Katarzyna Grzybowska

List of Publications by Year
in descending order

92 papers	2,851 citations	117571 34 h-index	206029 48 g-index
94 all docs	94 docs citations	94 times ranked	1924 citing authors

#	Article	IF	Citations
1	Broadband Dielectric Relaxation Study at Ambient and Elevated Pressure of Molecular Dynamics of Pharmaceutical: Indomethacin. Journal of Physical Chemistry B, 2009, 113, 12536-12545.	1.2	125
2	Molecular Dynamics and Physical Stability of Amorphous Anti-Inflammatory Drug: Celecoxib. Journal of Physical Chemistry B, 2010, 114, 12792-12801.	1.2	121
3	Study of molecular dynamics of pharmaceutically important protic ionic liquid-verapamil hydrochloride. I. Test of thermodynamic scaling. Journal of Chemical Physics, 2009, 131, .	1.2	84
4	Study of the Amorphous Glibenclamide Drug: Analysis of the Molecular Dynamics of Quenched and Cryomilled Material. Molecular Pharmaceutics, 2010, 7, 1692-1707.	2.3	79
5	Molecular Dynamics and Physical Stability of Coamorphous Ezetimib and Indapamide Mixtures. Molecular Pharmaceutics, 2015, 12, 3610-3619.	2.3	78
6	Recent developments in the experimental investigations of relaxations in pharmaceuticals by dielectric techniques at ambient and elevated pressure. Advanced Drug Delivery Reviews, 2016, 100, 158-182.	6.6	73
7	High Pressure as a Key Factor to Identify the Conductivity Mechanism in Protic Ionic Liquids. Physical Review Letters, 2013, 111, 225703.	2.9	65
8	Anomalous Electrical Conductivity Behavior at Elevated Pressure in the Protic Ionic Liquid Procainamide Hydrochloride. Physical Review Letters, 2012, 108, 015701.	2.9	62
9	Molecular dynamics of itraconazole at ambient and high pressure. Physical Chemistry Chemical Physics, 2013, 15, 20742.	1.3	62
10	Relaxation Dynamics and Crystallization Study of Sildenafil in the Liquid and Glassy States. Molecular Pharmaceutics, 2013, 10, 2270-2282.	2.3	60
11	Dielectric relaxation studies and dissolution behavior of amorphous verapamil hydrochloride. Journal of Pharmaceutical Sciences, 2010, 99, 828-839.	1.6	59
12	Enhancement of Amorphous Celecoxib Stability by Mixing It with Octaacetylmaltose: The Molecular Dynamics Study. Molecular Pharmaceutics, 2012, 9, 894-904.	2.3	59
13	Changes of relaxation dynamics of a hydrogen-bonded glass former after removal of the hydrogen bonds. Journal of Chemical Physics, 2006, 125, 144507.	1.2	57
14	Effect of high pressure on the relaxation dynamics of glass-forming liquids. Journal of Physics Condensed Matter, 2007, 19, 205117.	0.7	57
15	The influence of amorphization methods on the apparent solubility and dissolution rate of tadalafil. European Journal of Pharmaceutical Sciences, 2014, 62, 132-140.	1.9	55
16	Physical Stability of the Amorphous Anticholesterol Agent (Ezetimibe): The Role of Molecular Mobility. Molecular Pharmaceutics, 2014, 11, 4280-4290.	2.3	54
17	Molecular Dynamics Studies on the Water Mixtures of Pharmaceutically Important Ionic Liquid Lidocaine HCl. Molecular Pharmaceutics, 2012, 9, 1250-1261.	2.3	52
18	Kinetics of Cold Crystallization of 4-Cyano-3-fluorophenyl 4-Butylbenzoate (4CFPB) Glass Forming Liquid Crystal. I. Nonisothermal Process As Studied by Microscopic, Calorimetric, and Dielectric Methods. Crystal Growth and Design, 2015, 15, 2891-2900.	1.4	52

