Benoit Panicaud

List of Publications by Year
in descending order

89 papers	859 citations	471371 17 h-index	580701 25 g-index
89 all docs	89 docs citations	89 times ranked	751 citing authors

#	Article	IF	Citations
1	Finite element analysis of stress evolution during the high temperature oxidation of Ni30Cr+ Cr2O3 systems. Journal of Alloys and Compounds, 2022, 904, 164094.	2.8	1
2	Covariant spacetime formalism for applications to thermo-hyperelasticity. Acta Mechanica, 2022, 233, 2309-2334.	1.1	2
3	Direct diffraction measurement of critical resolved shear stresses and stress localisation in magnesium alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 801, 140400.	2.6	6
4	Direct determination of phase stress evolution in duplex steel using synchrotron diffraction. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 801, 140355.	2.6	5
5	Space-Time Thermo-Mechanics for a Material Continuum. Lecture Notes in Computer Science, 2021, , 219-226.	1.0	0
6	Stress determination in a thermally grown oxide on Ni38Cr alloy by use of micro/nanogauge gratings. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 812, 141079.	2.6	4
7	On the use of a spacetime modeling for heat equation applied to self-heating computation with comparison to experimental results. Heat and Mass Transfer, 2021, 57, 2045.	1.2	1
8	Stress distribution in depth of NiCr +ÂCr2O3 systems using high-energy synchrotron X-rays in transmission mode. Journal of Alloys and Compounds, 2021, 875, 159958.	2.8	2
9	2D characterization at submicron scale of crack propagation of 17-4PH parts produced by Atomic Diffusion Additive Manufacturing (ADAM) process. Procedia Structural Integrity, 2021, 34, 13-19.	0.3	1
10	Gradient Microstructure Induced by Surface Mechanical Attrition Treatment (SMAT) in Magnesium Studied Using Positron Annihilation Spectroscopy and Complementary Methods. Materials, 2020, 13, 4002.	1.3	9
11	Flexible plasmonic and strain sensors: fabrication, design and perspectives. Journal of Physics: Conference Series, 2020, 1461, 012096.	0.3	1
12	Viscoplasticity and growth strain parameters identification by full modelling optimization during the high temperature oxidation of Ni28Cr modified by the reactive element yttria or zirconium. Computational Materials Science, 2020, 180, 109689.	1.4	2
13	Investigation on the Use of a Spacetime Formalism for Modeling and Numerical Simulations of Heat Conduction Phenomena. Journal of Non-Equilibrium Thermodynamics, 2020, 45, 223-246.	2.4	6
14	Investigation on a full coupling between damage and other thermomechanical behaviours in the standard thermodynamic framework including environmental effects. Acta Mechanica, 2020, 231, 1731-1749.	1.1	0
15	Advanced modeling and numerical simulations for the thermo-chemico-mechanical behaviour of materials with damage and hydrogen, based on the thermodynamics of irreversible processes. Finite Elements in Analysis and Design, 2019, 164, 79-97.	1.7	9
16	Local microstructural characterization of an aged UR45N rolled steel: Application of the nanogauges grating coupled EBSD technique. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 759, 537-551.	2.6	4
17	Investigation of ductile damage during surface mechanical attrition treatment for TWIP steels using a dislocation density based viscoplasticity and damage models. Mechanics of Materials, 2019, 129, 279-289.	1.7	20
18	Investigation of nanoscale strains at the austenitic stainless steel 316L surface: Coupling between nanogauges gratings and EBSD technique during in situ tensile test. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 740-741, 315-335.	2.6	10

