Danuta Kruk

List of Publications by Citations

119 papers	2,371 citations	27 h-index	43 g-index
127 ext. papers	2,590 ext. citations	3.6 avg, IF	5.07 L-index

#	Paper	IF	Citations
119	Field-cycling NMR relaxometry of viscous liquids and polymers. *Progress in Nuclear Magnetic Resonance Spectroscopy*, **2012**, 63, 33-64	10.4	131
118	NMR RELAXATION IN SOLUTION OF PARAMAGNETIC COMPLEXES: RECENT THEORETICAL PROGRESS FOR S □1. *Advances in Inorganic Chemistry*, **2005**, 57, 41-104	2.1	101
117	Comparison of different methods for calculating the paramagnetic relaxation enhancement of nuclear spins as a function of the magnetic field. *Journal of Chemical Physics*, **2008**, 128, 052315	3.9	87
116	Solid state field-cycling NMR relaxometry: instrumental improvements and new applications. *Progress in Nuclear Magnetic Resonance Spectroscopy*, **2014**, 82, 39-69	10.4	84
115	Nuclear spin relaxation in paramagnetic systems with zero-field splitting and arbitrary electron spin. *Physical Chemistry Chemical Physics*, **2001**, 3, 4907-4917	3.6	73
114	Translational and rotational diffusion of glycerol by means of field cycling 1H NMR relaxometry. *Journal of Physical Chemistry B*, **2011**, 115, 951-7	3.4	70
113	Nuclear magnetic resonance relaxometry as a method of measuring translational diffusion coefficients in liquids. *Physical Review E*, **2012**, 85, 020201	2.4	68
112	Determining diffusion coefficients of ionic liquids by means of field cycling nuclear magnetic resonance relaxometry. *Journal of Chemical Physics*, **2014**, 140, 244509	3.9	66
111	Evolution of the dynamic susceptibility in molecular glass formers: results from light scattering, dielectric spectroscopy, and NMR. *Journal of Chemical Physics*, **2013**, 138, 12A510	3.9	64
110	Intermolecular relaxation in glycerol as revealed by field cycling 1H NMR relaxometry dilution experiments. *Journal of Chemical Physics*, **2012**, 136, 034508	3.9	62
109	Intermolecular spin relaxation and translation diffusion in liquids and polymer melts: insight from field-cycling 1H NMR relaxometry. *ChemPhysChem*, **2013**, 14, 3071-81	3.2	55
108	Mean Square Displacement and Reorientational Correlation Function in Entangled Polymer Melts Revealed by Field Cycling 1H and 2H NMR Relaxometry. *Macromolecules*, **2012**, 45, 6516-6526	5.5	49
107	Zero-field splitting in nickel(II) complexes: a comparison of DFT and multi-configurational wavefunction calculations. *Journal of Chemical Physics*, **2013**, 138, 064304	3.9	45
106	Comparative studies of the dynamics in viscous liquids by means of dielectric spectroscopy and field cycling NMR. *Journal of Physical Chemistry A*, **2010**, 114, 7847-55	2.8	45
105	Inter- and Intramolecular Relaxation in Molecular Liquids by Field Cycling 1H NMR Relaxometry. *Applied Magnetic Resonance*, **2013**, 44, 153-168	0.8	42
104	Protracted Crossover to Reptation Dynamics: A Field Cycling 1H NMR Study Including Extremely Low Frequencies. *Macromolecules*, **2012**, 45, 1408-1416	5.5	42
103	Glassy, Rouse, and Entanglement Dynamics As Revealed by Field Cycling 1H NMR Relaxometry. *Macromolecules*, **2012**, 45, 2390-2401	5.5	41

