Pascal Puech

List of Publications by Year
in descending order

105 papers	3,040 citations	147726 31 h-index	175177 52 g-index
107 all docs	107 docs citations	107 times ranked	4797 citing authors

#	Article	IF	Citations
1	Improved one-phonon confinement model for an accurate size determination of silicon nanocrystals. Journal of Applied Physics, 1999, 86, 1921-1924.	1.1	231
2	Giant Electronâ€“Phonon Coupling and Deep Conduction Band Resonance in Metal Halide Double Perovskite. ACS Nano, 2018, 12, 8081-8090.	7.3	190
3	A Raman study to obtain crystallite size of carbon materials: A better alternative to the Tuinstraâ€“Koenig law. Carbon, 2014, 80, 629-639.	5.4	186
4	Characterisation and in vivo ecotoxicity evaluation of double-wall carbon nanotubes in larvae of the amphibian Xenopus laevis. Aquatic Toxicology, 2008, 87, 127-137.	1.9	133
5	The preparation of carbon nanotube (CNT)/copper composites and the effect of the number of CNT walls on their hardness, friction and wear properties. Carbon, 2013, 58, 185-197.	5.4	105
6	Intralayer and interlayer electronâ€“phonon interactions in twisted graphene heterostructures. Nature Communications, 2018, 9, 1221.	5.8	93
7	Analyzing the Raman Spectra of Graphenic Carbon Materials from Kerogens to Nanotubes: What Type of Information Can Be Extracted from Defect Bands?. Journal of Carbon Research, 2019, 5, 69.	1.4	91
8	Indirect tail states formation by thermal-induced polar fluctuations in halide perovskites. Nature Communications, 2019, 10, 484.	5.8	88
9	Resonant Raman scattering in polycrystalline silicon thin films. Applied Physics Letters, 1998, 73, 1718-1720.	1.5	68
10	Discontinuous Tangential Stress in Double Wall Carbon Nanotubes. Physical Review Letters, 2004, 93, 095506.	2.9	66
11	Low temperature, pressureless sp2 to sp3 transformation of ultrathin, crystalline carbon films. Carbon, 2019, 145, 10-22.	5.4	64
12	Carbon nanotube ecotoxicity in amphibians: assessment of multiwalled carbon nanotubes and comparison with double-walled carbon nanotubes. Nanomedicine, 2010, 5, 963-974.	1.7	63
13	GaN nanoindentation: A micro-Raman spectroscopy study of local strain fields. Journal of Applied Physics, 2004, 96, 2853-2856.	1.1	62
14	Role of Electronâ€“Phonon Coupling in the Thermal Evolution of Bulk Rashba-Like Spin-Split Lead Halide Perovskites Exhibiting Dual-Band Photoluminescence. ACS Energy Letters, 2019, 4, 2205-2212.	8.8	58
15	Chirality of internal metallic and semiconducting carbon nanotubes. Physical Review B, 2002, 65, .	1.1	52
16	Surfactant-free CZTS nanoparticles as building blocks for low-cost solar cell absorbers. Nanotechnology, 2012, 23, 185402.	1.3	52
17	International amphibian micronucleus standardized procedure (ISO 21427â€1) for <i>in vivo</i> evaluation of doubleâ€walled carbon nanotubes toxicity and genotoxicity in water. Environmental Toxicology, 2011, 26, 136-145.	2.1	51
18	Advanced spectroscopic analyses on a:C-H materials: Revisiting the EELS characterization and its coupling with multi-wavelength Raman spectroscopy. Carbon, 2017, 112, 149-161.	5.4	51