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19	On the kinetics of tautomerism in drugs: New application of broadband dielectric spectroscopy. Journal of Chemical Physics, 2010, 133, 094507.	1.2	49
20	Density scaling in viscous systems near the glass transition. Physical Review E, 2011, 83, 041505.	0.8	49
21	Molecular Dynamics, Physical Stability and Solubility Advantage from Amorphous Indapamide Drug. Molecular Pharmaceutics, 2013, 10, 3612-3627.	2.3	49
22	Quantifying the Structural Dynamics of Pharmaceuticals in the Glassy State. Journal of Physical Chemistry Letters, 2012, 3, 1238-1241.	2.1	48
23	Communication: Relationships between Intermolecular potential, thermodynamics, and dynamic scaling in viscous systems. Journal of Chemical Physics, 2010, 133, 161101.	1.2	43
24	Stabilization of the Amorphous Ezetimibe Drug by Confining Its Dimension. Molecular Pharmaceutics, 2016, 13, 1308-1316.	2.3	43
25	Effect of Cryogrinding on Chemical Stability of the Sparingly Water-Soluble Drug Furosemide. Pharmaceutical Research, 2011, 28, 3220-3236.	1.7	42
26	Molecular Origin of Enhanced Proton Conductivity in Anhydrous Ionic Systems. Journal of the American Chemical Society, 2015, 137, 1157-1164.	6.6	41
27	Structure and thermal properties of salicylate-based-protic ionic liquids as new heat storage media. COSMO-RS structure characterization and modeling of heat capacities. Physical Chemistry Chemical Physics, 2014, 16, 3549.	1.3	39
28	Effect of High Pressure on Crystallization Kinetics of van der Waals Liquid: An Experimental and Theoretical Study. Crystal Growth and Design, 2014, 14, 2097-2104.	1.4	38
29	Molecular Dynamics and Physical Stability of Amorphous Nimesulide Drug and Its Binary Drugâ€“Polymer Systems. Molecular Pharmaceutics, 2016, 13, 1937-1946.	2.3	37
30	Decoupling of conductivity relaxation from structural relaxation in protic ionic liquids and general properties. Physical Chemistry Chemical Physics, 2013, 15, 9205.	1.3	36
31	Toward a Better Understanding of the Physical Stability of Amorphous Anti-Inflammatory Agents: The Roles of Molecular Mobility and Molecular Interaction Patterns. Molecular Pharmaceutics, 2015, 12, 3628-3638.	2.3	36
32	Dielectric secondary relaxations in polypropylene glycols. Journal of Chemical Physics, 2006, 125, 044904.	1.2	35
33	Consequences of an Equation of State in the Thermodynamic Scaling Regime. Journal of Physical Chemistry B, 2009, 113, 7419-7422.	1.2	35
34	Toward Better Understanding Crystallization of Supercooled Liquids under Compression: Isochronal Crystallization Kinetics Approach. Crystal Growth and Design, 2013, 13, 4648-4654.	1.4	35
35	Density Scaling of Supercooled Simple Liquids Near the Glass Transition. Journal of Physical Chemistry B, 2010, 114, 11544-11551.	1.2	34
36	Molecular Dynamics in Supercooled Liquid and Glassy States of Antibiotics: Azithromycin, Clarithromycin and Roxithromycin Studied by Dielectric Spectroscopy. Advantages Given by the Amorphous State. Molecular Pharmaceutics, 2012, 9, 1748-1763.	2.3	33

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37	Fundamentals of ionic conductivity relaxation gained from study of procaine hydrochloride and procainamide hydrochloride at ambient and elevated pressure. Journal of Chemical Physics, 2012, 136, 164507.	1.2	31
38	Molecular Dynamics of the Supercooled Pharmaceutical Agent Posaconazole Studied via Differential Scanning Calorimetry and Dielectric and Mechanical Spectroscopies. Molecular Pharmaceutics, 2013, 10, 3934-3945.	2.3	30
39	Isothermal Cold Crystallization Kinetics Study of Sildenafil. Crystal Growth and Design, 2014, 14, 3199-3209.	1.4	30
40	Correlations between isobaric and isochoric fragilities and thermodynamical scaling exponent for glass-forming liquids. Physical Review E, 2006, 74, 041503.	0.8	29
41	High pressure study of molecular dynamics of protic ionic liquid lidocaine hydrochloride. Journal of Chemical Physics, 2012, 136, 224501.	1.2	28
42	Molecular Factors Governing the Liquid and Glassy States Recrystallization of Celecoxib in Binary Mixtures with Excipients of Different Molecular Weights. Molecular Pharmaceutics, 2017, 14, 1154-1168.	2.3	28
43	Dielectric relaxation processes in water mixtures of tripropylene glycol. Journal of Chemical Physics, 2005, 123, 204506.	1.2	27
44	Comprehensive studies on physical and chemical stability in liquid and glassy states of telmisartan (TEL): solubility advantages given by cryomilled and quenched material. Philosophical Magazine, 2011, 91, 1926-1948.	0.7	27
45	Molecular Dynamics of the Cryomilled Base and Hydrochloride Ziprasidones by Means of Dielectric Spectroscopy. Journal of Pharmaceutical Sciences, 2011, 100, 2642-2657.	1.6	26
46	Study of molecular dynamics of the pharmaceutically important protic ionic liquid verapamil hydrochloride. II. Test of entropic models. Journal of Chemical Physics, 2010, 132, 094506.	1.2	24
47	Comparative Study on the Molecular Dynamics of a Series of Polypropylene Glycols. Macromolecules, 2013, 46, 1973-1980.	2.2	24
48	Heterogeneous Nature of Relaxation Dynamics of Room-Temperature Ionic Liquids (EMIm)₂[Co(NCS)₄] and (BMIm)₂[Co(NCS)₄]. Journal of Physical Chemistry C, 2015, 119, 20363-20368.	1.5	24
49	Dynamics of Pyrrolidinium-Based Ionic Liquids under Confinement. II. The Effects of Pore Size, Inner Surface, and Cationic Alkyl Chain Length. Journal of Physical Chemistry C, 2020, 124, 5395-5408.	1.5	24
50	Pressure coefficient of the glass transition temperature in the thermodynamic scaling regime. Physical Review E, 2012, 86, 041502.	0.8	23
51	Phenyl Ring: A Steric Hindrance or a Source of Different Hydrogen Bonding Patterns in Self-Organizing Systems?. Journal of Physical Chemistry Letters, 2021, 12, 2142-2147.	2.1	23
52	Recent advances in fundamental understanding of glass transition. Journal of Non-Crystalline Solids, 2008, 354, 5085-5088.	1.5	22
53	Dynamic Crossover of Water Relaxation in Aqueous Mixtures: Effect of Pressure. Journal of Physical Chemistry Letters, 2010, 1, 1170-1175.	2.1	22
54	Interplay between structural static and dynamical parameters as a key factor to understand peculiar behaviour of associated liquids. Journal of Molecular Liquids, 2020, 319, 114084.	2.3	21

