

Thierry Douillard

List of Publications by Year in descending order

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82
papers

2,147
citations

218592

26
h-index

254106

43
g-index

88
all docs

88
docs citations

88
times ranked

2862
citing authors

#	ARTICLE	IF	CITATIONS
1	Influence on microstructure, strength and ductility of build platform temperature during laser powder bed fusion of AlSi10Mg. <i>Acta Materialia</i> , 2020, 201, 231-243.	3.8	111
2	Highly ductile amorphous oxide at room temperature and high strain rate. <i>Science</i> , 2019, 366, 864-869.	6.0	107
3	Bone micromechanical properties are compromised during long-term alendronate therapy independently of mineralization. <i>Journal of Bone and Mineral Research</i> , 2012, 27, 825-834.	3.1	96
4	Growth Twinning and Generation of High-Frequency Surface Nanostructures in Ultrafast Laser-Induced Transient Melting and Resolidification. <i>ACS Nano</i> , 2016, 10, 6995-7007.	7.3	90
5	Forty years after the promise of "ceramic steel": Zirconia-based composites with a metal-like mechanical behavior. <i>Journal of the American Ceramic Society</i> , 2020, 103, 1482-1513.	1.9	88
6	A new testing protocol for zirconia dental implants. <i>Dental Materials</i> , 2015, 31, 15-25.	1.6	84
7	A Facile and Very Effective Method to Enhance the Mechanical Strength and the Cyclability of Si-Based Electrodes for Li-Ion Batteries. <i>Advanced Energy Materials</i> , 2018, 8, 1701787.	10.2	80
8	Microstructure Evolution in Nano-reinforced Ferritic Steel Processed By Mechanical Alloying and Spark Plasma Sintering. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014, 45, 1485-1497.	1.1	75
9	Respective roles of organic and mineral components of human cortical bone matrix in micromechanical behavior: An instrumented indentation study. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2011, 4, 1473-1482.	1.5	73
10	Multiscale Morphological and Electrical Characterization of Charge Transport Limitations to the Power Performance of Positive Electrode Blends for Lithium-Ion Batteries. <i>Advanced Energy Materials</i> , 2017, 7, 1602239.	10.2	69
11	M23C6 carbides and Cr2N nitrides in aged duplex stainless steel: A SEM, TEM and FIB tomography investigation. <i>Micron</i> , 2016, 84, 43-53.	1.1	66
12	Multiscale Phase Mapping of LiFePO ₄ -Based Electrodes by Transmission Electron Microscopy and Electron Forward Scattering Diffraction. <i>ACS Nano</i> , 2013, 7, 10887-10894.	7.3	65
13	Low temperature degradation and reliability of one-piece ceramic oral implants with a porous surface. <i>Dental Materials</i> , 2013, 29, 389-397.	1.6	58
14	Investigating the n- and p-Type Electrolytic Charging of Colloidal Nanoplatelets. <i>Journal of Physical Chemistry C</i> , 2015, 119, 21795-21799.	1.5	57
15	Effect of different surface treatments on the hydrothermal degradation of a 3Y-TZP ceramic for dental implants. <i>Dental Materials</i> , 2014, 30, 1136-1146.	1.6	47
16	Self-Arranged Periodic Nanovoids by Ultrafast Laser-Induced Near-Field Enhancement. <i>ACS Photonics</i> , 2018, 5, 1418-1426.	3.2	45
17	Comparative ageing behaviour of commercial, unworn and worn 3Y-TZP and zirconia-toughened alumina hip joint heads. <i>Journal of the European Ceramic Society</i> , 2012, 32, 1529-1540.	2.8	44
18	Effect of amount of doping agent on sintering, microstructure and optical properties of Zr- and La-doped alumina sintered by SPS. <i>Journal of the European Ceramic Society</i> , 2014, 34, 1279-1288.	2.8	41