#	Article	IF	Citations
19	Measurement of the in-depth stress profile in hydrogenated microcrystalline silicon thin films using Raman spectrometry. Journal of Applied Physics, 2001, 90, 3276-3279.	1.1	49
20	Raman evidence for the successful synthesis of diamane. Carbon, 2020, 169, 129-133.	5.4	49
21	Controlled laser heating of carbon nanotubes. Applied Physics Letters, 2006, 88, 173113.	1.5	47
22	Thermodynamic analysis of a Stirling engine including regenerator dead volume. Renewable Energy, 2011, 36, 872-878.	4.3	47
23	Intense Raman D Band without Disorder in Flattened Carbon Nanotubes. ACS Nano, 2021, 15, 596-603.	7.3	44
24	Towards a better understanding of the structure of diamanoÃ¯ds and diamanoÃ¯d/graphene hybrids. Carbon, 2020, 156, 234-241.	5.4	40
25	New insight on carbonisation and graphitisation mechanisms as obtained from a bottom-up analytical approach of X-ray diffraction patterns. Carbon, 2019, 147, 602-611.	5.4	39
26	Behavior of Raman D band for pyrocarbons with crystallite size in the 2â€“5 nm range. Applied Physics A: Materials Science and Processing, 2014, 114, 759-763.	1.1	38
27	Raman bands of double-wall carbon nanotubes: comparison with single- and triple-wall carbon nanotubes, and influence of annealing and electron irradiation. Journal of Raman Spectroscopy, 2007, 38, 714-720.	1.2	37
28	Mechanical properties of graphene. Applied Physics Reviews, 2021, 8, .	5.5	37
29	Theoretical Study of Graphene Doping Mechanism by Iodine Molecules. Journal of Physical Chemistry C, 2015, 119, 12071-12078.	1.5	35
30	Nanoscale pressure effects in individual double-wall carbon nanotubes. Physical Review B, 2006, 73, .	1.1	32
31	Synthesis and structure of free-standing germanium quantum dots and their application in live cell imaging. RSC Advances, 2015, 5, 20566-20573.	1.7	32
32	Narrow diameter double-wall carbon nanotubes: synthesis, electron microscopy and inelastic light scattering. New Journal of Physics, 2003, 5, 131-131.	1.2	30
33	Formation mechanism of peapod-derived double-walled carbon nanotubes. Physical Review B, 2010, 82, .	1.1	29
34	Electrical conductivity and Raman imaging of double wall carbon nanotubes in a polymer matrix. Composites Science and Technology, 2011, 71, 1326-1330.	3.8	29
35	Local stress measurements in laterally oxidized GaAs/AlxGa1â^'xAs heterostructures by micro-Raman spectroscopy. Applied Physics Letters, 1997, 71, 2520-2522.	1.5	27
36	RamanGband in double-wall carbon nanotubes combiningpdoping and high pressure. Physical Review B, 2008, 78, .	1.1	27

#	Article	IF	Citations
37	Spectroscopic detection of carbon nanotube interaction with amphiphilic molecules in epoxy resin composites. Journal of Applied Physics, 2005, 97, 034303.	1.1	26
38	Spatial confinement model applied to phonons in disordered graphene-based carbons. Carbon, 2016, 105, 275-281.	5.4	26
39	Diameter of As clusters in LT-GaAs by Raman spectroscopy. Journal of Applied Physics, 1999, 85, 2929-2933.	1.1	25
40	Theoretical study of polyiodide formation and stability on monolayer and bilayer graphene. Physical Chemistry Chemical Physics, 2015, 17, 30045-30051.	1.3	25
41	Charged iodide in chains behind the highly efficient iodine doping in carbon nanotubes. Physical Review Materials, 2017, 1, .	0.9	25
42	Mapping the three-dimensional strain field around a microindentation on silicon using polishing and Raman spectroscopy. Journal of Applied Physics, 2000, 88, 4582.	1.1	24
43	Charge transfer between carbon nanotubes and sulfuric acid as determined by Raman spectroscopy. Physical Review B, 2012, 85, .	1.1	24
44	Efficient cleaning of graphene from residual lithographic polymers by ozone treatment. Carbon, 2016, 109, 221-226.	5.4	24
45	Influence of nitrogen doping on the radial breathing mode in carbon nanotubes. Physical Review B, 2009, 79, .	1.1	22
46	Reversible Pressure-Induced Partial Phase Transition in Few-Layer Black Phosphorus. Nano Letters, 2020, 20, 5929-5935.	4.5	21
47	Enlightening the ultrahigh electrical conductivities of doped double-wall carbon nanotube fibers by Raman spectroscopy and first-principles calculations. Nanoscale, 2016, 8, 19668-19676.	2.8	18
48	Strain relaxation in [001]â€•and [111]â€GaAs/CaF2analyzed by Raman spectroscopy. Journal of Applied Physics, 1995, 77, 1126-1132.	1.1	17
49	Strain effects on optical phonons in ã€ˆ111ã€‰ GaAs layers analyzed by Raman scattering. Journal of Applied Physics, 1997, 82, 4493-4499.	1.1	17
50	Polarized Raman backscattering selection rules for (<i>hhl</i>)-oriented diamond- and zincblende-type crystals. Journal of Applied Physics, 2016, 120, .	1.1	17
51	Fermi level shift in carbon nanotubes by dye confinement. Carbon, 2019, 149, 772-780.	5.4	17
52	Mechanical lapping, handling and transfer of ultra-thin wafers. Journal of Micromechanics and Microengineering, 1998, 8, 338-342.	1.5	16
53	Resonant Raman scattering of graphite intercalation compounds KC₈, KC₂₄, and KC₃₆. Journal of Raman Spectroscopy, 2014, 45, 219-223.	1.2	15
54	Light scattering of double wall carbon nanotubes under hydrostatic pressure: pressure effects on the internal and external tubes. Physica Status Solidi (B): Basic Research, 2004, 241, 3360-3366.	0.7	14