102	Quadrupole relaxation enhancement--application to molecular crystals. *Solid State Nuclear Magnetic Resonance*, **2011**, 40, 114-20	3.1	40
101	Polymer Dynamics of Polybutadiene in Nanoscopic Confinement As Revealed by Field Cycling1H NMR. *Macromolecules*, **2011**, 44, 4017-4021	5.5	34
100	General treatment of paramagnetic relaxation enhancement associated with translational diffusion. *Journal of Chemical Physics*, **2009**, 130, 174104	3.9	34
99	Nuclear spin relaxation in paramagnetic systems (S>/=1) under fast rotation conditions. *Journal of Magnetic Resonance*, **2003**, 162, 229-40	3	31
98	Dynamics of ionic liquids in bulk and in confinement by means of (1)H NMR relaxometry - BMIM-OcSO4 in an SiO2 matrix as an example. *Physical Chemistry Chemical Physics*, **2016**, 18, 23184-94	3.6	31
97	Iso-Frictional Mass Dependence of Diffusion of Polymer Melts Revealed by 1H NMR Relaxometry. *Macromolecules*, **2013**, 46, 5538-5548	5.5	28
96	Analysis of1H□14N polarization transfer experiments in molecular crystals. *Journal of Physics Condensed Matter*, **2005**, 17, 519-533	1.8	28
95	Revealing the Charge Transport Mechanism in Polymerized Ionic Liquids: Insight from High Pressure Conductivity Studies. *Chemistry of Materials*, **2017**, 29, 8082-8092	9.6	27
94	Dynamical properties of EMIM-SCN confined in a SiO matrix by means of H NMR relaxometry. *Physical Chemistry Chemical Physics*, **2017**, 19, 32605-32616	3.6	27
93	Outer-sphere nuclear spin relaxation in paramagnetic systems: a low-field theory. *Molecular Physics*, **2001**, 99, 1435-1445	1.7	27
92	Joint analysis of ESR lineshapes and 1H NMRD profiles of DOTA-Gd derivatives by means of the slow motion theory. *Journal of Chemical Physics*, **2011**, 134, 024508	3.9	26
91	Field-dependent nuclear relaxation of spins 1/2 induced by dipole-dipole couplings to quadrupole spins: LaF3 crystals as an example. *Journal of Magnetic Resonance*, **2006**, 179, 250-62	3	26
90	Nuclear and electron spin relaxation in paramagnetic complexes in solution: effects of the quantum nature of molecular vibrations. *Journal of Chemical Physics*, **2004**, 121, 2215-27	3.9	26
89	Nuclear spin relaxation in solution of paramagnetic complexes with large transient zero-field splitting. *Molecular Physics*, **2003**, 101, 2861-2874	1.7	25
88	Bi quadrupole relaxation enhancement in solids as a step towards new contrast mechanisms in magnetic resonance imaging. *Physical Chemistry Chemical Physics*, **2018**, 20, 12710-12718	3.6	23
87	Field cycling methods as a tool for dynamics investigations in solid state systems: recent theoretical progress. *Solid State Nuclear Magnetic Resonance*, **2009**, 35, 152-63	3.1	23
86	Structural characterization, thermal, dielectric, vibrational properties and molecular motions in. *Journal of Solid State Chemistry*, **2009**, 182, 2949-2960	3.3	23
85	Extensive NMRD studies of Ni(II) salt solutions in water and water-glycerol mixtures. *Journal of Magnetic Resonance*, **2008**, 195, 103-11	3	23

84	Field-dependent proton relaxation in aqueous solutions of some manganese(II) complexes: a new interpretation. *Journal of Biological Inorganic Chemistry*, **2003**, 8, 512-518	3.7	23
83	Physical and Structural Characterization of Imidazolium-Based Organic-Inorganic Hybrid: (C3N2H5)2[CoCl4]. *Journal of Physical Chemistry A*, **2016**, 120, 2014-21	2.8	22
82	Generalization of the Cole-Davidson and Kohlrausch functions to describe the primary response of glass-forming systems. *Journal of Physics Condensed Matter*, **2010**, 22, 365101	1.8	21
81	Dynamics of Solid Proteins by Means of Nuclear Magnetic Resonance Relaxometry. *Biomolecules*, **2019**, 9,	5.9	20
80	Dynamics and ferroelectric phase transition of (C3N2H5)5Bi2Br11 by means of ac calorimetry and 1H NMR relaxometry. *Chemical Physics*, **2013**, 410, 19-24	2.3	20
79	Fluorine dynamics in LaF3-type fast ionic conductors Combined results of NMR and conductivity techniques. *Solid State Ionics*, **2008**, 179, 2350-2357	3.3	20
78	(1)H NMR relaxometry and quadrupole relaxation enhancement as a sensitive probe of dynamical properties of solids--[C(NH2)3]3Bi2I9 as an example. *Journal of Chemical Physics*, **2016**, 144, 054501	3.9	20
77	Perspectives of Deuteron Field-Cycling NMR Relaxometry for Probing Molecular Dynamics in Soft Matter. *Journal of Physical Chemistry B*, **2016**, 120, 7754-66	3.4	19
76	Dynamics of ferroelectric bis(imidazolium) pentachloroantimonate(III) by means of nuclear magnetic resonance 1H relaxometry and dielectric spectroscopy. *Journal of Physical Chemistry A*, **2014**, 118, 3564-71	2.8	18
75	1H relaxation enhancement induced by nanoparticles in solutions: influence of magnetic properties and diffusion. *Journal of Chemical Physics*, **2014**, 140, 174504	3.9	18
74	Vibrational motions and nuclear spin relaxation in paramagnetic complexes: Hexaaquonickel(II) as an example. *Journal of Chemical Physics*, **2002**, 116, 4079-4086	3.9	18
73	Evolution of solid state systems containing mutually coupled dipolar and quadrupole spins: perturbation treatment. *Solid State Nuclear Magnetic Resonance*, **2005**, 28, 180-92	3.1	17
72	Simultaneous effects of relaxation and polarization transfer in LaF3-type crystals as sources of dynamic information. *Solid State Nuclear Magnetic Resonance*, **2007**, 31, 141-52	3.1	16
71	Mechanism of Water Dynamics in Hyaluronic Dermal Fillers Revealed by Nuclear Magnetic Resonance Relaxometry. *ChemPhysChem*, **2019**, 20, 2816-2822	3.2	15
70	Long-Time Diffusion in Polymer Melts Revealed by H NMR Relaxometry.. *ACS Macro Letters*, **2013**, 2, 96-99	6.6	15
69	Understanding Spin Dynamics		15
68	1H relaxation dispersion in solutions of nitroxide radicals: effects of hyperfine interactions with 14N and 15N nuclei. *Journal of Chemical Physics*, **2012**, 137, 044512	3.9	14
67	Nuclear spin relaxation in ligands outside of the first coordination sphere in a gadolinium (III) complex: Effects of intermolecular forces. *Journal of Chemical Physics*, **2002**, 117, 1194-1200	3.9	14