#	Article	IF	Citations
19	Viscoplastic characteristics of thermally grown chromia films obtained from in situ 2D synchrotron X-ray diffraction. Journal of Alloys and Compounds, 2018, 744, 591-599.	2.8	3
20	Influence of Surface Mechanical Attrition Treatment on the oxidation behaviour of 316L stainless steel. Corrosion Science, 2018, 136, 188-200.	3.0	58
21	Determination of Residual Stresses in an Oxidized Metallic Alloy under Thermal Loadings. Metals, 2018, 8, 913.	1.0	4
22	Constitutive modeling of TWIP/TRIP steels and numerical simulation of single impact during Surface Mechanical Attrition Treatment. Mechanics of Materials, 2018, 122, 69-75.	1.7	12
23	In situ Synchrotron X-Ray diffraction study of high-temperature stress relaxation in chromia scales containing the reactive element yttrium. Acta Materialia, 2018, 159, 276-285.	3.8	4
24	Stress release in Î±-Cr2O3 oxide thin films formed on Ni30-Cr and Fe47-Cr alloys. Journal of Alloys and Compounds, 2017, 718, 223-230.	2.8	8
25	Micromechanical behaviour of a two-phase Ti alloy studied using grazing incidence diffraction and a self-consistent model. Acta Materialia, 2017, 136, 402-414.	3.8	9
26	Elastoplastic Deformation and Damage Process in Duplex Steel Studied Using Synchrotron and Neutron Diffraction. Materials Science Forum, 2017, 905, 9-16.	0.3	0
27	Nanogauges gratings for strain determination at nanoscale. Mechanics of Materials, 2017, 114, 268-278.	1.7	9
28	Frequency analysis for investigation of the thermomechanical mechanisms in thermal oxides growing on metals. Acta Mechanica, 2017, 228, 3595-3617.	1.1	5
29	Residual stress determination in oxide layers at different length scales combining Raman spectroscopy and X-ray diffraction: Application to chromia-forming metallic alloys. Journal of Applied Physics, 2017, 122, .	1.1	13
30	Modelling of the Mechanical Behaviour of a Chromia Forming Alloy Under Thermal Loading. Oxidation of Metals, 2017, 88, 15-27.	1.0	3
31	Stress distribution correlated with damage in duplex stainless steel studied by synchrotron diffraction during plastic necking. Materials and Design, 2017, 113, 157-168.	3.3	17
32	Strains in Thermally Growing Cr₂O₃ Films Measured In Situ Using Synchrotron X-Rays. Materials Science Forum, 2017, 905, 52-59.	0.3	1
33	Incremental constitutive models for elastoplastic materials undergoing finite deformations by using a four-dimensional formalism. International Journal of Engineering Science, 2016, 106, 199-219.	2.7	5
34	Mechanical behavior and fracture mechanisms of titanium alloy welded joints made by pulsed laser beam welding. Procedia Structural Integrity, 2016, 2, 3569-3576.	0.3	13
35	Viscoelasticity behavior for finite deformations, using a consistent hypoelastic model based on Rivlin materials. Continuum Mechanics and Thermodynamics, 2016, 28, 1741-1758.	1.4	6
36	Derivation of Cosseratâ€™s medium equations using different multi-dimensional frameworks. Acta Mechanica, 2016, 227, 367-385.	1.1	2

