

# Pedro J Sebasti o

## List of Publications by Year in descending order

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97  
papers

1,465  
citations

361413

20  
h-index

414414

32  
g-index

100  
all docs

100  
docs citations

100  
times ranked

1283  
citing authors

#	ARTICLE	IF	CITATIONS
1	CO <sub>2</sub> in 1-Butyl-3-methylimidazolium Acetate. 2. NMR Investigation of Chemical Reactions. Journal of Physical Chemistry A, 2012, 116, 4890-4901.	2.5	100
2	On the spontaneous carboxylation of 1-butyl-3-methylimidazolium acetate by carbon dioxide. Chemical Communications, 2012, 48, 1245-1247.	4.1	94
3	One-step preparation of high-performance bilayer $\gamma$ -alumina ultrafiltration membranes via co-sintering process. Journal of Membrane Science, 2017, 524, 141-150.	8.2	70
4	Desktop fast-field cycling nuclear magnetic resonance relaxometer. Solid State Nuclear Magnetic Resonance, 2010, 38, 36-43.	2.3	54
5	The art of model fitting to experimental results. European Journal of Physics, 2014, 35, 015017.	0.6	51
6	Self-assembled liquid crystals by hydrogen bonding between bipyridyl and alkylbenzoic acids: solvent-free synthesis by mechanochemistry. Liquid Crystals, 2014, 41, 1743-1751.	2.2	44
7	Liquid crystal 8CB in random porous glass: NMR relaxometry study of molecular diffusion and director fluctuations. Physical Review E, 2007, 76, 051708.	2.1	38
8	Proton NMR Relaxometry Study of Nafion Membranes Modified with Ionic Liquid Cations. Journal of Physical Chemistry B, 2011, 115, 8713-8723.	2.6	37
9	Synclincic $\rightarrow$ anticlincic phase transition in tilted organosiloxane liquid crystals. Journal of Materials Chemistry, 2001, 11, 2700-2708.	6.7	36
10	Field-cycling NMR relaxometry of a liquid crystal above T <sub>N</sub> in mesoscopic confinement. Physical Review E, 2005, 72, 061702.	2.1	35
11	Molecular dynamics in tilted bilayer smectic phases: A proton nuclear magnetic resonance relaxometry study. Journal of Chemical Physics, 2001, 115, 10484.	3.0	34
12	<sup>1</sup> H NMR relaxometry and X-ray study of PCL/nevirapine hybrids. Polymer Testing, 2013, 32, 553-566.	4.8	32
13	Novel pulsed switched power supply for a fast field cycling NMR spectrometer. Solid State Nuclear Magnetic Resonance, 2004, 25, 160-166.	2.3	31
14	Influence of TiO <sub>2</sub> nanoparticle on the thermal, morphological and molecular characteristics of PHB matrix. Polymer Testing, 2018, 65, 156-162.	4.8	30
15	<sup>1</sup> H NMR Relaxometry, Viscometry, and PFG NMR Studies of Magnetic and Nonmagnetic Ionic Liquids. Journal of Physical Chemistry B, 2013, 117, 11877-11884.	2.6	28
16	Phase structure and molecular dynamics of liquid-crystalline side-on organosiloxane tetrapodes. Physical Review E, 2010, 81, 011702.	2.1	23
17	<sup>1</sup> H NMR Relaxation Study of a Magnetic Ionic Liquid as a Potential Contrast Agent. Journal of Physical Chemistry B, 2015, 119, 11740-11747.	2.6	23
18	Proton NMR Relaxation Study on the Nematic $\rightarrow$ Nematic Phase Transition in A131 Liquid Crystal. Journal of Physical Chemistry B, 2012, 116, 9556-9563.	2.6	22