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19	Phase transformation induces plasticity with negligible damage in ceria-stabilized zirconia-based ceramics. <i>Acta Materialia</i> , 2020, 183, 261-273.	3.8	40
20	Sintering mechanisms involved in high-velocity compaction of nascent semicrystalline polymer powders. <i>Acta Materialia</i> , 2009, 57, 2550-2559.	3.8	37
21	Effect of grain orientation and magnesium doping on β^2 -tricalcium phosphate resorption behavior. <i>Acta Biomaterialia</i> , 2019, 89, 391-402.	4.1	37
22	Multiscale morphological characterization of process induced heterogeneities in blended positive electrodes for lithium-ion batteries. <i>Journal of Materials Science</i> , 2017, 52, 3576-3596.	1.7	35
23	Evolution of the 3D Microstructure of a Si-Based Electrode for Li-Ion Batteries Investigated by FIB/SEM Tomography. <i>Journal of the Electrochemical Society</i> , 2016, 163, A1550-A1559.	1.3	34
24	Unveiling damage sites and fracture path in laser powder bed fusion AlSi10Mg: Comparison between horizontal and vertical loading directions. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 807, 140845.	2.6	32
25	Local fracture toughness measurements in polycrystalline cubic zirconia using micro-cantilever bending tests. <i>Mechanics of Materials</i> , 2019, 136, 103086.	1.7	30
26	Stabilization of ZnCl ₂ -containing wastes using calcium sulfoaluminate cement: Leaching behaviour of the solidified waste form, mechanisms of zinc retention. <i>Journal of Hazardous Materials</i> , 2011, 194, 268-276.	6.5	29
27	Influence of artificial aging on mechanical properties of commercially and non-commercially available zirconia dental implants. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2020, 101, 103423.	1.5	27
28	3D-Characterization of the veneer-zirconia interface using FIB nano-tomography. <i>Dental Materials</i> , 2013, 29, 157-165.	1.6	26
29	Sub-surface assessment of hydrothermal ageing in zirconia-containing femoral heads for hip joint applications. <i>Acta Biomaterialia</i> , 2018, 68, 286-295.	4.1	23
30	Experimental determination of the macroscopic fatigue properties of metal hollow sphere structures. <i>Materials Letters</i> , 2009, 63, 1131-1134.	1.3	22
31	Crystal orientation mapping via ion channeling: An alternative to EBSD. <i>Ultramicroscopy</i> , 2015, 157, 65-72.	0.8	20
32	Incorporation of Aluminum into C-S-H Structures: From Synthesis to Nanostructural Characterization. <i>Journal of the American Ceramic Society</i> , 2008, 91, 2337-2342.	1.9	19
33	Reconstruction of the Cubic and Tetragonal Parent Grains from Electron Backscatter Diffraction Maps of Monoclinic Zirconia. <i>Journal of the American Ceramic Society</i> , 2010, 93, 2541-2544.	1.9	19
34	Electron CHanneling ORientation Determination (eCHORD): An original approach to crystalline orientation mapping. <i>Ultramicroscopy</i> , 2018, 186, 146-149.	0.8	19
35	The effects of microstructures and repassivation kinetics on the tribocorrosion resistance of ferrite and ferrite-martensite stainless steels. <i>Wear</i> , 2019, 420-421, 245-256.	1.5	18
36	Multiscale Characterization of Composite Electrode Microstructures for High Density Lithium-ion Batteries Guided by the Specificities of Their Electronic and Ionic Transport Mechanisms. <i>Journal of the Electrochemical Society</i> , 2020, 167, 100521.	1.3	18

