

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	Forming three-dimensional micro-objects using two-dimensional gradient printing. <i>Applied Materials Today</i> , 2022, 28, 101538.	4.3	1
2	Laser vibrational excitation of radicals to prevent crystallinity degradation caused by boron doping in diamond. <i>Science Advances</i> , 2021, 7, .	10.3	6
3	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
4	Manufacturing of complex diamond-based composite structures via laser powder-bed fusion. <i>Additive Manufacturing</i> , 2021, 40, 101927.	3.0	15
5	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
6	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
7	Femtosecond-laser sharp shaping of millimeter-scale geometries with vertical sidewalls. <i>International Journal of Extreme Manufacturing</i> , 2021, 3, 045001.	12.7	22
8	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
9	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
10	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
11	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
12	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
13	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
14	Additive manufacturing of copper/diamond composites for thermal management applications. <i>Manufacturing Letters</i> , 2020, 24, 61-66.	2.2	31
15	Laser 3D printing of complex copper structures. <i>Additive Manufacturing</i> , 2020, 35, 101268.	3.0	27
16	Powder processing methodology for fabrication of Copper/Graphite composite materials with enhanced thermal properties. <i>Composites Part A: Applied Science and Manufacturing</i> , 2019, 124, 105474.	7.6	17
17	Effect of titanium and zirconium carbide interphases on the thermal conductivity and interfacial heat transfers in copper/diamond composite materials. <i>AIP Advances</i> , 2019, 9, .	1.3	14
18	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

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19	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
20	Fabrication of biomimetic titanium laminated material using flakes powder metallurgy. <i>Journal of Materials Science</i> , 2018, 53, 7857-7868.	3.7	11
21	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
22	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
23	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
24	Control of Mechanical Properties of Functionally Graded Dual-Nanoparticle-Reinforced Composites. <i>Materials Science Forum</i> , 2018, 941, 2037-2040.	0.3	1
25	(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
26	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
27	Multi-walled carbon nanotube-coated spiral coils for loss reduction in wireless power transfer systems. <i>Carbon</i> , 2018, 139, 695-699.	10.3	2
28	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
29	Laser sintering of cold-pressed Cu powder without binder use. <i>Materialia</i> , 2018, 3, 178-181.	2.7	7
30	Understanding of Void Formation in Cu/Sn-Sn/Cu System During Transient Liquid Phase Bonding Process Through Diffusion Modeling. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2018, 49, 3343-3356.	2.1	18
31	Spectroscopic Sensing of O ₂ -C ₂ H ₂ -C ₂ H ₄ Flames for Diamond Growth Using Femtosecond Filamentation. <i>Crystal Growth and Design</i> , 2017, 17, 3443-3449.	3.0	3
32	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
33	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
34	Controlled defect creation and removal in graphene and MoS ₂ monolayers. <i>Nanoscale</i> , 2017, 9, 8997-9008.	5.6	21
35	Thermally Stable and Electrically Conductive, Vertically Aligned Carbon Nanotube/Silicon Infiltrated Composite Structures for High-Temperature Electrodes. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 37340-37349.	8.0	14
36	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

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37	Seed-free deposition of large-area adhesive diamond films on copper surfaces processed and patterned by femtosecond lasers. <i>Thin Solid Films</i> , 2017, 636, 499-505.	1.8	2
38	Isotope signature characterization of Pb and U in open air by laser-ablation mass spectrometry. <i>Journal of Analytical Atomic Spectrometry</i> , 2017, 32, 1932-1937.	3.0	1
39	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
40	Facile and Green Reduction of Graphene Oxide by a Reduced Polyoxometalate and Formation of a Nanohybrid. <i>ChemPlusChem</i> , 2017, 82, 186-189.	2.8	2
41	Time-resolved resonance fluorescence spectroscopy for study of chemical reactions in laser-induced plasmas. <i>Optics Express</i> , 2017, 25, 27000.	3.4	7
42	Time-resolved resonance fluorescence spectroscopy for study of chemical reactions in laser-induced breakdown spectroscopy. , 2017, , .		0
43	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
44	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
45	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
46	Impact of violated high-dose refuge assumptions on evolution of <i>Bt</i> resistance. <i>Evolutionary Applications</i> , 2016, 9, 596-607.	3.1	17
47	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
48	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
49	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
50	Solid-state graphene formation via a nickel carbide intermediate phase. <i>RSC Advances</i> , 2015, 5, 99037-99043.	3.6	34
51	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
52	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
53	Laser-based micro/nanofabrication in one, two and three dimensions. <i>Frontiers of Optoelectronics</i> , 2015, 8, 351-378.	3.7	36
54	Influence of Laser Vibrational Excitations of Ethylene Molecules in Laser-Assisted Combustion Diamond Synthesis. <i>Materials Research Society Symposia Proceedings</i> , 2015, 1734, 1.	0.1	0