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19	Understanding chemical reactions of CO <sub>2</sub> and its isoelectronic molecules with 1-butyl-3-methylimidazolium acetate by changing the nature of the cation: The case of CS <sub>2</sub> in 1-butyl-1-methylpyrrolidinium acetate studied by NMR spectroscopy and density functional theory calculations. <i>Journal of Chemical Physics</i> , 2014, 140, 244307.	3.0	22
20	Fast Field-Cycling NMR Relaxometry Study of Chiral and Nonchiral Nematic Liquid Crystals. <i>Journal of Physical Chemistry B</i> , 2011, 115, 14348-14358.	2.6	21
21	Structure and molecular dynamics of the mesophases exhibited by an organosiloxane tetrapode with strong polar terminal groups. <i>Physical Review E</i> , 2007, 75, 011704.	2.1	20
22	Molecular Dynamic Evaluation of starch-PLA blends nanocomposite with organoclay by proton NMR relaxometry. <i>Polymer Testing</i> , 2013, 32, 1181-1185.	4.8	20
23	Determination of herb authenticity by low-field NMR. <i>Food Chemistry</i> , 2013, 136, 1272-1276.	8.2	20
24	Study of large-angle anharmonic oscillations of a physical pendulum using an acceleration sensor. <i>European Journal of Physics</i> , 2017, 38, 045004.	0.6	20
25	Proton NMR Relaxation Study of Molecular Motions in a Liquid Crystal with a Strong Polar Terminal Group. <i>Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences</i> , 1993, 48, 851-860.	1.5	18
26	<sup>1</sup> H NMR Relaxometry Study of a Rod-Like Chiral Liquid Crystal in Its Isotropic, Cholesteric, TGBA*, and TGBC* Phases. <i>Journal of Physical Chemistry B</i> , 2010, 114, 11993-12001.	2.6	18
27	Molecular Dynamics in a Liquid Crystal with Reentrant Mesophases. <i>Journal De Physique II</i> , 1995, 5, 1707-1724.	0.9	17
28	New isolated gate bipolar transistor two-quadrant chopper power supply for a fast field cycling nuclear magnetic resonance spectrometer. <i>Review of Scientific Instruments</i> , 2003, 74, 4521-4528.	1.3	17
29	On the chemical reactions of carbon dioxide isoelectronic molecules CS <sub>2</sub> and OCS with 1-butyl-3-methylimidazolium acetate. <i>Chemical Communications</i> , 2013, 49, 11083.	4.1	17
30	A differential equations model-fitting analysis of COVID-19 epidemiological data to explain multi-wave dynamics. <i>Scientific Reports</i> , 2021, 11, 16312.	3.3	17
31	Advances in Proton NMR Relaxometry in Thermotropic Liquid Crystals. , 2009, , 129-167.		16
32	Molecular dynamics in a blue phase liquid crystal: a <sup>1</sup> H fast field-cycling NMR relaxometry study. <i>Soft Matter</i> , 2013, 9, 10746.	2.7	15
33	Temperature Effects on the Molecular Dynamics of Modified Nafion® Membranes Incorporating Ionic Liquids' Cations: A <sup>1</sup> H NMRD Study. <i>Fuel Cells</i> , 2013, 13, 1166-1176.	2.4	15
34	Magnetic modulation of the transport of organophilic solutes through Supported Magnetic Ionic Liquid Membranes. <i>Journal of Membrane Science</i> , 2016, 505, 36-43.	8.2	15
35	NMR relaxation study of molecular dynamics in columnar and smectic phases of a PAMAM liquid-crystalline co-dendrimer. <i>European Physical Journal E</i> , 2005, 18, 149-158.	1.6	14
36	NMR relaxometry evaluation of nanostructured starch-PLA blends. <i>Polymer Testing</i> , 2015, 45, 161-167.	4.8	14

