

Rafael J Jimenez Riobó

List of Publications by Year in descending order

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110
papers

1,937
citations

279798

23
h-index

315739

38
g-index

114
all docs

114
docs citations

114
times ranked

2015
citing authors

#	ARTICLE	IF	CITATIONS
1	Self-sterilized EVOH-TiO ₂ Nanocomposites: Interface Effects on Biocidal Properties. <i>Advanced Functional Materials</i> , 2008, 18, 1949-1960.	14.9	111
2	Concentration and temperature dependence of the refractive index of ethanol-water mixtures: Influence of intermolecular interactions. <i>European Physical Journal E</i> , 2009, 30, 19-26.	1.6	99
3	A new Brillouin scattering technique for the investigation of acoustic and opto-acoustic properties: application to polymers. <i>Journal Physics D: Applied Physics</i> , 1998, 31, 1913-1917.	2.8	84
4	Boosting TiO ₂ -anatase antimicrobial activity: Polymer-oxide thin films. <i>Applied Catalysis B: Environmental</i> , 2009, 89, 441-447.	20.2	81
5	Looking at the "Water-in-Deep-Eutectic-Solvent" System: A Dilution Range for High Performance Eutectics. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 17565-17573.	6.7	80
6	Two-Level Systems and Boson Peak Remain Stable in 110-Million-Year-Old Amber Glass. <i>Physical Review Letters</i> , 2014, 112, 165901.	7.8	75
7	Low-temperature specific heat of structural and orientational glasses of simple alcohols. <i>Journal of Physics Condensed Matter</i> , 2003, 15, S1007-S1018.	1.8	55
8	Reline aqueous solutions behaving as liquid mixtures of H-bonded co-solvents: microphase segregation and formation of co-continuous structures as indicated by Brillouin and ¹ H NMR spectroscopies. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 17103-17110.	2.8	49
9	On the phase diagram of polymorphic ethanol: Thermodynamic and structural studies. <i>Journal of Non-Crystalline Solids</i> , 2006, 352, 4769-4775.	3.1	43
10	Thermal properties and Brillouin-scattering study of glass, crystal, and "glacial" states in n-butanol. <i>Journal of Chemical Physics</i> , 2009, 131, 174508.	3.0	38
11	Photochemical solution processing of films of metastable phases for flexible devices: the ¹² -Bi ₂ O ₃ polymorph. <i>Scientific Reports</i> , 2016, 6, 39561.	3.3	38
12	Anisotropy-induced polarization mixture of surface acoustic waves in GaN/c-sapphire heterostructures. <i>Physical Review B</i> , 2005, 72, .	3.2	37
13	Modelling of SAW filter based on ZnO/diamond/Si layered structure including velocity dispersion. <i>Applied Surface Science</i> , 2000, 164, 200-204.	6.1	34
14	Structural and thermodynamic studies of n-butanol. <i>Journal of Physics Condensed Matter</i> , 2010, 22, 195102.	1.8	34
15	Nanophase separation in aqueous dilutions of a ternary DES as revealed by Brillouin and NMR spectroscopy. <i>Journal of Molecular Liquids</i> , 2019, 276, 196-203.	4.9	33
16	Brillouin and NMR spectroscopic studies of aqueous dilutions of malicine: Determining the dilution range for transition from a "water-in-DES" system to a "DES-in-water" one. <i>Journal of Molecular Liquids</i> , 2019, 284, 175-181.	4.9	32
17	Surface-induced organization of linear molecules on nanostructured polytetrafluoroethylene: Crystalline state of poly[vinylidene fluoride-trifluoroethylene]. <i>Physical Review B</i> , 1997, 55, 3497-3506.	3.2	31
18	Na Modification of Lanthanide Doped Ca ₃ Nb _{1.5} Ga _{3.5} O ₁₂ -Type Laser Garnets: Czochralski Crystal Growth and Characterization. <i>Crystal Growth and Design</i> , 2016, 16, 1480-1491.	3.0	29