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55	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
56	Magnetic field enhancement for femtosecond-laser-ablation mass spectrometry in ambient environments. <i>Journal of Analytical Atomic Spectrometry</i> , 2015, 30, 2303-2306.	3.0	16
57	Mass spectrometric investigation of the roles of several chemical intermediates in diamond synthesis. <i>RSC Advances</i> , 2015, 5, 4822-4830.	3.6	2
58	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
59	Two-photon polymerization: investigation of chemical and mechanical properties of resins using Raman microspectroscopy. <i>Optics Letters</i> , 2014, 39, 3034.	3.3	112
60	Enhanced coherent anti-Stokes Raman scattering imaging using silica microspheres. <i>Proceedings of SPIE</i> , 2014, , .	0.8	2
61	Contrast enhancement using silica microspheres in coherent anti-Stokes Raman spectroscopic imaging. <i>Optics Express</i> , 2014, 22, 2889.	3.4	12
62	Flame-enhanced laser-induced breakdown spectroscopy. <i>Optics Express</i> , 2014, 22, 7686.	3.4	46
63	Low-Temperature Growth of Crystalline Gallium Nitride Films Using Vibrational Excitation of Ammonia Molecules in Laser-Assisted Metalorganic Chemical Vapor Deposition. <i>Crystal Growth and Design</i> , 2014, 14, 6248-6253.	3.0	17
64	Resonant vibrational excitation of ethylene molecules in laser-assisted diamond deposition. <i>Laser Physics Letters</i> , 2014, 11, 076002.	1.4	11
65	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
66	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
67	Highly Efficient and Recyclable Carbon Soot Sponge for Oil Cleanup. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 5924-5929.	8.0	157
68	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
69	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
70	Thermal Characterization of Diamond Films through Modulated Photothermal Radiometry. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 2095-2102.	8.0	6
71	Thermomechanical stability of a carbon fiber-reinforced aluminum matrix composite fabricated by spark plasma sintering in various pulse conditions. <i>Materials Letters</i> , 2014, 130, 32-35.	2.6	20
72	Copper-Carbon and Aluminum-Carbon Composites Fabricated by Powder Metallurgy Processes. <i>Journal of Physics: Conference Series</i> , 2014, 525, 012015.	0.4	24

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73	Direct writing of graphene patterns on insulating substrates under ambient conditions. Scientific Reports, 2014, 4, 4892.	3.3	78
74	Epitaxial growth of chromium carbide nanostructures on multiwalled carbon nanotubes (MWCNTs) in MWCNT/copper composites. Acta Materialia, 2013, 61, 708-716.	7.9	54
75	An innovative process to fabricate copper/diamond composite films for thermal management applications. Composites Part A: Applied Science and Manufacturing, 2012, 43, 1746-1753.	7.6	29
76	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
77	Stress and Phase Purity Analyses of Diamond Films Deposited through Laser-Assisted Combustion Synthesis. ACS Applied Materials & Interfaces, 2011, 3, 4120-4125.	8.0	25
78	Synthesis of copper/chromium oxide composites by a chemical processing method. Journal of Materials Science, 2011, 46, 2105-2111.	3.7	0
79	Fabrication of single crystalline diamond reinforced aluminum matrix composite by powder metallurgy route. Metals and Materials International, 2011, 17, 755-763.	3.4	19
80	Analysis of the Solidification and Microstructure of Two Aluminium Alloys Reinforced with TiB ₂ Particles. Advanced Engineering Materials, 2011, 13, 887-894.	3.5	3
81	Spark plasma sintering behavior of pure aluminum depending on various sintering temperatures. Metals and Materials International, 2010, 16, 71-75.	3.4	59
82	Investigation of carbon nanotube reinforced aluminum matrix composite materials. Composites Science and Technology, 2010, 70, 546-550.	7.8	214
83	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
84	Architectural optimization for microelectronic packaging. Applied Thermal Engineering, 2009, 29, 2391-2395.	6.0	33
85	Application of Eshelby's Tensor and Rotation Matrix for the Evaluation of Thermal Transport Properties of Composites. Mechanics of Advanced Materials and Structures, 2008, 15, 117-129.	2.6	6
86	Electroless Coating Process of Carbon Nano Fibers by Copper Metal. Materials Science Forum, 2007, 534-536, 1445-1448.	0.3	5
87	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
88	Preparation by tape casting and hot pressing of copper carbon composites films. Journal of the European Ceramic Society, 2007, 27, 291-299.	5.7	39
89	Thermal and mechanical behavior of Al-Si alloy cast using magnetic molding and lost foam processes. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2006, 37, 441-447.	2.2	22
90	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. Journal of Applied Physics, 2004, 96, 4945-4951.	2.5	2

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91	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
92	Determination of the oxidation kinetics of modified Fe-iron substrate: correlation between TGA and AES. <i>Surface and Interface Analysis</i> , 2004, 36, 1014-1017.	1.8	2
93	Iron oxidation under the influence of phosphate thin films. <i>Journal of Applied Physics</i> , 2003, 94, 784-788.	2.5	38
94	Conception of a consumable copper reaction zone for a NiTi/SnAgCu composite material. <i>Composites Part A: Applied Science and Manufacturing</i> , 2002, 33, 1391-1395.	7.6	14
95	XPS studies of YBa ₂ Cu ₃ O _{7-x} /Ag high-TC superconductor. <i>Surface and Interface Analysis</i> , 2000, 30, 448-453.	1.8	1
96	Interface analysis in Al and Al alloys/Ni/carbon composites. <i>Journal of Materials Science</i> , 2000, 35, 961-965.	3.7	15
97	Fabrication and characterisation of graphite/alumina reinforced copper composites. <i>Journal of Materials Science</i> , 2000, 35, 5967-5971.	3.7	1
98	Interface characterisation and wettability properties of carbon particle reinforced copper alloy. <i>Journal of Materials Chemistry</i> , 2000, 10, 2213-2218.	6.7	15
99	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
100	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
101	X-ray photoelectron spectroscopy and transmission electron microscopy studies of the NiAl/Al ₂ O ₃ interfacial chemical compatibility. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1995, 13, 1893-1900.	2.1	13
102	PET Treatment in Different Solvents: Influence on the Adhesion After Metallization. <i>Journal of Adhesion</i> , 1992, 38, 235-241.	3.0	0
103	Adaptive Composite Materials with Novel Architectures. <i>Materials Science Forum</i> , 0, 631-632, 149-154.	0.3	6