

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
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114
all docs

114
docs citations

114
times ranked

2015
citing authors

#	ARTICLE	IF	CITATIONS
1	Dehydroxylation processing and lasing properties of a Nd alumino-phosphate glass. <i>Journal of Alloys and Compounds</i> , 2022, 896, 163040.	5.5	7
2	Transitioning from Ionic Liquids to Deep Eutectic Solvents. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 1232-1245.	6.7	22
3	Tools for extending the dilution range of the "solvent-in-DES" regime. <i>Journal of Molecular Liquids</i> , 2021, 329, 115573.	4.9	11
4	Stress-mediated solution deposition method to stabilize ferroelectric BiFe _{1-x} CrxO ₃ perovskite thin films with narrow bandgaps. <i>Journal of the European Ceramic Society</i> , 2021, 41, 3404-3415.	5.7	5
5	Brillouin Spectroscopy: From Biomedical Research to New Generation Pathology Diagnosis. <i>International Journal of Molecular Sciences</i> , 2021, 22, 8055.	4.1	8
6	Assessment of myocardial viscoelasticity with Brillouin spectroscopy in myocardial infarction and aortic stenosis models. <i>Scientific Reports</i> , 2021, 11, 21369.	3.3	3
7	Chemical and structural heterogeneities in Nd-doped oxynitride phosphate laser glasses. <i>Journal of Alloys and Compounds</i> , 2020, 816, 152657.	5.5	6
8	Aqueous-Eutectic-in-Salt Electrolytes for High-Energy-Density Supercapacitors with an Operational Temperature Window of 100 Å°C, from -35 to +65 Å°C. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 29181-29193.	8.0	10
9	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
10	Carbon and carbon composites obtained using deep eutectic solvents and aqueous dilutions thereof. <i>Chemical Communications</i> , 2020, 56, 3592-3604.	4.1	22
11	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
12	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
13	Resilience improvement of an isotactic polypropylene-g-maleic anhydride by crosslinking using polyether triamine agents. <i>Polymer</i> , 2019, 179, 121655.	3.8	9
14	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
15	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
16	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
17	Impact of optical tissue clearing on the Brillouin signal from biological tissue samples. <i>Biomedical Optics Express</i> , 2019, 10, 2674.	2.9	5
18	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

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19	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
20	Photochemical solution deposition of $\hat{\text{I}}^2\text{-Bi}_2\text{O}_3$ thin films. <i>Journal of Sol-Gel Science and Technology</i> , 2017, 81, 355-361.	2.4	7
21	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
22	Synthesis and properties of Nd-doped oxynitride phosphate laser glasses. <i>Journal of Non-Crystalline Solids</i> , 2017, 473, 125-131.	3.1	16
23	Surface acoustic wave velocity and elastic constants of cubic GaN. <i>Applied Physics Express</i> , 2016, 9, 061001.	2.4	2
24	Photochemical solution processing of films of metastable phases for flexible devices: the $\hat{\text{I}}^2\text{-Bi}_2\text{O}_3$ polymorph. <i>Scientific Reports</i> , 2016, 6, 39561.	3.3	38
25	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
26	Optical find of hypersonic surface acoustic waves in bulk transparent materials. <i>Physical Review B</i> , 2016, 94, .	3.2	7
27	Na Modification of Lanthanide Doped $\text{Ca}_{3}\text{Nb}_{1.5}\text{Ga}_{3.5}\text{O}_{12}$ -Type Laser Garnets: Czochralski Crystal Growth and Characterization. <i>Crystal Growth and Design</i> , 2016, 16, 1480-1491.	3.0	29
28	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
29	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
30	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
31	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
32	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
33	Kinetic processes at the demixing transition of PNIPAM solutions. <i>Soft Matter</i> , 2013, 9, 9887.	2.7	10
34	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
35	Low-temperature thermal properties of a hyperaged geological glass. <i>Journal of Physics Condensed Matter</i> , 2013, 25, 295402.	1.8	17
36	Temperature Dependence of Surface Acoustic Wave Propagation Velocity in $\text{In}_{1-x}\text{Ga}_x\text{N}$ Films Obtained by High-Resolution Brillouin Spectroscopy: Determination of Temperature Coefficient of Frequency. <i>Applied Physics Express</i> , 2013, 6, 056601.	2.4	2