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37	Microcracking of high zirconia refractories after α 's phase transition during cooling: An EBSD study. <i>Journal of the European Ceramic Society</i> , 2011, 31, 1525-1531.	2.8	17
38	Evolution of microstructure and strength during the ultra-fast tempering of Fe-Mn-C martensitic steels. <i>Journal of Materials Science</i> , 2014, 49, 7782-7796.	1.7	17
39	A simple approach to bulk bioinspired tough ceramics. <i>Materialia</i> , 2020, 12, 100807.	1.3	17
40	Microstructural study of the NbC to G-phase transformation in HP-Nb alloys. <i>Materialia</i> , 2020, 9, 100593.	1.3	17
41	Microstructure and hydrothermal ageing of alumina-zirconia composites modified by laser engraving. <i>Journal of the European Ceramic Society</i> , 2020, 40, 2077-2089.	2.8	17
42	Numerical Prediction of Multiscale Electronic Conductivity of Lithium-Ion Battery Positive Electrodes. <i>Journal of the Electrochemical Society</i> , 2019, 166, A1692-A1703.	1.3	16
43	Room temperature plasticity and phase transformation of nanometer-sized transition alumina nanoparticles under pressure. <i>Acta Materialia</i> , 2018, 150, 308-316.	3.8	15
44	Intraoral low-temperature degradation of monolithic zirconia dental prostheses: Results of a prospective clinical study with ex vivo monitoring. <i>Dental Materials</i> , 2021, 37, 1134-1149.	1.6	15
45	Effective Electronic and Ionic Conductivities of Dense EV-Designed NMC-Based Positive Electrodes using Fourier Based Numerical Simulations on FIB/SEM Volumes. <i>Journal of the Electrochemical Society</i> , 2020, 167, 140504.	1.3	15
46	Influence of crystallographic orientation on the early stages of oxidation of polycrystalline titanium nitride. <i>Journal of Nuclear Materials</i> , 2012, 427, 415-417.	1.3	14
47	Rotational-Electron Channeling Contrast Imaging analysis of dislocation structure in fatigued copper single crystal. <i>Scripta Materialia</i> , 2019, 162, 103-107.	2.6	14
48	Strain-hardening influence on iodine induced stress corrosion cracking of Zircaloy-4. <i>Journal of Nuclear Materials</i> , 2008, 373, 59-70.	1.3	13
49	Three-dimensional structure and formation mechanisms of Y ₂ O ₃ hollow-precipitates in a Cu-based metallic glass. <i>Materials and Design</i> , 2019, 168, 107660.	3.3	13
50	In situ TEM observations of ion irradiation damage in boron carbide. <i>Journal of the European Ceramic Society</i> , 2019, 39, 726-734.	2.8	13
51	Influence of firing time and framework thickness on veneered Y-TZP discs curvature. <i>Dental Materials</i> , 2014, 30, 242-248.	1.6	11
52	Self-diffusion of electrolyte species in model battery electrodes using Magic Angle Spinning and Pulsed Field Gradient Nuclear Magnetic Resonance. <i>Journal of Power Sources</i> , 2017, 362, 315-322.	4.0	10
53	iCHORD-SI combination as an alternative to EDS-EBSD coupling for the characterization of γ 's nickel-based superalloy microstructures. <i>Materials Characterization</i> , 2018, 142, 492-503.	1.9	10
54	Microstructural analyses of artificial ageing in 5 commercially and non-commercially available Zirconia dental implants. <i>Journal of the European Ceramic Society</i> , 2020, 40, 3642-3655.	2.8	10