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19	Predicting the suitability of aqueous solutions of deep eutectic solvents for preparation of co-continuous porous carbons via spinodal decomposition processes. <i>Carbon</i> , 2017, 123, 536-547.	10.3	29
20	Influence of the microstructure on the macroscopic elastic and optical properties of dried sonogels: A Brillouin spectroscopic study. <i>Journal of Applied Physics</i> , 1997, 81, 7739-7745.	2.5	28
21	Hypersonic characterization of sound propagation velocity in Al _x Ga _{1-x} N thin films. <i>Journal of Applied Physics</i> , 2002, 92, 6868-6874.	2.5	27
22	Solution Synthesis of BiFeO ₃ Thin Films onto Silicon Substrates with Ferroelectric, Magnetic, and Optical Functionalities. <i>Journal of the American Ceramic Society</i> , 2013, 96, 3061-3069.	3.8	26
23	Brillouin Spectroscopy as a Suitable Technique for the Determination of the Eutectic Composition in Mixtures of Choline Chloride and Water. <i>Journal of Physical Chemistry B</i> , 2020, 124, 4002-4009.	2.6	24
24	Biocidal Capability Optimization in Organic-Inorganic Nanocomposites Based on Titania. <i>Environmental Science & Technology</i> , 2009, 43, 1630-1634.	10.0	23
25	Low-temperature thermal and elastoacoustic properties of butanol glasses: Study of position isomerism effects around the boson peak. <i>Physical Review B</i> , 2012, 85, .	3.2	23
26	Acoustic, opto-acoustic, and thermal properties investigated around the phase transitions of NaCN and Na(CN) _{1-x} Cl _x mixed crystals. <i>Physical Review B</i> , 1990, 42, 8537-8547.	3.2	22
27	Crystallisation of Pb _{1-x} Ca _x TiO ₃ ferroelectric thin films as a function of the Ca ²⁺ content. <i>Journal of the European Ceramic Society</i> , 2005, 25, 2325-2329.	5.7	22
28	Carbon and carbon composites obtained using deep eutectic solvents and aqueous dilutions thereof. <i>Chemical Communications</i> , 2020, 56, 3592-3604.	4.1	22
29	Raman amplification in the ultra-small limit of Ag nanoparticles on SiO ₂ and graphene: Size and inter-particle distance effects. <i>Materials and Design</i> , 2020, 192, 108702.	7.0	22
30	Transitioning from Ionic Liquids to Deep Eutectic Solvents. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 1232-1245.	6.7	22
31	Low-temperature properties of glassy and crystalline states of n-butanol. <i>Journal of Non-Crystalline Solids</i> , 2011, 357, 524-529.	3.1	21
32	Functional poly(urethane-imide)s containing Lewis bases for SO ₂ detection by Love surface acoustic wave gas micro-sensors. <i>Sensors and Actuators B: Chemical</i> , 2013, 185, 309-320.	7.8	21
33	MPACVD diamond films for surface acoustic wave filters. <i>Diamond and Related Materials</i> , 2001, 10, 681-685.	3.9	20
34	Further Extending the Dilution Range of the "Solvent-in-DES" Regime upon the Replacement of Water by an Organic Solvent with Hydrogen Bond Capabilities. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 12120-12131.	6.7	20
35	Unconventional orientational glass transitions in symmetrical difluorotetrachloroethane. <i>Journal of Physics Condensed Matter</i> , 1994, 6, 6947-6964.	1.8	19
36	Phase-transition behavior of n-alkanes on nanostructured polytetrafluoroethylene films: Brillouin spectroscopic and calorimetric investigations on pentacosane. <i>Physical Review B</i> , 1997, 56, 8683-8690.	3.2	19