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37	<sup>1</sup> H NMR Relaxometric Study of Molecular Dynamics in a Vries-Liquid Crystal. Journal of Physical Chemistry B, 2016, 120, 4706-4714.	2.6	14
38	Conventional and Fast Field Cycling Relaxometry Study of the Molecular Dynamics in Polymer Nanocomposites for Use as Drug Delivery Systems. Journal of Nanoscience and Nanotechnology, 2016, 16, 7539-7545.	0.9	14
39	Spin relaxation studies of Li <sup>+</sup> ion dynamics in polymer gel electrolytes. Physical Chemistry Chemical Physics, 2017, 19, 7390-7398.	2.8	14
40	Influence of siloxane groups on the properties of some sulfinate ferroelectric liquid crystals derivatives. Ferroelectrics, 1998, 212, 133-141.	0.6	13
41	Dynamics of Discotic Fluoroalkylated Triphenylene Molecules Studied by Proton NMR Relaxometry. Journal of Physical Chemistry B, 2012, 116, 2339-2346.	2.6	13
42	Synthesis of liquid crystals based on hydrogen-bonding of 4-(Octyloxy)benzoic acid with 4-alkylbenzoic acids. Molecular Crystals and Liquid Crystals, 2016, 630, 87-101.	0.9	11
43	Use of NMR Relaxometry to identify frankfurters of different meat sources. Molecular Physics, 2019, 117, 1015-1019.	1.7	11
44	Deuteron NMR study of molecular dynamics in a compound exhibiting a reentrant nematic phase. Physical Review E, 2000, 62, 3679-3686.	2.1	10
45	Fe(III) salen derived Schiff base complexes as potential contrast agents. Inorganica Chimica Acta, 2015, 432, 258-266.	2.4	10
46	Silica and silica organically modified nanoparticles: Water dynamics in complex systems. Microporous and Mesoporous Materials, 2015, 217, 102-108.	4.4	10
47	<sup>1</sup> H NMR study of molecular order and dynamics in the liquid crystal CB-C9-CB. Physical Chemistry Chemical Physics, 2019, 21, 4523-4537.	2.8	10
48	NMR study of molecular dynamics in a mixture of two polar liquid crystals (CBOOA and DOBCA). Liquid Crystals, 1992, 11, 621-635.	2.2	9
49	Molecular dynamics study of the ferroelectric liquid crystal CI IPNOC by proton spin-lattice relaxation. Liquid Crystals, 1993, 14, 415-426.	2.2	9
50	Ferroelectric side group liquid crystalline polysiloxanes containing a chiral sulphinate derivative. Liquid Crystals, 1999, 26, 1445-1454.	2.2	9
51	Contribution of Proton NMR Relaxation to the Investigation of Molecular Dynamics and Molecular Organisation in Liquid Crystalline Phases. Molecular Crystals and Liquid Crystals, 2001, 362, 289-304.	0.3	9
52	Deuterium nuclear-magnetic-resonance study of a chiral smectic-C* phase. Physical Review E, 2006, 74, 061704.	2.1	9
53	NMR molecular dynamics study of chromonic liquid crystals Edicol Sunset Yellow doped with salts. Magnetic Resonance in Chemistry, 2014, 52, 540-545.	1.9	9
54	<sup>1</sup> H time domain NMR real time monitoring of polyacrylamide hydrogels synthesis. Polymer Testing, 2017, 60, 396-404.	4.8	9