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37	Elastic properties of B-C-N films grown by N ₂ -reactive sputtering from boron carbide targets. Journal of Applied Physics, 2013, 114, .	2.5	11
38	Low-temperature properties of monoalcohol glasses and crystals. Low Temperature Physics, 2013, 39, 468-472.	0.6	13
39	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
40	Brillouin scattering determination of the surface acoustic wave velocity in In _x Ga _{1-x} N: A probe into the elastic constants. Applied Physics Letters, 2012, 101, 062103.	3.3	12
41	Amorphous-nanocrystalline Al doped ZnO transparent conducting thin films. Journal of Alloys and Compounds, 2012, 536, S445-S449.	5.5	13
42	Low-temperature thermal and elastoacoustic properties of butanol glasses: Study of position isomerism effects around the boson peak. Physical Review B, 2012, 85, .	3.2	23
43	Surface acoustic waves and elastic constants of InN epilayers determined by Brillouin scattering. Physica Status Solidi - Rapid Research Letters, 2012, 6, 256-258.	2.4	7
44	Low-temperature properties of glassy and crystalline states of n-butanol. Journal of Non-Crystalline Solids, 2011, 357, 524-529.	3.1	21
45	Surface acoustic wave velocity of gold films deposited on silicon substrates at different temperatures. Journal of Applied Physics, 2011, 110, 023503.	2.5	13
46	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
47	Elastic properties in different nano-structured AlN films. Journal of Materials Science, 2010, 45, 363-368.	3.7	2
48	Influence of nanoparticles on elastic and optical properties of a polymeric matrix: Hypersonic studies on ethylene vinyl alcohol copolymer-titania nanocomposites. European Polymer Journal, 2010, 46, 397-403.	5.4	12
49	Structural and thermodynamic studies of n-butanol. Journal of Physics Condensed Matter, 2010, 22, 195102.	1.8	34
50	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
51	Development of new polyurethanamide tailored copolymers for SO ₂ SAW gas microsensors. , 2010, , .		0
52	Interphases, gelation, vitrification, porous glasses and the generalized Cauchy relation: epoxy/silica nanocomposites. New Journal of Physics, 2009, 11, 023015.	2.9	9
53	Thermal properties and Brillouin-scattering study of glass, crystal, and "glacial" states in n-butanol. Journal of Chemical Physics, 2009, 131, 174508.	3.0	38
54	Space and time resolving molecular acoustics as a tool to visualize epoxy formation at a planar hardener-resin interface. Chemical Physics Letters, 2009, 476, 11-14.	2.6	6

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55	Boosting TiO ₂ -anatase antimicrobial activity: Polymer-oxide thin films. Applied Catalysis B: Environmental, 2009, 89, 441-447.	20.2	81
56	Crystalline phase transitions and acoustic phonons behaviour of polymorphic ethanol. European Physical Journal B, 2009, 71, 41-45.	1.5	3
57	Concentration and temperature dependence of the refractive index of ethanol-water mixtures: Influence of intermolecular interactions. European Physical Journal E, 2009, 30, 19-26.	1.6	99
58	Biocidal Capability Optimization in Organic-Inorganic Nanocomposites Based on Titania. Environmental Science & Technology, 2009, 43, 1630-1634.	10.0	23
59	Self-Sterilized EVOH-TiO ₂ Nanocomposites: Interface Effects on Biocidal Properties. Advanced Functional Materials, 2008, 18, 1949-1960.	14.9	111
60	Acoustic and optical phonons in EVOH-TiO ₂ nanocomposite films: Effect of aggregation. Journal of Luminescence, 2008, 128, 851-854.	3.1	4
61	Thermal and acoustic experiments on polymorphic ethanol. Philosophical Magazine, 2008, 88, 4197-4203.	1.6	9
62	Phase transitions in Na _{1-x} Li _x NbO ₃ solid solution ceramics studied by a new pyroelectric current based method. Journal Physics D: Applied Physics, 2008, 41, 065408.	2.8	8
63	Calorimetric and acoustic experiments on orientationally disordered and fully ordered crystalline phases of ethanol. Journal of Physics Condensed Matter, 2007, 19, 205135.	1.8	10
64	Compositional dependence of the elastic constants of dilute GaAs _{1-x} N _x alloys. Journal of Applied Physics, 2007, 101, 113507.	2.5	5
65	Brillouin spectroscopy experiments on polymorphic ethanol. Philosophical Magazine, 2007, 87, 657-663.	1.6	4
66	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
67	Influence of the yttria content on the mechanical properties of Y ₂ O ₃ -ZrO ₂ thin films prepared by EB-PVD. Vacuum, 2007, 81, 1457-1461.	3.5	10
68	Elastic instability of the nano-structured state as an intrinsic probe to study the early formation stages of sol-gel derived (Pb _{1-x} Ca _x)TiO ₃ thin films. Applied Physics A: Materials Science and Processing, 2007, 89, 967-973.	2.3	3
69	On the phase diagram of polymorphic ethanol: Thermodynamic and structural studies. Journal of Non-Crystalline Solids, 2006, 352, 4769-4775.	3.1	43
70	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
71	Crystallisation of Pb _{1-x} Ca _x TiO ₃ ferroelectric thin films as a function of the Ca ²⁺ content. Journal of the European Ceramic Society, 2005, 25, 2325-2329.	5.7	22
72	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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73	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
74	Anisotropy-induced polarization mixture of surface acoustic waves in GaN/c-sapphire heterostructures. <i>Physical Review B</i> , 2005, 72, .	3.2	37
75	Low-Temperature Specific Heat and Brillouin Scattering Measurements on Hydrogen-Bonded Glasses. <i>AIP Conference Proceedings</i> , 2004, , .	0.4	0
76	Brillouin scattering study of methanol-water solutions under pressure. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2004, 1, 3178-3181.	0.8	1
77	Anisotropic propagation of surface acoustic waves on nitride layers. <i>Superlattices and Microstructures</i> , 2004, 36, 815-823.	3.1	10
78	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
79	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
80	High Resolution Brillouin Spectroscopy and Determination of Elastic Properties of Ferroelectric and Piezoelectric Films. <i>Ferroelectrics</i> , 2002, 272, 93-98.	0.6	1
81	Brillouin characterization of the acoustic waves phase-velocity in Al _x Ga _{1-x} N epilayers. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2002, 93, 168-171.	3.5	5
82	MPACVD diamond films for surface acoustic wave filters. <i>Diamond and Related Materials</i> , 2001, 10, 681-685.	3.9	20
83	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
84	Elastic anomalies and orientational glass transition in Na(CN)Cl mixed crystals. A Brillouin spectroscopic study. <i>European Physical Journal B</i> , 2000, 13, 643-651.	1.5	1
85	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
86	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
87	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
88	Hypersonic properties of nano- and microstructured CVD diamond. <i>Diamond and Related Materials</i> , 2000, 9, 123-128.	3.9	13
89	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
90	Thermal behavior of the elastic (young's) modulus in SBN-derived compounds (Bi ₂ SrNb ₂ O ₉). <i>Journal of the European Ceramic Society</i> , 1999, 19, 1315-1319.	5.7	3