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37	Phase Instability and Molecular Kinetics Provoked by Repeated Crossing of the Demixing Transition of PNIPAM Solutions. <i>Langmuir</i> , 2014, 30, 11792-11801.	3.5	19
38	Second-order elasticity of liquid crystals within their nematic state at high frequencies. <i>Physical Review E</i> , 1995, 51, 2115-2128.	2.1	18
39	In- and out-of-plane longitudinal acoustic-wave velocities and elastic moduli in h-BN from Brillouin scattering measurements. <i>Applied Physics Letters</i> , 2018, 112, 051905.	3.3	18
40	Low-temperature thermal properties of a hyperaged geological glass. <i>Journal of Physics Condensed Matter</i> , 2013, 25, 295402.	1.8	17
41	On the existence of an intrinsic glass transition in a fragile liquid: polyvinylacetate. <i>Colloid and Polymer Science</i> , 1996, 274, 490-495.	2.1	16
42	Synthesis and properties of Nd-doped oxynitride phosphate laser glasses. <i>Journal of Non-Crystalline Solids</i> , 2017, 473, 125-131.	3.1	16
43	On the existence of a second phase transition in ferroelectrics with Aurivillius-type structure through the study of the Young's modulus. <i>Journal of Physics Condensed Matter</i> , 2000, 12, 3883-3895.	1.8	15
44	Premelting features and acoustic mode softening in the rotator phases of linear telomers: C17H36. <i>Journal of Physics Condensed Matter</i> , 1994, 6, 10977-10988.	1.8	14
45	Spatial and angle distribution of internal stresses in nano- and microstructured chemical vapor deposited diamond as revealed by Brillouin spectroscopy. <i>Journal of Applied Physics</i> , 2000, 87, 74-77.	2.5	14
46	Hypersonic properties of nano- and microstructured CVD diamond. <i>Diamond and Related Materials</i> , 2000, 9, 123-128.	3.9	13
47	Surface acoustic wave velocity of gold films deposited on silicon substrates at different temperatures. <i>Journal of Applied Physics</i> , 2011, 110, 023503.	2.5	13
48	Amorphous-nanocrystalline Al doped ZnO transparent conducting thin films. <i>Journal of Alloys and Compounds</i> , 2012, 536, S445-S449.	5.5	13
49	Low-temperature properties of monoalcohol glasses and crystals. <i>Low Temperature Physics</i> , 2013, 39, 468-472.	0.6	13
50	Influence of nanoparticles on elastic and optical properties of a polymeric matrix: Hypersonic studies on ethylene vinyl alcohol copolymer-titania nanocomposites. <i>European Polymer Journal</i> , 2010, 46, 397-403.	5.4	12
51	Brillouin scattering determination of the surface acoustic wave velocity in $\text{In}_x\text{Ga}_{1-x}\text{N}$: A probe into the elastic constants. <i>Applied Physics Letters</i> , 2012, 101, 062103.	3.3	12
52	Elastic constants of graphene oxide few-layer films: correlations with interlayer stacking and bonding. <i>Journal of Materials Chemistry C</i> , 2015, 3, 4868-4875.	5.5	12
53	Elastic properties by Brillouin spectroscopy of sol-gel (Pb,Ca)TiO ₃ films. <i>Journal of Applied Physics</i> , 1999, 85, 7349-7354.	2.5	11
54	Elastic properties of B-C-N films grown by N ₂ -reactive sputtering from boron carbide targets. <i>Journal of Applied Physics</i> , 2013, 114, .	2.5	11

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55	Tools for extending the dilution range of the "solvent-in-DES" regime. <i>Journal of Molecular Liquids</i> , 2021, 329, 115573.	4.9	11
56	Anisotropic propagation of surface acoustic waves on nitride layers. <i>Superlattices and Microstructures</i> , 2004, 36, 815-823.	3.1	10
57	Calorimetric and acoustic experiments on orientationally disordered and fully ordered crystalline phases of ethanol. <i>Journal of Physics Condensed Matter</i> , 2007, 19, 205135.	1.8	10
58	Influence of the yttria content on the mechanical properties of Y ₂ O ₃ -ZrO ₂ thin films prepared by EB-PVD. <i>Vacuum</i> , 2007, 81, 1457-1461.	3.5	10
59	Kinetic processes at the demixing transition of PNIPAM solutions. <i>Soft Matter</i> , 2013, 9, 9887.	2.7	10
60	Aqueous-Eutectic-in-Salt Electrolytes for High-Energy-Density Supercapacitors with an Operational Temperature Window of 100 °C, from ~35 to +65 °C. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 29181-29193.	8.0	10
61	Surface-induced organization of n-alkanes on nanostructured PTFE: I. Brillouin spectroscopic investigations on pentacosane. <i>Journal of Physics Condensed Matter</i> , 1996, 8, 7579-7587.	1.8	9
62	Elastic Properties of Langmuir-Blodgett Films. A New Brillouin Spectroscopic Strategy. <i>Langmuir</i> , 1998, 14, 6625-6627.	3.5	9
63	Thermal and acoustic experiments on polymorphic ethanol. <i>Philosophical Magazine</i> , 2008, 88, 4197-4203.	1.6	9
64	Interphases, gelation, vitrification, porous glasses and the generalized Cauchy relation: epoxy/silica nanocomposites. <i>New Journal of Physics</i> , 2009, 11, 023015.	2.9	9
65	Resilience improvement of an isotactic polypropylene-g-maleic anhydride by crosslinking using polyether triamine agents. <i>Polymer</i> , 2019, 179, 121655.	3.8	9
66	Phase transitions in Na ^{1-x} Li _x NbO ₃ solid solution ceramics studied by a new pyroelectric current based method. <i>Journal Physics D: Applied Physics</i> , 2008, 41, 065408.	2.8	8
67	Do two-level systems and boson peak persist or vanish in hyperaged geological glasses of amber?. <i>Philosophical Magazine</i> , 2016, 96, 774-787.	1.6	8
68	Brillouin Spectroscopy: From Biomedical Research to New Generation Pathology Diagnosis. <i>International Journal of Molecular Sciences</i> , 2021, 22, 8055.	4.1	8
69	Brillouin investigations of the phases and phase transitions in the mixed crystal Na(CN) _x Cl _{1-x} . <i>Ferroelectrics</i> , 1990, 106, 175-180.	0.6	7
70	Elastic softening in the rotator phase of the perfluoroalkane C ₂₄ F ₅₀ . <i>Physical Review B</i> , 1995, 51, 3353-3361.	3.2	7
71	Brillouin spectroscopy and elastic properties of the nucleation and growth faces of synthetic diamond films. <i>Journal of Applied Physics</i> , 2005, 97, 073509.	2.5	7
72	Surface acoustic waves and elastic constants of InN epilayers determined by Brillouin scattering. <i>Physica Status Solidi - Rapid Research Letters</i> , 2012, 6, 256-258.	2.4	7

