

Jean François Silvain

List of Publications by Year in descending order

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103
papers

2,824
citations

218677

26
h-index

197818

49
g-index

104
all docs

104
docs citations

104
times ranked

3753
citing authors

#	ARTICLE	IF	CITATIONS
1	(Hf _{0.2} Zr _{0.2} Ta _{0.2} Nb _{0.2} Ti _{0.2})C high-entropy ceramics with low thermal conductivity. <i>Journal of the American Ceramic Society</i> , 2018, 101, 4486-4491.	3.8	395
2	Investigation of carbon nanotube reinforced aluminum matrix composite materials. <i>Composites Science and Technology</i> , 2010, 70, 546-550.	7.8	214
3	Highly Efficient and Recyclable Carbon Soot Sponge for Oil Cleanup. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 5924-5929.	8.0	157
4	Multimodal Nonlinear Optical Imaging of MoS ₂ and MoS ₂ -Based van der Waals Heterostructures. <i>ACS Nano</i> , 2016, 10, 3766-3775.	14.6	127
5	Laser-Directed Assembly of Aligned Carbon Nanotubes in Three Dimensions for Multifunctional Device Fabrication. <i>Advanced Materials</i> , 2016, 28, 2002-2009.	21.0	119
6	Two-photon polymerization: investigation of chemical and mechanical properties of resins using Raman microspectroscopy. <i>Optics Letters</i> , 2014, 39, 3034.	3.3	112
7	Load-bearing contribution of multi-walled carbon nanotubes on tensile response of aluminum. <i>Composites Part A: Applied Science and Manufacturing</i> , 2015, 68, 133-139.	7.6	85
8	Direct writing of graphene patterns on insulating substrates under ambient conditions. <i>Scientific Reports</i> , 2014, 4, 4892.	3.3	78
9	Interfacial microstructure of graphite flake reinforced aluminum matrix composites fabricated via hot pressing. <i>Composites Part A: Applied Science and Manufacturing</i> , 2015, 73, 125-131.	7.6	62
10	Spark plasma sintering behavior of pure aluminum depending on various sintering temperatures. <i>Metals and Materials International</i> , 2010, 16, 71-75.	3.4	59
11	Epitaxial growth of chromium carbide nanostructures on multiwalled carbon nanotubes (MWCNTs) in MWCNT-copper composites. <i>Acta Materialia</i> , 2013, 61, 708-716.	7.9	54
12	Tailoring interfacial bonding states of highly thermal performance diamond/Al composites: Spark plasma sintering vs. vacuum hot pressing. <i>Composites Part A: Applied Science and Manufacturing</i> , 2016, 91, 9-19.	7.6	48
13	Thermal expansion coefficient and thermal fatigue of discontinuous carbon fiber-reinforced copper and aluminum matrix composites without interfacial chemical bond. <i>Journal of Materials Science</i> , 2014, 49, 397-402.	3.7	47
14	Flame-enhanced laser-induced breakdown spectroscopy. <i>Optics Express</i> , 2014, 22, 7686.	3.4	46
15	A Facile Space-Confined Solid-Phase Sulfurization Strategy for Growth of High-Quality Ultrathin Molybdenum Disulfide Single Crystals. <i>Nano Letters</i> , 2018, 18, 2021-2032.	9.1	42
16	Preparation by tape casting and hot pressing of copper carbon composites films. <i>Journal of the European Ceramic Society</i> , 2007, 27, 291-299.	5.7	39
17	Iron oxidation under the influence of phosphate thin films. <i>Journal of Applied Physics</i> , 2003, 94, 784-788.	2.5	38
18	Laser-based micro/nanofabrication in one, two and three dimensions. <i>Frontiers of Optoelectronics</i> , 2015, 8, 351-378.	3.7	36