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55	Elaboration and behavior under extreme irradiation conditions of nano- and micro-structured TiC. Nuclear Instruments & Methods in Physics Research B, 2015, 356-357, 114-128.	0.6	9
56	Intrinsic properties of osteomalacia bone evaluated by nanoindentation and FTIRM analysis. Journal of Biomechanics, 2021, 117, 110247.	0.9	8
57	Structural modifications of boron carbide irradiated by swift heavy ions. Journal of Nuclear Materials, 2021, 546, 152737.	1.3	8
58	Observation of a modified superficial layer on heavily loaded contacts under grease lubrication. Tribology International, 2021, 158, 106921.	3.0	8
59	Role of Ceria Nanoparticles on the Electrodeposited Zinc Coating's Growth: Interest of a TEM-Scale Investigation. ECS Electrochemistry Letters, 2014, 3, D33-D35.	1.9	7
60	Towards quantitative analysis of enamel erosion by focused ion beam tomography. Dental Materials, 2018, 34, e289-e300.	1.6	7
61	Impact of spherulite-type crystalline defects on the mechanical and electrochemical properties of Ti ₄₀ Cu ₃₆ Zr ₁₀ Pd ₁₄ metallic glasses. Materialia, 2022, 21, 101353.	1.3	7
62	Effect of microstructure heterogeneity on the damage resistance of nacre-like alumina: Insights from image-based discrete simulations. Scripta Materialia, 2021, 191, 210-214.	2.6	6
63	Evidence for the formation of distorted nanodomains involved in the phase transformation of stabilized zirconia by coupling convergent beam electron diffraction and in situ TEM nanoindentation. Acta Materialia, 2013, 61, 174-182.	3.8	5
64	Thickness evaluation of thermally sprayed coatings after exposure to boiler tube environments by eddy current testing. International Journal of Applied Electromagnetics and Mechanics, 2015, 47, 993-1001.	0.3	5
65	Nerve Growth Factor Expression and Its Receptors TrkA and p75NTR in Peri-Implantitis Lesions. Implant Dentistry, 2016, 25, 373-379.	1.7	5
66	The crystal structure of Rb ₂ Ti ₂ O ₅ . Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2017, 73, 1142-1150.	0.5	5
67	Toward an automated tool for dislocation density characterization in a scanning electron microscope. Materials Characterization, 2019, 158, 109954.	1.9	5
68	Growth and Characterization of Undoped Polysilicon Thick Layers: Revisiting an Old System. Silicon, 2020, 12, 1187-1194.	1.8	5
69	Towards large scale orientation mapping using the eCHORD method. Ultramicroscopy, 2020, 208, 112854.	0.8	4
70	3D microstructural study of selachimorph enameloid evolution. Journal of Structural Biology, 2021, 213, 107664.	1.3	4
71	A global investigation into <i>in situ</i> nanoindentation experiments on zirconia: from the sample geometry optimization to the stress nanolocalization using convergent beam electron diffraction. Journal of Microscopy, 2013, 249, 99-110.	0.8	3
72	Fabrication of BN membranes containing high density of cylindrical pores using an elegant approach. RSC Advances, 2017, 7, 20709-20715.	1.7	3

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73	Can (Mg,Y)â€œPSZâ€œ Spinel composites be a valuable option for dental application?. International Journal of Applied Ceramic Technology, 2018, 15, 873-883.	1.1	2
74	Magnetic filaments for anisotropic composite polymers. Nanotechnology, 2020, 31, 395503.	1.3	2
75	Lithiumâ€œ Batteries: Multiscale Morphological and Electrical Characterization of Charge Transport Limitations to the Power Performance of Positive Electrode Blends for Lithiumâ€œ Batteries (Adv.) Tj ETQq1 1 0.784314 rgBT /Overlaid	1.1	1
76	Angular resolution expected from iCHORD orientation maps through a revisited ion channeling model. Ultramicroscopy, 2019, 202, 68-75.	0.8	1
77	Origin of Nickel Catalytic Particles in Carbon Nanotube Formation on a High-Carbon 25Crâ€œ35Niâ€œNb Cast Alloy. Oxidation of Metals, 2019, 91, 279-290.	1.0	1
78	eCHORD orientation mapping of bio-inspired alumina down to 1 kV. Materialia, 2021, 20, 101207.	1.3	1
79	Model Materials for Irradiated Fuels: Study of Local Mechanical Behavior Using Nanoindentation and Microstructural Analysis. Microscopy and Microanalysis, 2014, 20, 1832-1833.	0.2	0
80	Acquisition of Micro-mechanical Data on Irradiated Fuel. Microscopy and Microanalysis, 2014, 20, 1844-1845.	0.2	0
81	Crystallographic Orientation Maps Obtained from Ion and Backscattered Electron Channeling Contrast. Microscopy and Microanalysis, 2017, 23, 552-553.	0.2	0
82	When Ion or Electron Channeling Meets Crystal Orientation Mapping. Microscopy and Microanalysis, 2019, 25, 1964-1965.	0.2	0