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73	Optical find of hypersonic surface acoustic waves in bulk transparent materials. <i>Physical Review B</i> , 2016, 94, .	3.2	7
74	Photochemical solution deposition of $\text{Pb-Bi}_2\text{O}_3$ thin films. <i>Journal of Sol-Gel Science and Technology</i> , 2017, 81, 355-361.	2.4	7
75	Dehydroxylation processing and lasing properties of a Nd alumino-phosphate glass. <i>Journal of Alloys and Compounds</i> , 2022, 896, 163040.	5.5	7
76	About the microstructure of PCVD prepared crystal mats of statistical oligo-vinylidene-fluoride-trifluoroethylene in relation to other fluorinated polymers. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 1995, 33, 237-246.	2.1	6
77	Brillouin spectroscopy on dried sonogels. <i>Applied Physics Letters</i> , 1996, 69, 3827-3829.	3.3	6
78	Space and time resolving molecular acoustics as a tool to visualize epoxy formation at a planar hardener-resin interface. <i>Chemical Physics Letters</i> , 2009, 476, 11-14.	2.6	6
79	Chemical and structural heterogeneities in Nd-doped oxynitride phosphate laser glasses. <i>Journal of Alloys and Compounds</i> , 2020, 816, 152657.	5.5	6
80	Elastic behaviour of Si/Ge superlattices determined by Brillouin light scattering. <i>Thin Solid Films</i> , 1998, 317, 255-258.	1.8	5
81	Brillouin characterization of the acoustic waves phase-velocity in $\text{Al}_x\text{Ga}_{1-x}\text{N}$ epilayers. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2002, 93, 168-171.	3.5	5
82	Compositional dependence of the elastic constants of dilute $\text{GaAs}_{1-x}\text{N}_x$ alloys. <i>Journal of Applied Physics</i> , 2007, 101, 113507.	2.5	5
83	Stress-mediated solution deposition method to stabilize ferroelectric $\text{BiFe}_{1-x}\text{Cr}_x\text{O}_3$ perovskite thin films with narrow bandgaps. <i>Journal of the European Ceramic Society</i> , 2021, 41, 3404-3415.	5.7	5
84	Impact of optical tissue clearing on the Brillouin signal from biological tissue samples. <i>Biomedical Optics Express</i> , 2019, 10, 2674.	2.9	5
85	Microstructural and Mechanical Properties of Sono-Ormosils. <i>Journal of Sol-Gel Science and Technology</i> , 1998, 13, 451-455.	2.4	4
86	Influence of the short-range structural properties on the elastic constants of Si/Ge superlattices. <i>Journal of Physics Condensed Matter</i> , 2000, 12, 2931-2943.	1.8	4
87	Brillouin spectroscopy experiments on polymorphic ethanol. <i>Philosophical Magazine</i> , 2007, 87, 657-663.	1.6	4
88	Acoustic and optical phonons in EVOH/TiO_2 nanocomposite films: Effect of aggregation. <i>Journal of Luminescence</i> , 2008, 128, 851-854.	3.1	4
89	Do tunneling states and boson peak persist or disappear in extremely stabilized glasses?. <i>Low Temperature Physics</i> , 2015, 41, 412-418.	0.6	4
90	Thermal behavior of the elastic (young's) modulus in SBN-derived compounds ($\text{Bi}_2\text{SrNb}_2\text{O}_9$). <i>Journal of the European Ceramic Society</i> , 1999, 19, 1315-1319.	5.7	3