66	1H NMR relaxation in glycerol solutions of nitroxide radicals: effects of translational and rotational dynamics. *Journal of Chemical Physics*, **2012**, 136, 114504	3.9	13
65	Complex Nuclear Relaxation Processes in Guanidinium Compounds [C(NH2)3]3Sb2X9 (X = Br, Cl): Effects of Quadrupolar Interactions. *Applied Magnetic Resonance*, **2010**, 39, 233-249	0.8	13
64	Structure and dynamics of [NH(CH)]SbCl by means of H NMR relaxometry - quadrupolar relaxation enhancement effects. *Physical Chemistry Chemical Physics*, **2017**, 19, 11197-11205	3.6	12
63	Systematic theoretical investigation of the zero-field splitting in Gd(III) complexes: wave function and density functional approaches. *Journal of Chemical Physics*, **2015**, 142, 034304	3.9	12
62	R dispersion contrast at high field with fast field-cycling MRI. *Journal of Magnetic Resonance*, **2018**, 290, 68-75	3	12
61	NMR Studies of Solid-State Dynamics. *Annual Reports on NMR Spectroscopy*, **2012**, 67-138	1.7	12
60	Verification of the authenticity of drugs by means of NMR relaxometry-Viagra as an example. *Journal of Pharmaceutical and Biomedical Analysis*, **2017**, 135, 199-205	3.5	11
59	Estimation of the magnitude of quadrupole relaxation enhancement in the context of magnetic resonance imaging contrast. *Journal of Chemical Physics*, **2019**, 150, 184306	3.9	11
58	Primary and secondary relaxation process in plastically crystalline cyanocyclohexane studied by 2H nuclear magnetic resonance. II. Quantitative analysis. *Journal of Chemical Physics*, **2013**, 138, 074504	3.9	11
57	Transport properties of CsHSO4 investigated by impedance spectroscopy and nuclear magnetic resonance. *Ionics*, **2008**, 14, 223-226	2.7	11
56	Dynamics of [C3H5N2]6[Bi4Br18] by means of (1)H NMR relaxometry and quadrupole relaxation enhancement. *Journal of Chemical Physics*, **2015**, 142, 204503	3.9	10
55	Field-dependent NMR relaxometry for Food Science: Applications and perspectives. *Trends in Food Science and Technology*, **2021**, 110, 513-524	15.3	10
54	Peculiar relaxation dynamics of propylene carbonate derivatives. *Journal of Chemical Physics*, **2019**, 150, 044504	3.9	9
53	Dynamics of fluorine ions in LaF3-type crystals investigated by NMR lineshape analysis. *Journal of Physics Condensed Matter*, **2006**, 18, 1725-1741	1.8	9
52	Slow dynamics of solid proteins - Nuclear magnetic resonance relaxometry versus dielectric spectroscopy. *Journal of Magnetic Resonance*, **2020**, 314, 106721	3	8
51	Translational diffusion in paramagnetic liquids by 1H NMR relaxometry: nitroxide radicals in solution. *Journal of Chemical Physics*, **2013**, 138, 024506	3.9	8
50	On the problem of field-gradient NMR measurements of intracrystalline diffusion in small crystallites--water in NaA zeolites as an example. *Solid State Nuclear Magnetic Resonance*, **2005**, 28, 244-9	3.1	8
49	ESR Studies of Paramagnetic Centers in Pharmaceutical Materials - Cefaclor and Clarithromycin as an Example. *Acta Physica Polonica A*, **2012**, 121, 514-517	0.6	8