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55	Effects of water on molecular dynamics of amorphous<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î±</mml:mi></mml:math>-,<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î²</mml:mi></mml:math>-, and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î³</mml:mi></mml:math>-cyclodextrins studied by dielectric spectroscopy. Phy	0.8	20
56	Effects of lowering temperature and raising pressure on the spatially heterogeneous dynamics of glass-forming van der Waals liquids. Physical Review B, 2012, 85, .	1.1	20
57	Temperature behavior of secondary relaxation dynamics in tripropylene glycol. Physical Review B, 2005, 71, .	1.1	19
58	Effect of Temperature and Density Fluctuations on the Spatially Heterogeneous Dynamics of Glass-Forming Van der Waals Liquids under High Pressure. Physical Review Letters, 2013, 111, 125701.	2.9	19
59	Activation volume in the density scaling regime: Equation of state and its test by using experimental and simulation data. Physical Review B, 2013, 87, .	1.1	19
60	Anomalous behavior of secondary dielectric relaxation in polypropylene glycols. Journal of Physics Condensed Matter, 2007, 19, 376105.	0.7	16
61	Comment on â€œDensity scaling of the diffusion coefficient at various pressures in viscous liquidsâ€. Physical Review E, 2010, 82, 013501.	0.8	16
62	Effect of Cation n-Alkyl Side-Chain Length, Temperature, and Pressure on the Glass-Transition Dynamics and Crystallization Tendency of the [CnC1Pyrr]+[Tf2N]â^' Ionic Liquid Family. Journal of Physical Chemistry C, 2019, , .	1.5	16
63	Observation of the dynamics of clusters in d-glucose with the use of dielectric spectroscopy. Physical Chemistry Chemical Physics, 2010, 12, 723-730.	1.3	15
64	Molecular dynamics and crystallization phenomenon of supercooled and glassy DNA and RNA nucleosides:<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î²</mml:mi></mml:math>-adenosine,<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î²</mml:mi></mml:math>-thymidine, and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î²</mml:mi></mml:math>-u	0.8	15
65	Ionic liquids and their bases: Striking differences in the dynamic heterogeneity near the glass transition. Scientific Reports, 2015, 5, 16876.	1.6	14
66	Adam-Gibbs model in the density scaling regime and its implications for the configurational entropy scaling. Scientific Reports, 2015, 5, 13998.	1.6	14
67	Spatially Heterogeneous Dynamics in the Density Scaling Regime: Time and Length Scales of Molecular Dynamics near the Glass Transition. Journal of Physical Chemistry Letters, 2013, 4, 4273-4278.	2.1	13
68	Changing the Tendency of Glass-Forming Liquid To Crystallize by Moving Along Different Isolines in theTâ€“pPhase Diagram. Crystal Growth and Design, 2016, 16, 6263-6268.	1.4	12
69	Relationship between Nanoscale Supramolecular Structure, Effectiveness of Hydrogen Bonds, and Appearance of Debye Process. Journal of Physical Chemistry C, 2020, 124, 2672-2679.	1.5	12
70	Role of entropy in the thermodynamic evolution of the time scale of molecular dynamics near the glass transition. Physical Review E, 2015, 91, 062305.	0.8	11
71	Essential meaning of high pressure measurements in discerning the properties of monohydroxy alcohols with a single phenyl group. Journal of Molecular Liquids, 2020, 305, 112863.	2.3	11
72	Influence of molecular geometry on the formation, architecture and dynamics of H-bonded supramolecular associates in 1-phenyl alcohols. Journal of Molecular Liquids, 2021, 326, 115349.	2.3	11

