitoring of Airplane Componentsâ€"A Review. Sensors, 2020, 20, 6685.	2.1	45
2	Calculation of K-factor and T-stress for cracks in anisotropic bimaterials. Engineering Fracture Mechanics, 2008, 75, 3707-3726.	2.0	30
3	Application of the coupled stress-energy criterion to predict the fracture behaviour of layered ceramics designed with internal compressive stresses. European Journal of Mechanics, A/Solids, 2015, 54, 94-104.	2.1	24
4	Design of alumina-zirconia composites with spatially tailored strength and toughness. Journal of the European Ceramic Society, 2015, 35, 631-640.	2.8	24
5	Design of damage tolerant and crack-free layered ceramics with textured microstructure. Journal of the European Ceramic Society, 2020, 40, 427-435.	2.8	23
6	Prediction of the crack bifurcation in layered ceramics with high residual stresses. Engineering Fracture Mechanics, 2013, 108, 120-138.	2.0	18
7	Investigation of the bonding strength and bonding mechanisms of SOFCs interconnectorâ€"electrode interfaces. Materials Letters, 2016, 162, 250-253.	1.3	16
8	What is the tensile strength of a ceramic to be used in numerical models for predicting crack initiation?. International Journal of Fracture, 2018, 212, 89-103.	1.1	16
9	Mass Spectrometry of Heavy Analytes and Large Biological Aggregates by Monitoring Changes in the Quality Factor of Nanomechanical Resonators in Air. ACS Sensors, 2020, 5, 2128-2135.	4.0	16
10	Analysis of multiple cracks in thin coating on orthotropic substrate under mechanical and residual stresses. Engineering Fracture Mechanics, 2010, 77, 229-248.	2.0	15
11	Crack growth in ceramic laminates with strong interfaces and large compressive residual stresses. Theoretical and Applied Fracture Mechanics, 2012, 61, 40-50.	2.1	14
12	Effect of aging on the onset of cracks due to redistribution of residual stresses in functionally graded environmental barrier coatings of mullite/ZrO2. Composites Part B: Engineering, 2014, 61, 199-205.	5.9	14
13	Resolving measurement of large (~ÂGDa) chemical/biomolecule complexes with multimode nanomechanical resonators. Sensors and Actuators B: Chemical, 2022, 353, 131062.	4.0	13
14	Assessment of crack-related problems in layered ceramics using the finite fracture mechanics and coupled stress-energy criterion. Procedia Structural Integrity, 2016, 2, 2014-2021.	0.3	10
15	An energetic criterion for a micro-crack of finite length initiated in orthotropic bi-material notches. Engineering Fracture Mechanics, 2013, 110, 396-409.	2.0	9
16	The influence of the first non-singular stress terms on crack initiation direction in an orthotropic bi-material plate. Theoretical and Applied Fracture Mechanics, 2014, 71, 67-75.	2.1	9
17	Edge cracking due to a compressive residual stress in ceramic laminates. Comptes Rendus - Mecanique, 2015, 343, 192-198.	2.1	9
18	Modelling of edge crack formation and propagation in ceramic laminates using the stressâ€"energy coupled criterion. Engineering Fracture Mechanics, 2016, 167, 45-55.	2.0	8

#	Article	IF	Citations
19	Achievable accuracy of resonating nanomechanical systems for mass sensing of larger analytes in GDa range. International Journal of Mechanical Sciences, 2022, 224, 107353.	3.6	8
20	Effect of higher order asymptotic terms on the competition between crack penetration and debond at a bimaterial interface between aligned orthotropic materials. Engineering Fracture Mechanics, 2012, 80, 28-51.	2.0	7
21	Elastic properties of multiâ€layered ceramic systems for SOCs. International Journal of Applied Ceramic Technology, 2018, 15, 370-379.	1.1	7
22	Modelling of cracking of the ceramic foam specimen with a central notch under the tensile load. Theoretical and Applied Fracture Mechanics, 2019, 100, 242-250.	2.1	7
23	Calculation of K-Factor and T-Stress for Crack at Anisotropic Bimaterials. , 2006, , 879-880.		6
24	Crack bridging modelling in Bioglass Â® based scaffolds reinforced by poly-vinyl alcohol/microfibrillated cellulose composite coating. Mechanics of Materials, 2017, 110, 16-28.	1.7	5
25	Modeling of electromechanical response and fracture resistance of multilayer piezoelectric energy harvester with residual stresses. Journal of Intelligent Material Systems and Structures, 2020, 31, 2261-2287.	1.4	5