#	Article	IF	Citations
55	Resolving the Framework Position of Organic Structure-Directing Agents in Hierarchical Zeolites via Polarized Stimulated Raman Scattering. Journal of Physical Chemistry Letters, 2018, 9, 1778-1782.	2.1	14
56	Similarities in the Raman RBM and D bands in double-wall carbon nanotubes. Physical Review B, 2005, 72, .	1.1	13
57	Optimizing metal-support interphase for efficient fuel cell oxygen reduction reaction catalyst. Journal of Colloid and Interface Science, 2020, 561, 439-448.	5.0	13
58	Raman scattering study of [hhk]â€GaAs/(Si or CaF2) strained heterostructures. Journal of Applied Physics, 1994, 76, 2773-2780.	1.1	12
59	The effect of twin screw extrusion on structural, electrical, and rheological properties in carbon nanotube polyâ€etherâ€etherâ€ketone nanocomposites. Journal of Applied Polymer Science, 2013, 129, 2527-2535.	1.3	12
60	Measurement of stress gradients in hydrogenated microcrystalline silicon thin films using Raman spectroscopy. Journal of Non-Crystalline Solids, 2002, 299-302, 280-283.	1.5	11
61	Conductive graphene coatings synthesized from graphenide solutions. Carbon, 2017, 121, 217-225.	5.4	11
62	Progress on Diamane and Diamanoid Thin Film Pressureless Synthesis. Journal of Carbon Research, 2021, 7, 9.	1.4	11
63	Molecular nature of breakdown of the folic acid under hydrothermal treatment: a combined experimental and DFT study. Scientific Reports, 2020, 10, 19668.	1.6	10
64	Mo thio and oxo-thio molecular complexes film as self-healing catalyst for photocatalytic hydrogen evolution on 2D materials. Applied Catalysis B: Environmental, 2020, 278, 119288.	10.8	10
65	Long-wavelength optical phonons of CdxZn1-xSb mixed crystals. Semiconductor Science and Technology, 1994, 9, 333-337.	1.0	9
66	Residual strain field in indented GaAs. Journal of Materials Research, 2003, 18, 1474-1480.	1.2	9
67	Strain Determination Around Vickers Indentation on Silicon Surface by Raman Spectroscopy. Journal of Materials Research, 2004, 19, 1273-1280.	1.2	9
68	Ultraviolet photon absorption in single- and double-wall carbon nanotubes and peapods: Heating-induced phonon line broadening, wall coupling, and transformation. Physical Review B, 2007, 76, .	1.1	9
69	Resonant Laserâ€Induced Formation of Doubleâ€Walled Carbon Nanotubes from Peapods under Ambient Conditions. Small, 2012, 8, 2045-2052.	5.2	9
70	Anharmonic frequency shift of long-wavelength phonons in As and Sb. Applied Physics Letters, 2000, 77, 2924-2925.	1.5	8
71	Uniform dispersion of nanotubes in thermoplastic polymer through thermal annealing. Carbon, 2013, 53, 399-402.	5.4	8
72	Electronic coupling in fullerene-doped semiconducting carbon nanotubes probed by Raman spectroscopy and electronic transport. Carbon, 2013, 57, 498-506.	5.4	8