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91	Microstructural and Mechanical Properties of Sono-Ormosils. Journal of Sol-Gel Science and Technology, 1998, 13, 451-455.	2.4	4
92	Elastic behaviour of Si/Ge superlattices determined by Brillouin light scattering. Thin Solid Films, 1998, 317, 255-258.	1.8	5
93	Elastic Properties of Langmuir-Blodgett Films. A New Brillouin Spectroscopic Strategy. Langmuir, 1998, 14, 6625-6627.	3.5	9
94	A new Brillouin scattering technique for the investigation of acoustic and opto-acoustic properties: application to polymers. Journal Physics D: Applied Physics, 1998, 31, 1913-1917.	2.8	84
95	Anomalous hypersonic behavior of CuGeO ₃ prior to the spin-Peierls transition. Physical Review B, 1998, 58, 8574-8578.	3.2	2
96	Surface-induced organization of linear molecules on nanostructured polytetrafluoroethylene: Crystalline state of poly[vinylidene fluoride-trifluoroethylene]. Physical Review B, 1997, 55, 3497-3506.	3.2	31
97	Phase-transition behavior of n-alkanes on nanostructured polytetrafluoroethylene films: Brillouin spectroscopic and calorimetric investigations on pentacosane. Physical Review B, 1997, 56, 8683-8690.	3.2	19
98	Influence of the microstructure on the macroscopic elastic and optical properties of dried sonogels: A Brillouin spectroscopic study. Journal of Applied Physics, 1997, 81, 7739-7745.	2.5	28
99	On the existence of an intrinsic glass transition in a fragile liquid: polyvinylacetate. Colloid and Polymer Science, 1996, 274, 490-495.	2.1	16
100	Brillouin spectroscopy on dried sonogels. Applied Physics Letters, 1996, 69, 3827-3829.	3.3	6
101	Surface-induced organization of n-alkanes on nanostructured PTFE: I. Brillouin spectroscopic investigations on pentacosane. Journal of Physics Condensed Matter, 1996, 8, 7579-7587.	1.8	9
102	About the microstructure of PCVD prepared crystal mats of statistical oligo-vinylidene-fluoride-trifluoroethylene in relation to other fluorinated polymers. Journal of Polymer Science, Part B: Polymer Physics, 1995, 33, 237-246.	2.1	6
103	Second-order elasticity of liquid crystals within their nematic state at high frequencies. Physical Review E, 1995, 51, 2115-2128.	2.1	18
104	Elastic softening in the rotator phase of the perfluoroalkane C ₂₄ F ₅₀ . Physical Review B, 1995, 51, 3353-3361.	3.2	7
105	Premelting features and acoustic mode softening in the rotator phases of linear telomers: C ₁₇ H ₃₆ . Journal of Physics Condensed Matter, 1994, 6, 10977-10988.	1.8	14
106	Unconventional orientational glass transitions in symmetrical difluorotetrachloroethane. Journal of Physics Condensed Matter, 1994, 6, 6947-6964.	1.8	19
107	Thermal expansion of Cr-doped TGS crystals as a function of the DC electric field. Ferroelectrics, 1994, 154, 125-130.	0.6	1
108	Existence of a second glass transition in the mixed alkali cyanides. Ferroelectrics, 1994, 157, 141-146.	0.6	1

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109	Acoustic, opto-acoustic, and thermal properties investigated around the phase transitions of NaCN and Na(CN) _x Cl _{1-x} mixed crystals. Physical Review B, 1990, 42, 8537-8547.	3.2	22
110	Brillouin investigations of the phases and phase transitions in the mixed crystal Na(CN) _x Cl _{1-x} . Ferroelectrics, 1990, 106, 175-180.	0.6	7