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73	Reply to â€œComment on â€˜Correlations between isobaric and isochoric fragilities and thermodynamical scaling exponent for glass-forming liquidsâ€™<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mspace width="0.2em" /></mml:mrow></mml:math>â€• Physical Review E, 2007, 76, 013502.	0.8	10
74	Fragility versus activation volume: Insight into molecular dynamics of glass-forming hydrogen-bonded liquids. Physical Review E, 2011, 84, 052501.	0.8	10
75	Does the Johariâ€“Goldstein Î²-Relaxation Exist in Polypropylene Glycols?. Macromolecules, 2015, 48, 4151-4157.	2.2	10
76	Role of defects in the nonmonotonic behavior of secondary relaxation of polypropylene glycols. Journal of Chemical Physics, 2008, 128, 134904.	1.2	9
77	Molecular Dynamics and Physical Stability of Ibuprofen in Binary Mixtures with an Acetylated Derivative of Maltose. Molecular Pharmaceutics, 2020, 17, 3087-3105.	2.3	9
78	New paradigm of dielectric relaxation of sizable and rigid molecular glass formers. Physical Review E, 2020, 101, 010603.	0.8	9
79	The Impact of the Length of Alkyl Chain on the Behavior of Benzyl Alcohol Homologous. The Interplay Between Dispersive and Hydrogen Bond Interactions. Physical Chemistry Chemical Physics, 2021, 23, 23796-23807.	1.3	9
80	Effect of polymer structure on the molecular dynamics and thermal behavior of poly(allyl) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 462 Td (	1.8	8
81	Dynamics of the slow mode in the family of six-carbon monosaccharides monitored by dielectric spectroscopy. Journal of Physics Condensed Matter, 2010, 22, 365103.	0.7	7
82	In search of correlations between the four-point measure of dynamic heterogeneity and other characteristics of glass-forming liquids under high pressure. Journal of Non-Crystalline Solids, 2015, 407, 196-205.	1.5	7
83	Hydrostatic pressure influence on electric relaxation response of bismuth manganite ceramics. Journal of the American Ceramic Society, 2020, 103, 3732-3738.	1.9	7
84	Conformational analysis and molecular dynamics of glass-forming aromatic thiacrown ethers. Physical Chemistry Chemical Physics, 2020, 22, 17948-17959.	1.3	6
85	Local structure and molecular dynamics of highly polar propylene carbonate derivative infiltrated within alumina and silica porous templates. Journal of Chemical Physics, 2021, 154, 064701.	1.2	6
86	Aromaticity effect on supramolecular aggregation. Aromatic vs. cyclic monohydroxy alcohols. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2022, 276, 121235.	2.0	6
87	Test of the dynamic lattice liquid model of glass-forming liquids. Journal of Molecular Liquids, 2004, 109, 137-141.	2.3	5
88	High-pressure crystallization of 1-methyl-3-trimethylsilylmethylimidazolium tetrafluoroborate ionic liquid. Chemical Physics Letters, 2012, 546, 150-152.	1.2	5
89	Effects of dynamic heterogeneity and density scaling of molecular dynamics on the relationship among thermodynamic coefficients at the glass transition. Journal of Chemical Physics, 2015, 143, 024502.	1.2	4
90	Correction to Effect of High Pressure on Crystallization Kinetics of van der Waals Liquid: An Experimental and Theoretical Study. Crystal Growth and Design, 2014, 14, 4226-4226.	1.4	1

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91	Transformation of the Strongly Hydrogen Bonded System into van der Waals one Reflected in Molecular Dynamics. NATO Science for Peace and Security Series A: Chemistry and Biology, 2010, , 359-376.	0.5	1
92	Peculiar Behavior of the Secondary Dielectric Relaxation in Propylene Glycol Oligomers near the Glass Transition. AIP Conference Proceedings, 2008, , .	0.3	0