#	Article	IF	Citations
37	Elastoplastic deformation and damage process in duplex stainless steels studied using synchrotron and neutron diffractions in comparison with a self-consistent model. International Journal of Plasticity, 2016, 81, 102-122.	4.1	32
38	Consistent hypo-elastic behavior using the four-dimensional formalism of differential geometry. Acta Mechanica, 2016, 227, 651-675.	1.1	7
39	Advanced Deformation Stages in Duplex Steel Investigated using Neutron and Synchrotron Radiation. Fatigue of Aircraft Structures, 2016, 2016, 80-91.	0.3	0
40	Viscoelastic models with consistent hypoelasticity for fluids undergoing finite deformations. Mechanics of Time-Dependent Materials, 2015, 19, 375-395.	2.3	2
41	The beginnings of plasmomechanics: towards plasmonic strain sensors. Frontiers of Materials Science, 2015, 9, 170-177.	1.1	45
42	Micromechanical Polycrystalline Damage-Plasticity Modeling for Metal Forming Processes. , 2015, , 963-1020.		1
43	Relationship between Residual Stresses and Damaging in Thermally Grown Oxide on Metals: Raman Spectroscopy and Synchrotron Micro-Diffraction Contributions. Advances in Science and Technology, 2014, 91, 100-107.	0.2	0
44	Influence of Surface Mechanical Attrition Treatment (SMAT) on Oxidation Behavior of 316L Stainless Steel at 650Â°C. Advanced Materials Research, 2014, 996, 906-911.	0.3	2
45	Anisotropic elastic behaviour using the four-dimensional formalism of differential geometry. Computational Materials Science, 2014, 94, 132-141.	1.4	4
46	A frame-indifferent model for a thermo-elastic material beyond the three-dimensional Eulerian and Lagrangian descriptions. Continuum Mechanics and Thermodynamics, 2014, 26, 79-93.	1.4	14
47	Determination of Stress Fields and Identification of Thermomechanical Parameters in a Thermally Grown Oxide under Thermal Cycling Loadings, Using Advanced Models. Advanced Materials Research, 2014, 996, 896-901.	0.3	6
48	Influence of surface mechanical attrition treatment on the oxidation behavior of 316L stainless steel at 750Â°C. IOP Conference Series: Materials Science and Engineering, 2014, 63, 012014.	0.3	1
49	Modelling of stresses evolution in growing thermal oxides on metals. A methodology to identify the corresponding mechanical parameters. Computational Materials Science, 2013, 71, 47-55.	1.4	18
50	Canonical frame-indifferent transport operators with the four-dimensional formalism of differential geometry. Computational Materials Science, 2013, 77, 120-130.	1.4	18
51	On the mechanical effects of a nanocrystallisation treatment for ZrO2 oxide films growing on a zirconium alloy. Corrosion Science, 2013, 68, 263-274.	3.0	31
52	Comparison of strain/stress behaviour of a duplex stainless steel between mesoscopic and macroscopic scales by neutron measurements extended to the necking range. Thin Solid Films, 2013, 530, 62-65.	0.8	1
53	Local stress determination in chromia-former thanks to micro-Raman spectroscopy: A way to investigate spontaneous delamination processes. Journal of Applied Physics, 2013, 113, .	1.1	12
54	Micromechanical Polycrystalline Damageâ€“Plasticity Modeling for Metal Forming Processes. , 2013, , 1-51.		0

#	Article	IF	Citations
55	Theoretical modelling of iron nitriding coupled with a nanocrystallisation treatment. Application to numerical predictions for ferritic stainless steels. Applied Surface Science, 2012, 258, 6611-6620.	3.1	7
56	Experimental and numerical study of the effects of a nanocrystallisation treatment on high-temperature oxidation of a zirconium alloy. Corrosion Science, 2012, 60, 224-230.	3.0	13
57	Study of stress localisation in polycrystalline grains using self-consistent modelling and neutron diffraction. Philosophical Magazine, 2012, 92, 3015-3035.	0.7	5
58	Application of Clifford algebra $${C ell_3(mathbb{C})}$$ to continuum and engineering mechanics. Acta Mechanica, 2012, 223, 2493-2507.	1.1	2
59	Theoretical modelling of ductile damage in duplex stainless steels â€“ Comparison between two micro-mechanical elasto-plastic approaches. Computational Materials Science, 2011, 50, 1908-1916.	1.4	13
60	Clifford Algebra Câ„“ 3(â„) for Applications to Field Theories. International Journal of Theoretical Physics, 2011, 50, 3186-3204.	0.5	6
61	Neutron time-of-flight diffraction used to study aged duplex stainless steel at small and large deformation until sample fracture. Journal of Applied Crystallography, 2011, 44, 966-982.	1.9	24
62	Analysis of Ductile Damage â€“ Comparison between Micromechanical Models and Neutron Diffraction Experiments. Materials Science Forum, 2011, 681, 91-96.	0.3	0
63	Localization of Stresses in Polycrystalline Grains Measured by Neutron Diffraction and Predicted by Self-Consistent Model. Materials Science Forum, 2011, 681, 103-108.	0.3	1
64	Endommagement de films dâ€™oxydes thermiques de chromine sur NiCr30. Relaxation de contrainte par fluage ou par cloquage mÃ©canique. Materiaux Et Techniques, 2011, 99, 135-140.	0.3	1
65	Damage in duplex steels studied at mesoscopic and macroscopic scales. Mechanics of Materials, 2010, 42, 1048-1063.	1.7	20
66	Stress analysis of local blisters coupling Raman spectroscopy and X-ray diffraction. Correlation between experimental results and continuous damage modelling for buckling in an iron oxide/phosphated iron system. Applied Surface Science, 2010, 257, 1282-1288.	3.1	3
67	Mechanical features optimization for oxide films growing on alloy. Computational Materials Science, 2009, 46, 42-48.	1.4	25
68	General approach on the growth strain versus viscoplastic relaxation during oxidation of metals. Computational Materials Science, 2008, 42, 286-294.	1.4	41
69	Growth stresses in Î±-Cr2O3 thermal oxide films determined by in situ high temperature Raman spectroscopy. Journal of Applied Physics, 2007, 102, .	1.1	28
70	Modelling of aluminized coating growth on nickel. Acta Materialia, 2007, 55, 6586-6595.	3.8	33
71	On the growth strain origin and stress evolution prediction during oxidation of metals. Applied Surface Science, 2006, 252, 5700-5713.	3.1	68
72	Comparison of growth stress measurements with modelling in thin iron oxide films. Applied Surface Science, 2006, 252, 8414-8420.	3.1	17