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55	<sup>1</sup> H NMR Relaxometry and Diffusometry Study of Magnetic and Nonmagnetic Ionic Liquid-Based Solutions: Cosolvent and Temperature Effects. <i>Journal of Physical Chemistry B</i> , 2017, 121, 11472-11484.	2.6	9
56	Real-time monitoring by proton relaxometry of radical polymerization reactions of acrylamide in aqueous solution. <i>Polymer International</i> , 2018, 67, 675-683.	3.1	9
57	NMR Relaxation Study of Molecular Dynamics in the Smectic A Phase of PAMAM Liquid Crystalline Dendrimers of Generation 1 and 3. <i>Molecular Crystals and Liquid Crystals</i> , 2006, 450, 191/[391]-201/[401].	0.9	7
58	Proton NMR relaxation study of molecular dynamics of chromonic liquid crystal Edicol Sunset Yellow. <i>Liquid Crystals</i> , 2014, 41, 1080-1089.	2.2	7
59	<sup>1</sup> H- <sup>2</sup> H Cross-Relaxation Study in a Partially Deuterated Nematic Liquid Crystal. <i>Journal of Physical Chemistry B</i> , 2014, 118, 5600-5607.	2.6	7
60	Magnetic Flux Density Distribution in the Air Gap of a Ferromagnetic Core With Superconducting Blocks: Three-Dimensional Analysis and Experimental NMR Results. <i>IEEE Transactions on Applied Superconductivity</i> , 2015, 25, 1-9.	1.7	7
61	From molecular biaxiality of real board-shaped mesogens to phase biaxiality? On the hunt for the holy grail of liquid crystal science. <i>Soft Matter</i> , 2019, 15, 8496-8511.	2.7	7
62	NMR studies of molecular ordering and molecular dynamics in a chiral liquid crystal with the $SmC^*$ phase. <i>Physical Review E</i> , 2020, 101, 052708.	2.1	7
63	Proton spin-lattice relaxation study of a partial bilayer smectic A phase. <i>Liquid Crystals</i> , 1988, 3, 937-945.	2.2	6
64	NMR Study of Molecular Dynamics in a D <sub>h</sub> Columnar Mesophase. <i>Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences</i> , 1998, 53, 823-827.	1.5	6
65	Anisotropic hydroxypropylcellulose films as alignment layers of a bistable ferroelectric device. <i>Liquid Crystals</i> , 2002, 29, 1491-1495.	2.2	6
66	Contribution of proton NMR relaxation to the investigation of molecular dynamics in columnar mesophases of discotic and polycatenar molecules. <i>Pramana - Journal of Physics</i> , 2003, 61, 205-218.	1.8	6
67	<sup>1</sup> H NMR relaxometry in the TGBA* and TGBC* phases. <i>Ferroelectrics</i> , 2016, 495, 17-27.	0.6	6
68	Physical pendulum model: Fractional differential equation and memory effects. <i>American Journal of Physics</i> , 2020, 88, 962-975.	0.7	6
69	Frustrated structure of an anticlinic-like smectic-C phase. <i>European Physical Journal E</i> , 2006, 20, 55-61.	1.6	5
70	Reducing the size of Fast Field Cycling NMR spectrometers based on the use of IGBTs. , 2009, , .		5
71	Detecting columnar deformations in a supermesogenic octapode by proton NMR relaxometry. <i>European Physical Journal E</i> , 2010, 31, 275-283.	1.6	5
72	Tuning the <sup>1</sup> H NMR Paramagnetic Relaxation Enhancement and Local Order of [Aliquat]+-Based Systems Mixed with DMSO. <i>International Journal of Molecular Sciences</i> , 2021, 22, 706.	4.1	5