48	Tuning Nuclear Quadrupole Resonance: A Novel Approach for the Design of Frequency-Selective MRI Contrast Agents. *Physical Review X*, **2018**, 8,	9.1	8
47	The indications of tautomeric conversion in amorphous bicalutamide drug. *European Journal of Pharmaceutical Sciences*, **2017**, 110, 117-123	5.1	7
46	Internal dynamics of hydroxymethyl rotation from CH2 cross-correlated dipolar relaxation in methyl-beta-D-glucopyranoside. *Journal of Magnetic Resonance*, **2004**, 167, 273-81	3	7
45	Multi-quantum quadrupole relaxation enhancement effects in Bi compounds. *Journal of Chemical Physics*, **2019**, 150, 184309	3.9	6
44	Crystal structure and characterization of a novel ferroelastic ionic crystal: 1-Aminopyridinium iodide (C5H7N2)+I *Chemical Physics Letters*, **2012**, 537, 38-47	2.5	6
43	Thermodynamic properties and molecular motions in ferroelectric (C3N2H5)5Sb2Br11. *Chemical Physics*, **2011**, 380, 86-91	2.3	6
42	13C NMR lineshapes for the 13C2H2H isotopomeric spin grouping. *ChemPhysChem*, **2002**, 3, 933-8	3.2	6
41	Recent development in 1H NMR relaxometry. *Annual Reports on NMR Spectroscopy*, **2020**, 119-184	1.7	6
40	Dynamics of Ionic Liquids in Confinement by Means of NMR Relaxometry-EMIM-FSI in a Silica Matrix as an Example. *Materials*, **2020**, 13,	3.5	6
39	Dynamics of Molecular Crystals by Means of (1) H NMR Relaxometry: Dynamical Heterogeneity versus Homogenous Motion. *ChemPhysChem*, **2016**, 17, 2329-39	3.2	6
38	Exploring the water mobility in gelatin based soft candies by means of Fast Field Cycling (FFC) Nuclear Magnetic Resonance relaxometry. *Journal of Food Engineering*, **2021**, 294, 110422	6	6
37	Model - free approach to quadrupole spin relaxation in solid Bi-aryl compounds. *Physical Chemistry Chemical Physics*, **2018**, 20, 23414-23423	3.6	6
36	Dynamic Properties of Glass-Formers Governed by the Frequency Dispersion of the Structural Relaxation: Examples from Prilocaine. *Journal of Physical Chemistry B*, **2015**, 119, 12699-707	3.4	5
35	1H relaxation dispersion in solutions of nitroxide radicals: influence of electron spin relaxation. *Journal of Chemical Physics*, **2013**, 138, 124506	3.9	5
34	ESR lineshape and 1H spin-lattice relaxation dispersion in propylene glycol solutions of nitroxide radicals--joint analysis. *Journal of Chemical Physics*, **2013**, 139, 244502	3.9	5
33	Fluorine dynamics in BaF2 crystal lattice as an example of complex motion in a simple system. *Solid State Nuclear Magnetic Resonance*, **2009**, 35, 187-93	3.1	5
32	13C NMR Line Shapes in the Study of Dynamics of Perdeuterated Methyl Groups. *Journal of Physical Chemistry A*, **2004**, 108, 9018-9025	2.8	5
31	Water mobility in cheese by means of Nuclear Magnetic Resonance relaxometry. *Journal of Food Engineering*, **2021**, 298, 110483	6	5