#	Article	IF	Citations
73	Optical signatures of bulk and solutions of KC8 and KC24. Journal of Applied Physics, 2015, 118, 044304.	1.1	8
74	Sizeâ€controlled grapheneâ€based materials prepared by annealing of pitchâ€based cokes: G band phonon line broadening effects due to high pressure, crystallite size, and merging with Dâ€² band. Journal of Raman Spectroscopy, 2019, 50, 1861-1866.	1.2	8
75	The X-ray, Raman and TEM Signatures of Cellulose-Derived Carbons Explained. Journal of Carbon Research, 2022, 8, 4.	1.4	8
76	Raman Mapping Devoted to the Phase Transformation and Strain Analysis in Si Micro-Indentation. Advanced Engineering Materials, 2002, 4, 543-546.	1.6	7
77	Raman<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>G</mml:mi></mml:math>and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>D</mml:mi></mml:math>band in strongly photoexcited carbon nanotubes. Physical Review B, 2009, 79, .	1.1	7
78	Texture, Nanotexture, and Structure of Carbon Nanotube-Supported Carbon Cones. ACS Nano, 2022, 16, 9287-9296.	7.3	7
79	MBE growth and Raman analysis of [hhk]GaAs/(Si or CaF2) highly strained hetero-structures. Microelectronics Journal, 1995, 26, 789-795.	1.1	6
80	Improved characterization of polycrystalline silicon film, by resonant Raman scattering. Thin Solid Films, 1999, 337, 93-97.	0.8	6
81	Origin of mechanical modifications in poly (ether ether ketone)/carbon nanotube composite. Journal of Applied Physics, 2014, 115, .	1.1	5
82	Mechanical lapping of ultra-thin wafers for 3D integration. , 0, , .		4
83	Pressure dependence of Raman modes in DWCNT filled with PbI2 semiconductor. Physica Status Solidi (B): Basic Research, 2007, 244, 136-141.	0.7	4
84	The effect of adsorbed species and exposure to sulfuric acid on the electrical conductance of individual single-wall carbon nanotube transistors. Carbon, 2012, 50, 3953-3956.	5.4	4
85	Brittle and ductile removal modes observed during diamond turning of carbon nanotube composites. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2009, 223, 1-8.	1.5	3
86	Comparative Raman spectroscopy of individual and bundled double wall carbon nanotubes. Physica Status Solidi (B): Basic Research, 2011, 248, 974-979.	0.7	3
87	Properties of Carbon Nanotubes. , 2014, , 1-49.		3
88	A gas-templating strategy to synthesize CZTS nanocrystals for environment-friendly solar inks. Solar Energy Materials and Solar Cells, 2015, 141, 364-371.	3.0	3
89	Water-soluble, heterometallic chalcogenide oligomers as building blocks for functional films. Inorganic Chemistry Frontiers, 2016, 3, 689-701.	3.0	3
90	Reversibility of defect formation during oxygenâ€assisted electronâ€beamâ€induced etching of graphene. Journal of Raman Spectroscopy, 2018, 49, 317-323.	1.2	3

#	Article	IF	Citations
91	Non-stoichiometry in (001) low temperature GaAs by Raman spectroscopy. Journal of Physics Condensed Matter, 2000, 12, 2895-2902.	0.7	2
92	Spatial Distribution of Strain and Phases in Si Nano-Indentation Analysed by Raman Mapping. Solid State Phenomena, 2001, 82-84, 777-782.	0.3	2
93	Is there a link between very high strain and metastable phases in semiconductors: cases of Si and GaAs?. Journal of Physics Condensed Matter, 2004, 16, S39-S47.	0.7	2
94	Thermal transfer in SWNTs and peapods under UV-irradiation. Physica Status Solidi (B): Basic Research, 2007, 244, 4064-4068.	0.7	2
95	Chemical insights into the formation of Cu2ZnSnS4films from all-aqueous dispersions for low-cost solar cells. Nanotechnology, 2017, 28, 445709.	1.3	2
96	Enhanced Raman signal of CH3 on carbon nanotubes. Materials Research Society Symposia Proceedings, 2004, 858, 107.	0.1	1
97	Laser Induced Modifications of Carbon Nanotube Composite Surfaces. Japanese Journal of Applied Physics, 2006, 45, 7776-7779.	0.8	1
98	High robustness of epitaxial 4H-SiC graphene to oxidation processes. Journal of Physics: Conference Series, 2018, 1124, 081020.	0.3	1
99	Combining low and high electron energy diffractions as a powerful tool for studying 2D materials. Applied Physics A: Materials Science and Processing, 2021, 127, 1.	1.1	1
100	UV Raman Spectroscopy Study of Strain Induced by Buried Silicon Nitride Layer in the BOX of Silicon On Insulator Substrates. Materials Research Society Symposia Proceedings, 2009, 1185, 43.	0.1	0
101	Double Wall Carbon Nanotubes as a Molecular Sensor in Polymer Composites. , 2010, , .		0
102	Ecotoxicology of Carbon Nanotubes Toward Amphibian Larvae. , 2016, , 931-940.		0
103	Initial stage of C60 cation formation in superacids. Chemical Physics, 2018, 513, 13-16.	0.9	0
104	Embedded carbon nanotubes on surface of thermoplastic poly(ether ether ketone). Polymer, 2021, 226, 123807.	1.8	0
105	Structure of mixed-phase LPCVD silicon films as a function of operating conditions. European Physical Journal Special Topics, 1999, 09, Pr8-1091-Pr8-1098.	0.2	0