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73	Water Dynamics in Composite Aqueous Suspensions of Cellulose Nanocrystals and a Clay Mineral Studied through Magnetic Resonance Relaxometry. <i>Journal of Physical Chemistry B</i> , 2021, 125, 12787-12796.	2.6	5
74	Preliminary in situ X-ray diffraction measurements of UV-induced photomechanical effects in a mesogenic material. <i>Liquid Crystals</i> , 2002, 29, 479-482.	2.2	4
75	Proton and deuterium nuclear spin relaxation study of the SmA and SmC* phases of BP8Cl <sub>17</sub> : a self-consistent analysis. <i>Magnetic Resonance in Chemistry</i> , 2014, 52, 546-555.	1.9	4
76	The use of fast field cycling to evaluate the time domain relaxation of starches from tropical fruit seeds. <i>Molecular Physics</i> , 2019, 117, 1028-1033.	1.7	4
77	<sup>1</sup> H spin-lattice NMR relaxation in the presence of residual dipolar interactions – Dipolar relaxation enhancement. <i>Journal of Magnetic Resonance</i> , 2020, 318, 106783.	2.1	4
78	Wine traceability and authenticity: approaches for geographical origin, variety and vintage assessment. <i>Ciencia E Tecnica Vitivinicola</i> , 2020, 35, 133-147.	0.9	4
79	Chapter 11. NMR Relaxometry in Liquid Crystals: Molecular Organization and Molecular Dynamics Interrelation. <i>New Developments in NMR</i> , 0, , 255-302.	0.1	4
80	Molecular order in bilayer, anticlinic and ferroelectric smectic C mesophases. <i>European Physical Journal E</i> , 2000, 2, 351.	1.6	3
81	Dynamics of binary mixtures of an ionic liquid and ethanol by NMR. <i>Magnetic Resonance in Chemistry</i> , 2018, 56, 108-112.	1.9	3
82	Molecular order and dynamics of water in hybrid cellulose acetate-silica asymmetric membranes. <i>Molecular Physics</i> , 2019, 117, 975-982.	1.7	3
83	NMR Study of the Molecular Order in a Liquid Crystal with Peculiar Smectic Phases. <i>Molecular Crystals and Liquid Crystals</i> , 1999, 331, 89-96.	0.3	2
84	Peculiar Molecular Dynamics Behaviour in the Isotropic Phase of Some Liquid Crystalline Systems. <i>Molecular Crystals and Liquid Crystals</i> , 2005, 436, 17/[971]-28/[982].	0.9	2
85	Molecular Dynamics Study in PU/PBDO Anisotropic Elastomers by Proton NMR Relaxometry. <i>Molecular Crystals and Liquid Crystals</i> , 2006, 450, 119/[319]-126/[326].	0.9	2
86	Free-standing urethane/urea elastomer films undoped and doped with ferro-nano-particles. <i>European Physical Journal E</i> , 2011, 34, 8.	1.6	2
87	The art of fitting ordinary differential equations models to experimental results. <i>European Journal of Physics</i> , 2022, 43, 035807.	0.6	2
88	Molecular Dynamics in the Columnar and Lamellar Mesophases of a Liquid Crystal of Biforked Molecules. <i>Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences</i> , 1996, 51, 155-166.	1.5	1
89	Design of a Nuclear Magnetic Resonance Fast Field Cycling Air Cored Magnet. , 2007, , .		1
90	Caracterizaçãõ dos constituintes poliméricos da <i>Maytenus ilicifolia</i> por relaxaõ nuclear de <sup>1</sup> H por RMN no estado sãlido. <i>Polimeros</i> , 2011, 21, 416-420.	0.7	1

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91	Study of the Behavior of Magnetic Ionic Liquids Supported Membranes for Selective Transport. <i>Procedia Engineering</i> , 2012, 44, 177-180.	1.2	1
92	FFC NMR Relaxometer with Magnetic Flux Density Control. <i>Journal of Low Power Electronics and Applications</i> , 2019, 9, 22.	2.0	1
93	Characterization of Pectin-Based Gels: A <sup>1</sup> H Nuclear Magnetic Resonance Relaxometry Study. <i>Journal of Agricultural and Food Chemistry</i> , 2021, 69, 12102-12110.	5.2	1
94	Tailoring the Selective Permeation Properties of Asymmetric Cellulose Acetate/Silica Hybrid Membranes and Characterisation of Water Dynamics in Hydrated Membranes by Deuterium Nuclear Magnetic Resonance. <i>Membranes</i> , 2022, 12, 559.	3.0	1
95	FFC NMR relaxometers on education: Topologies, control techniques and electromagnetic devices. , 2014, , .		0
96	Microcontroller of the power supply of a fast field cycling relaxometer. , 2018, , .		0
97	Digital Control of an FFC NMR Relaxometer Power Supply. <i>Lecture Notes in Electrical Engineering</i> , 2020, , 211-228.	0.4	0