30	Segmentation Integrating Watershed and Shape Priors Applied to Cardiac Delayed Enhancement MR Images. *Irbm*, **2017**, 38, 224-227	4.8	4
29	NMR relaxation spectroscopy: Interference effects. *Applied Magnetic Resonance*, **1999**, 17, 367-374	0.8	4
28	Field Dependent Electron and Quadrupole Spin Relaxation: A Unified Treatment. *Acta Physica Polonica A*, **2007**, 111, 215-238	0.6	3
27	Towards applying NMR relaxometry as a diagnostic tool for bone and soft tissue sarcomas: a pilot study. *Scientific Reports*, **2020**, 10, 14207	4.9	3
26	1H spin□attice relaxation in water solution of 209Bi counterparts of Gd3+contrast agents. *Molecular Physics*, **2019**, 117, 927-934	1.7	3
25	Predicting quadrupole relaxation enhancement peaks in proton R1-NMRD profiles in solid Bi-aryl compounds from NQR parameters. *Molecular Physics*, **2019**, 117, 910-920	1.7	3
24	Correlated Dynamics in Ionic Liquids by Means of NMR Relaxometry: Butyltriethylammonium bis(Trifluoromethanesulfonyl)imide as an Example. *International Journal of Molecular Sciences*, **2021**, 22,	6.3	3
23	Dynamics of solid alanine by means of nuclear magnetic resonance relaxometry. *Journal of Chemical Physics*, **2017**, 146, 164501	3.9	2
22	Sn-Based Alloys Synthesized in an Ionic Liquid at Room Temperature: Cu6Sn5 as a Case Study. *ChemNanoMat*, **2020**, 6, 639-647	3.5	2
21	Aspects of structural order in 209Bi-containing particles for potential MRI contrast agents based on quadrupole enhanced relaxation. *Molecular Physics*, **2019**, 117, 935-943	1.7	2
20	Nuclear quadrupole resonance lineshape analysis for different motional models: stochastic Liouville approach. *Journal of Chemical Physics*, **2011**, 135, 224511	3.9	2
19	Nuclear quadrupole resonance (NQR) enhancement by polarization transfer and its limitation due to relaxation. *Journal Physics D: Applied Physics*, **2007**, 40, 7555-7559	3	2
18	Water dynamics in eggs by means of Nuclear Magnetic Resonance relaxometry. *Journal of Magnetic Resonance*, **2021**, 327, 106976	3	2
17	Field-dependent paramagnetic relaxation enhancement in solutions of Ni(II): What happens above the NMR proton frequency of 1 GHz?. *Journal of Magnetic Resonance*, **2020**, 314, 106737	3	1
16	Dynamics of □Tocopherol Acetate: Proton Relaxation Studies Supported by Molecular Dynamics Simulations. *Applied Magnetic Resonance*, **2010**, 39, 273-283	0.8	1
15	Nuclear spin relaxation study of aqueous raffinose solution in the presence of a gadolinium contrast agent. *Magnetic Resonance in Chemistry*, **2005**, 43, 235-9	2.1	1
14	Relationship between Translational and Rotational Dynamics of Alkyltriethylammonium-Based Ionic Liquids.. *International Journal of Molecular Sciences*, **2022**, 23,	6.3	1
13	Influence of Sample Rotation on the Shape of the Free Induction Decay. *Acta Physica Polonica A*, **1993**, 84, 321-325	0.6	1

12	Diffusion in oils versus their viscosity Insight from Nuclear Magnetic Resonance relaxometry. *Journal of Food Engineering*, **2022**, 317, 110848	6	1
11	Prospectives and Limitations of Nqr Signal Enhancement by Polarisation Transfer. *NATO Science for Peace and Security Series B: Physics and Biophysics*, **2009**, 81-93	0.2	1
10	H spin-lattice NMR relaxation in the presence of residual dipolar interactions - Dipolar relaxation enhancement. *Journal of Magnetic Resonance*, **2020**, 318, 106783	3	1
9	Quadrupole relaxation enhancement and polarisation transfer in DMSO solution of [Bi(NO3)3(H2O)3]*18-crown-6 in solid state. *Molecular Physics*, **2019**, 117, 944-951	1.7	1
8	Relationship between macroscopic properties of honey and molecular dynamics Temperature effects. *Journal of Food Engineering*, **2022**, 314, 110782	6	1
7	Sensitivity of 2H NMR spectroscopy to motional models: proteins and highly viscous liquids as examples. *Journal of Chemical Physics*, **2012**, 136, 244509	3.9	0
6	Relative Cation-Anion Diffusion in Alkyltriethylammonium-Based Ionic Liquids. *International Journal of Molecular Sciences*, **2022**, 23, 5994	6.3	0
5	Dynamics of condensed matter by means of Nuclear Magnetic Resonance Relaxometry. *Molecular Physics*, **2019**, 117, 831-831	1.7	
4	1H relaxation and dynamics of triphenylbismuth in deuterated solvents. *Molecular Physics*, **2019**, 117, 921-926	1.7	
3	Nuclear spin relaxation in systems of magnetic spheres. *Physica B: Condensed Matter*, **2003**, 328, 302-311	2.8	
2	Analysis of the shape of FID signal and NMR spinning sidebands for the Couette flow. *Physica B: Condensed Matter*, **2001**, 301, 349-358	2.8	
1	NMR Relaxation and ESR Lineshape of Anisotropically Rotating Paramagnetic Molecules. *Acta Physica Polonica A*, **2012**, 121, 527-532	0.6	