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19	Microstructure of a carbon fiber-reinforced aluminum matrix composite fabricated by spark plasma sintering in various pulse conditions. <i>Journal of Materials Science</i> , 2014, 49, 3268-3275.	3.7	34
20	Solid-state graphene formation via a nickel carbide intermediate phase. <i>RSC Advances</i> , 2015, 5, 99037-99043.	3.6	34
21	Architectural optimization for microelectronic packaging. <i>Applied Thermal Engineering</i> , 2009, 29, 2391-2395.	6.0	33
22	Fast Growth of GaN Epilayers via Laser-Assisted Metal-Organic Chemical Vapor Deposition for Ultraviolet Photodetector Applications. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 21539-21547.	8.0	32
23	Effect of flake powder metallurgy on thermal conductivity of graphite flakes reinforced aluminum matrix composites. <i>Journal of Materials Science</i> , 2018, 53, 8180-8192.	3.7	32
24	Additive manufacturing of copper/diamond composites for thermal management applications. <i>Manufacturing Letters</i> , 2020, 24, 61-66.	2.2	31
25	Surface modification of elastomer/carbon composite by Nd ⁺ :YAG laser and KrF excimer laser ablation. <i>Applied Surface Science</i> , 1999, 141, 25-34.	6.1	29
26	An innovative process to fabricate copper/diamond composite films for thermal management applications. <i>Composites Part A: Applied Science and Manufacturing</i> , 2012, 43, 1746-1753.	7.6	29
27	A review of processing of Cu/C base plate composites for interfacial control and improved properties. <i>International Journal of Extreme Manufacturing</i> , 2020, 2, 012002.	12.7	28
28	Laser 3D printing of complex copper structures. <i>Additive Manufacturing</i> , 2020, 35, 101268.	3.0	27
29	Simple Fabrication and Characterization of Discontinuous Carbon Fiber Reinforced Aluminum Matrix Composite for Lightweight Heat Sink Applications. <i>Acta Metallurgica Sinica (English Letters)</i> , 2014, 27, 714-722.	2.9	26
30	Stress and Phase Purity Analyses of Diamond Films Deposited through Laser-Assisted Combustion Synthesis. <i>ACS Applied Materials & Interfaces</i> , 2011, 3, 4120-4125.	8.0	25
31	Large-Area 2D/3D MoS ₂ -MoO ₂ Heterostructures with Thermally Stable Exciton and Intriguing Electrical Transport Behaviors. <i>Advanced Electronic Materials</i> , 2017, 3, 1600335.	5.1	25
32	Hardness and Young's modulus behavior of Al composites reinforced by nanometric TiB ₂ elaborated by mechanosynthesis. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014, 591, 1-8.	5.6	24
33	Copper-Carbon and Aluminum-Carbon Composites Fabricated by Powder Metallurgy Processes. <i>Journal of Physics: Conference Series</i> , 2014, 525, 012015.	0.4	24
34	Ultraviolet laser photolysis of hydrocarbons for nondiamond carbon suppression in chemical vapor deposition of diamond films. <i>Light: Science and Applications</i> , 2018, 7, 17177-17177.	16.6	24
35	Thermal and mechanical behavior of Al-Si alloy cast using magnetic molding and lost foam processes. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2006, 37, 441-447.	2.2	22
36	Femtosecond-laser sharp shaping of millimeter-scale geometries with vertical sidewalls. <i>International Journal of Extreme Manufacturing</i> , 2021, 3, 045001.	12.7	22