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91	Brillouin light scattering characterization of the surface acoustic wave velocity in the ZnO/ Si ₃ N ₄ /Si(100) system. Superlattices and Microstructures, 2006, 39, 75-82.	3.1	3
92	Elastic instability of the nano-structured state as an intrinsic probe to study the early formation stages of sol-gel derived (Pb _{1-x} Cax)TiO ₃ thin films. Applied Physics A: Materials Science and Processing, 2007, 89, 967-973.	2.3	3
93	Crystalline phase transitions and acoustic phonons behaviour of polymorphic ethanol. European Physical Journal B, 2009, 71, 41-45.	1.5	3
94	Brillouin light scattering characterization of the surface acoustic wave velocity in sp ² allotropes thin films. European Physical Journal B, 2010, 75, 151-155.	1.5	3
95	Elastic properties of boron carbide films via surface acoustic waves measured by Brillouin light scattering. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 513-518.	1.8	3
96	Assessment of myocardial viscoelasticity with Brillouin spectroscopy in myocardial infarction and aortic stenosis models. Scientific Reports, 2021, 11, 21369.	3.3	3
97	Anomalous hypersonic behavior of CuGeO ₃ prior to the spin-Peierls transition. Physical Review B, 1998, 58, 8574-8578.	3.2	2
98	Study of effect of deposition temperature of AlN films on SAW velocity using Brillouin spectroscopy. Diamond and Related Materials, 2007, 16, 1417-1420.	3.9	2
99	Elastic properties in different nano-structured AlN films. Journal of Materials Science, 2010, 45, 363-368.	3.7	2
100	Influence of the preparation temperature on the SAW velocity of partially oxidized Fe thin films. IOP Conference Series: Materials Science and Engineering, 2010, 12, 012014.	0.6	2
101	Temperature Dependence of Surface Acoustic Wave Propagation Velocity in In _x Ga _{1-x} N Films Obtained by High-Resolution Brillouin Spectroscopy: Determination of Temperature Coefficient of Frequency. Applied Physics Express, 2013, 6, 056601.	2.4	2
102	Surface acoustic wave velocity and elastic constants of cubic GaN. Applied Physics Express, 2016, 9, 061001.	2.4	2
103	Thermal expansion of Cr-doped TGS crystals as a function of the DC electric field. Ferroelectrics, 1994, 154, 125-130.	0.6	1
104	Existence of a second glass transition in the mixed alkali cyanides. Ferroelectrics, 1994, 157, 141-146.	0.6	1
105	Elastic anomalies and orientational glass transition in Na(CN) Cl mixed crystals. A Brillouin spectroscopic study. European Physical Journal B, 2000, 13, 643-651.	1.5	1
106	High Resolution Brillouin Spectroscopy and Determination of Elastic Properties of Ferroelectric and Piezoelectric Films. Ferroelectrics, 2002, 272, 93-98.	0.6	1
107	Brillouin scattering study of methanol-water solutions under pressure. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 3178-3181.	0.8	1
108	Effect of deposition temperature on surface acoustic wave velocity of aluminum nitride films determined by Brillouin spectroscopy. Journal of Applied Physics, 2005, 98, 096102.	2.5	1

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109	Low-Temperature Specific Heat and Brillouin Scattering Measurements on Hydrogen-Bonded Glasses. AIP Conference Proceedings, 2004, , .	0.4	0
110	Development of new polyurethanamide tailored copolymers for SO ₂ SAW gas microsensors. , 2010, , .		0