#	Article	IF	Citations
73	Competition between Stress Generation and Relaxation in Iron Oxide Films. Experiments and Modelling. Journal of Neutron Research, 2004, 12, 27-32.	0.4	1
74	In-situ Stress Determination in Thermally-grown Iron Oxide Scales using X-Ray Diffraction of Synchrotron Radiation. Journal of Neutron Research, 2004, 12, 57-61.	0.4	1
75	Determination of the oxidation kinetics of modifiedÎ±-iron substrate: correlation between TGA and AES. Surface and Interface Analysis, 2004, 36, 1014-1017.	0.8	2
76	Study of stress effects in the oxidation of phosphated Î±-iron: in situ measurement by diffraction of synchrotron radiation. Applied Surface Science, 2003, 206, 149-158.	3.1	11
77	Chronological study of the oxidation of phosphated Î±-iron. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 356, 434-442.	2.6	6
78	Iron oxidation under the influence of phosphate thin films. Journal of Applied Physics, 2003, 94, 784-788.	1.1	38
79	Measurement of Stress in Phosphated-Iron Oxide Layers by In-Situ Diffraction of Synchrotron Radiation. Materials Science Forum, 2002, 404-407, 809-816.	0.3	3
80	Phosphating of bulk Î±-iron and its oxidation resistance at 400 Â°C. Applied Surface Science, 2002, 199, 11-21.	3.1	25
81	Structural characterisation of phosphated Î±-iron oxidised at 400 Â°C. Surface and Coatings Technology, 2002, 161, 144-149.	2.2	13
82	Large Deformation and Mechanical Effects of Damage in Aged Duplex Stainless Steel. Materials Science Forum, 0, 652, 155-160.	0.3	2
83	Modelling of Grain Refinement Induced by SMAT Process, Using a Complete Numerical Chaining Methodology. Materials Science Forum, 0, 762, 295-300.	0.3	0
84	Study of Stresses in Texture Components Using Neutron Diffraction. Materials Science Forum, 0, 768-769, 289-295.	0.3	0
85	Study of Micromechanical Behaviour of Two Phase Polycrystalline Materials Using Diffraction and Self Consistent Model. Materials Science Forum, 0, 783-786, 2059-2064.	0.3	0
86	Study of Mechanical Behaviour of Polycrystalline Materials at the Mesoscale Using High Energy X-Ray Diffraction. Advanced Materials Research, 0, 996, 118-123.	0.3	1
87	Modeling of Stress and Strain Fields Induced during the Smart-Cut Process on Silicone - Influence of Different Couplings for Diffusion of Hydrogen at a Microscopic Scale. Advanced Materials Research, 0, 996, 707-712.	0.3	0
88	Determination of Residual Stress Fields in a Thermally Grown Oxide under Thermal Cycling Loadings, Using XRD and Raman Spectroscopy â€" Correlations with Microstructural States. Advanced Materials Research, 0, 996, 890-895.	0.3	0
89	On the Use of the Generalized Eigenstrain Method in the Modeling of Coupling between Damage and Corrosion. Applied Mechanics and Materials, 0, 784, 59-67.	0.2	0