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37	Influence of WC-Co Substrate Pretreatment on Diamond Film Deposition by Laser-Assisted Combustion Synthesis. ACS Applied Materials & Interfaces, 2011, 3, 1134-1139.	8.0	21
38	Controlled defect creation and removal in graphene and MoS ₂ monolayers. Nanoscale, 2017, 9, 8997-9008.	5.6	21
39	Structural and Thermal Properties of Hot Pressed Cu/C Matrix Composites Materials Used for the Thermal Management of High Power Electronic Devices. Materials Science Forum, 2007, 534-536, 1505-1508.	0.3	20
40	Thermomechanical stability of a carbon fiber-reinforced aluminum matrix composite fabricated by spark plasma sintering in various pulse conditions. Materials Letters, 2014, 130, 32-35.	2.6	20
41	Fabrication of single crystalline diamond reinforced aluminum matrix composite by powder metallurgy route. Metals and Materials International, 2011, 17, 755-763.	3.4	19
42	Understanding of Void Formation in Cu/Sn-Sn/Cu System During Transient Liquid Phase Bonding Process Through Diffusion Modeling. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2018, 49, 3343-3356.	2.1	18
43	Low-Temperature Growth of Crystalline Gallium Nitride Films Using Vibrational Excitation of Ammonia Molecules in Laser-Assisted Metalorganic Chemical Vapor Deposition. Crystal Growth and Design, 2014, 14, 6248-6253.	3.0	17
44	Impact of violated high-dose refuge assumptions on evolution of <i>Bt</i> resistance. Evolutionary Applications, 2016, 9, 596-607.	3.1	17
45	Powder processing methodology for fabrication of Copper/Graphite composite materials with enhanced thermal properties. Composites Part A: Applied Science and Manufacturing, 2019, 124, 105474.	7.6	17
46	Magnetic field enhancement for femtosecond-laser-ablation mass spectrometry in ambient environments. Journal of Analytical Atomic Spectrometry, 2015, 30, 2303-2306.	3.0	16
47	Interface analysis in Al and Al alloys/Ni/carbon composites. Journal of Materials Science, 2000, 35, 961-965.	3.7	15
48	Interface characterisation and wettability properties of carbon particle reinforced copper alloy. Journal of Materials Chemistry, 2000, 10, 2213-2218.	6.7	15
49	Manufacturing of complex diamond-based composite structures via laser powder-bed fusion. Additive Manufacturing, 2021, 40, 101927.	3.0	15
50	Conception of a consumable copper reaction zone for a NiTi/SnAgCu composite material. Composites Part A: Applied Science and Manufacturing, 2002, 33, 1391-1395.	7.6	14
51	Thermally Stable and Electrically Conductive, Vertically Aligned Carbon Nanotube/Silicon Infiltrated Composite Structures for High-Temperature Electrodes. ACS Applied Materials & Interfaces, 2017, 9, 37340-37349.	8.0	14
52	Effect of titanium and zirconium carbide interphases on the thermal conductivity and interfacial heat transfers in copper/diamond composite materials. AIP Advances, 2019, 9, .	1.3	14
53	X-ray photoelectron spectroscopy and transmission electron microscopy studies of the NiAl/Al ₂ O ₃ interfacial chemical compatibility. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1995, 13, 1893-1900.	2.1	13
54	Thermal and mechanical behaviour of grey cast iron and ductile iron castings using magnetic molding and lost foam processes. Journal of Materials Processing Technology, 2009, 209, 4103-4111.	6.3	13