26	Crack Protective Layered Architecture of Lead-Free Piezoelectric Energy Harvester in Bistable Configuration. Sensors, 2020, 20, 5808.	2.1	4
27	Experimentally Verified Analytical Models of Piezoelectric Cantilevers in Different Design Configurations. Sensors, 2021, 21, 6759.	2.1	4
28	Dislocation tri-material solution in the analysis of bridged crack in anisotropic bimaterial half-space. International Journal of Fracture, 2007, 147, 199-217.	1.1	3
29	Influence of the T-stress on the Crack Bifurcation Phenomenon in Ceramic Laminates. , 2014, 3, 1062-1067.		3
30	Optimization of Design Parameters of Fracture Resistant Piezoelectric Vibration Energy Harvester. Key Engineering Materials, 2018, 774, 416-422.	0.4	3
31	Computational Analysis of Crack-Like Defects Influence on the Open Cell Ceramic Foam Tensile Strength. Key Engineering Materials, 2018, 774, 271-276.	0.4	3
32	Crack kinking out of interface of two orthotropic materials under combined thermal/mechanical loading. Theoretical and Applied Fracture Mechanics, 2020, 105, 102397.	2.1	3
33	Analysis of Edge Bridged Crack in Bimaterial Anisotropic Half-Space. Key Engineering Materials, 2006, 324-325, 1143-1148.	0.4	2
34	Influence of the Ceramic Foam Structure Irregularity on the Tensile Response. Solid State Phenomena, 0, 258, 161-164.	0.3	2
35	Influence of the cell geometry on the tensile strength of open-cell ceramic foams. Procedia Structural Integrity, 2019, 23, 553-558.	0.3	2
36	Piezoelectric PVDF Elements and Systems for Mechanical Engineering Applications. , 2020, , .		2

#	Article	IF	Citations
37	Crack Propagation from Bi-Material Notches â€“ Matched Asymptotic Procedure. Key Engineering Materials, 0, 488-489, 416-419.	0.4	1
38	Validity of the Finite Fracture Mechanics Based Asymptotic Analysis for Predictions of Crack Deflection in Thin Layers of Ceramic Laminates. Key Engineering Materials, 0, 627, 237-240.	0.4	1
39	Preparation and characterization of novel environmentally friendly Al2O3/SiO2/CaO ceramic foams. Ceramics International, 2018, 44, 19063-19069.	2.3	1
40	Analysis of piezoelectric skin on vibrating structure for energy harvesting and structural health monitoring applications. European Physical Journal: Special Topics, 0, , 1.	1.2	1
41	Modeling of Cracks Crossing an Interface between Dissimilar Elastic Anisotropic Materials. Materials Science Forum, 2008, 567-568, 17-22.	0.3	0
42	The Analysis of the Stress and Displacement Field near the Surface Crack Tip Terminating Perpendicular to the Interface between Two Orthotropic Materials. Materials Science Forum, 2008, 567-568, 137-140.	0.3	0
43	Solution Methods for General Stress Concentrators in Anisotropic Heterogeneous Media. Key Engineering Materials, 2007, 348-349, 677-680.	0.4	0
44	Modelling of Crack Bifurcation in Laminar Ceramics with Large Compressive Stress. Key Engineering Materials, 0, 488-489, 130-133.	0.4	0
45	On the Direction of a Crack Initiated from an Orthotropic Bi-Material Notch Composed of Materials with Non-Uniform Fracture Mechanics Properties. Key Engineering Materials, 0, 525-526, 545-548.	0.4	0
46	An Effect of the First Non-Singular Term of the Williams Asymptotic Expansion to the Stability of the Bi-Material Orthotropic Notch. Key Engineering Materials, 0, 592-593, 745-748.	0.4	0
47	Crack Deflection from the Interface between Two Orthotropic Materials-Effect of Higher Order Terms in Asymptotic Analysis. Key Engineering Materials, 0, 577-578, 157-160.	0.4	0
48	Criterion for Crack Kinking out of the Interface of Two Orthotropic Layers Subjected to Thermal and Mechanical Loading. Key Engineering Materials, 0, 592-593, 169-172.	0.4	0
49	Computational Modeling of Porous Ceramics with Bioactive Layer. Key Engineering Materials, 0, 592-593, 378-381.	0.4	0
50	Electro-mechanical analysis of a multilayer piezoelectric cantilever energy harvester upon harmonic vibrations. MATEC Web of Conferences, 2018, 210, 02053.	0.1	0
51	Prediction of the Ceramic Foam Structure Failure Using a Detailed Finite Element Model. Key Engineering Materials, 0, 827, 222-227.	0.4	0
52	Understanding the edge crack phenomenon in ceramic laminates. Frattura Ed Integrita Strutturale, 2016, , .	0.5	0