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55	Contrast enhancement using silica microspheres in coherent anti-Stokes Raman spectroscopic imaging. <i>Optics Express</i> , 2014, 22, 2889.	3.4	12
56	Resonant vibrational excitation of ethylene molecules in laser-assisted diamond deposition. <i>Laser Physics Letters</i> , 2014, 11, 076002.	1.4	11
57	Resonant and nonresonant vibrational excitation of ammonia molecules in the growth of gallium nitride using laser-assisted metal organic chemical vapour deposition. <i>Journal of Applied Physics</i> , 2016, 120, 105303.	2.5	11
58	Fabrication of biomimetic titanium laminated material using flakes powder metallurgy. <i>Journal of Materials Science</i> , 2018, 53, 7857-7868.	3.7	11
59	Solid-liquid co-existent phase process: Towards fully dense and thermally efficient Cu/C composite materials. <i>Journal of Alloys and Compounds</i> , 2018, 738, 292-300.	5.5	11
60	EPMA and XPS studies of TiAlSiC interfacial chemical compatibility. <i>Composites Part A: Applied Science and Manufacturing</i> , 1996, 27, 691-695.	7.6	10
61	XPS investigations of Sn, Sn _{1-x} Pd and Sn _{1-x} Pd/Cu clusters produced by electroless deposition onto NiTi micronic particles formed by atomization. <i>Surface and Interface Analysis</i> , 2004, 36, 769-772.	1.8	10
62	Detection of trace-level uranium and samarium in glasses by combined laser-induced breakdown spectroscopy and plasma-induced fluorescence spectroscopy. <i>Journal of Analytical Atomic Spectrometry</i> , 2015, 30, 1128-1132.	3.0	10
63	Synergetic Effect of Discontinuous Carbon Fibers and Graphite Flakes on Thermo-Mechanical Properties of Aluminum Matrix Composites Fabricated by Solid-Liquid Phase Sintering. <i>Metals and Materials International</i> , 2020, 26, 155-167.	3.4	10
64	Effect of Material and Process Atmosphere in the Preparation of Al-Ti-B Grain Refiner by SHS. <i>Metals</i> , 2015, 5, 1387-1396.	2.3	9
65	Relationship between oviposition, virulence gene expression and parasitism success in <i>Cotesia typhae</i> nov. sp. parasitoid strains. <i>Genetica</i> , 2017, 145, 469-479.	1.1	9
66	Isotropic thermal expansion in anisotropic thermal management composites filled with carbon fibres and graphite. <i>Journal of Materials Science</i> , 2018, 53, 10910-10919.	3.7	9
67	Characterization of the interface reaction zone between iron and NiZn ferrite in a composite material - Study of a silica layer as a diffusion barrier. <i>Journal of Alloys and Compounds</i> , 2017, 724, 711-719.	5.5	8
68	Formation of Cu Nanodots on Diamond Surface to Improve Heat Transfer in Cu/D Composites. <i>Advanced Engineering Materials</i> , 2018, 20, 1700894.	3.5	8
69	From 1D to 2D arrangements of graphite flakes in an aluminium matrix composite: Impact on thermal properties. <i>Scripta Materialia</i> , 2020, 183, 86-90.	5.2	8
70	Spontaneous formation of multilayer refractory carbide coatings in a molten salt media. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	8
71	Sensitivity and intensity enhancement in open air mass spectrometry assisted with a continuous wave infrared laser. <i>Journal of Analytical Atomic Spectrometry</i> , 2015, 30, 1663-1667.	3.0	7
72	Time-resolved resonance fluorescence spectroscopy for study of chemical reactions in laser-induced plasmas. <i>Optics Express</i> , 2017, 25, 27000.	3.4	7

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73	Effects of Laser Photolysis of Hydrocarbons at 193 and 248 nm on Chemical Vapor Deposition of Diamond Films. <i>Crystal Growth and Design</i> , 2018, 18, 2458-2466.	3.0	7
74	Laser sintering of cold-pressed Cu powder without binder use. <i>Materialia</i> , 2018, 3, 178-181.	2.7	7
75	Application of Eshelby's Tensor and Rotation Matrix for the Evaluation of Thermal Transport Properties of Composites. <i>Mechanics of Advanced Materials and Structures</i> , 2008, 15, 117-129.	2.6	6
76	Adaptive Composite Materials with Novel Architectures. <i>Materials Science Forum</i> , 0, 631-632, 149-154.	0.3	6
77	Thermal Characterization of Diamond Films through Modulated Photothermal Radiometry. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 2095-2102.	8.0	6
78	Design of tailored oxide-carbide coating on carbon fibers for a robust copper/carbon interphase. <i>Carbon</i> , 2020, 158, 607-614.	10.3	6
79	Laser vibrational excitation of radicals to prevent crystallinity degradation caused by boron doping in diamond. <i>Science Advances</i> , 2021, 7, .	10.3	6
80	Tailoring the microstructure of an oriented graphite flake/Al composite produced by powder metallurgy for achieving high thermal conductivity. <i>Diamond and Related Materials</i> , 2021, 118, 108513.	3.9	6
81	Electroless Coating Process of Carbon Nano Fibers by Copper Metal. <i>Materials Science Forum</i> , 2007, 534-536, 1445-1448.	0.3	5
82	Ultra-low temperature fabrication of copper carbon fibre composites by hydrothermal sintering for heat sinks with enhanced thermal efficiency. <i>Composites Part A: Applied Science and Manufacturing</i> , 2020, 133, 105858.	7.6	5
83	Controlling Interfacial Exchanges in Liquid Phase Bonding Enables Formation of Strong and Reliable Cu-Sn Soldering for High-Power and Temperature Applications. <i>ACS Applied Electronic Materials</i> , 2021, 3, 921-928.	4.3	5
84	Laser-assisted vibrational control of precursor molecules in diamond synthesis. <i>Current Opinion in Solid State and Materials Science</i> , 2015, 19, 107-114.	11.5	4
85	Analysis of the Solidification and Microstructure of Two Aluminium Alloys Reinforced with TiB ₂ Particles. <i>Advanced Engineering Materials</i> , 2011, 13, 887-894.	3.5	3
86	Spectroscopic Sensing of O ₂ and H ₂ in C ₂ H ₂ Flames for Diamond Growth Using Femtosecond Filamentation. <i>Crystal Growth and Design</i> , 2017, 17, 3443-3449.	3.0	3
87	Correlation of the mechanical properties of Cu/C composite materials with the chemistry of Cu C interfacial zone. <i>Materials Characterization</i> , 2021, 179, 111364.	4.4	3
88	Atomic force microscopy and x-ray photoelectron spectroscopy investigations of the morphology and chemistry of a PdCl ₂ ·SnCl ₂ electroless plating catalysis system adsorbed onto shape memory alloy particles. <i>Journal of Applied Physics</i> , 2004, 96, 4945-4951.	2.5	2
89	Determination of the oxidation kinetics of modified iron substrate: correlation between TGA and AES. <i>Surface and Interface Analysis</i> , 2004, 36, 1014-1017.	1.8	2
90	Enhanced coherent anti-Stokes Raman scattering imaging using silica microspheres. <i>Proceedings of SPIE</i> , 2014, , .	0.8	2

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91	Mass spectrometric investigation of the roles of several chemical intermediates in diamond synthesis. RSC Advances, 2015, 5, 4822-4830.	3.6	2
92	Seed-free deposition of large-area adhesive diamond films on copper surfaces processed and patterned by femtosecond lasers. Thin Solid Films, 2017, 636, 499-505.	1.8	2
93	Facile and Green Reduction of Graphene Oxide by a Reduced Polyoxometalate and Formation of a Nanohybrid. ChemPlusChem, 2017, 82, 186-189.	2.8	2
94	Multi-walled carbon nanotube-coated spiral coils for loss reduction in wireless power transfer systems. Carbon, 2018, 139, 695-699.	10.3	2
95	XPS studies of YBa ₂ Cu ₃ O _{7-x} /Ag high-TC superconductor. Surface and Interface Analysis, 2000, 30, 448-453.	1.8	1
96	Fabrication and characterisation of graphite/alumina reinforced copper composites. Journal of Materials Science, 2000, 35, 5967-5971.	3.7	1
97	Isotope signature characterization of Pb and U in open air by laser-ablation mass spectrometry. Journal of Analytical Atomic Spectrometry, 2017, 32, 1932-1937.	3.0	1
98	Control of Mechanical Properties of Functionally Graded Dual-Nanoparticle-Reinforced Composites. Materials Science Forum, 2018, 941, 2037-2040.	0.3	1
99	Forming three-dimensional micro-objects using two-dimensional gradient printing. Applied Materials Today, 2022, 28, 101538.	4.3	1
100	PET Treatment in Different Solvents: Influence on the Adhesion After Metallization. Journal of Adhesion, 1992, 38, 235-241.	3.0	0
101	Synthesis of copper/chromium oxide composites by a chemical processing method. Journal of Materials Science, 2011, 46, 2105-2111.	3.7	0
102	Influence of Laser Vibrational Excitations of Ethylene Molecules in Laser-Assisted Combustion Diamond Synthesis. Materials Research Society Symposia Proceedings, 2015, 1734, 1.	0.1	0
103	Time-resolved resonance fluorescence spectroscopy for study of chemical reactions in laser-induced breakdown spectroscopy. , 2017, , .		0