Sergey Vasenkov

List of Publications by Year
in descending order

90	2,649	159585 30	206112 48
papers	citations	h-index	g-index

93	93	93	2103
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The Role of Mesopores in Intracrystalline Transport in USY Zeolite:Â PFG NMR Diffusion Study on Various Length Scales. Journal of the American Chemical Society, 2005, 127, 13055-13059.	13.7	211
2	Photocatalyzed oxidation in zeolite cages. Catalysis Today, 1998, 41, 297-309.	4.4	111
3	PFG NMR Study of Diffusion in MFI-Type Zeolites:â€‰ Evidence of the Existence of Intracrystalline Transport Barriers. Journal of Physical Chemistry B, 2001, 105, 5922-5927.	2.6	108
4	Unprecedented Insight into Diffusion by Monitoring the Concentration of Guest Molecules in Nanoporous Host Materials. Angewandte Chemie - International Edition, 2006, 45, 7846-7849.	13.8	107
5	Interference Microscopy Investigation of the Influence of Regular Intergrowth Effects in MFI-Type Zeolites on Molecular Uptake. Journal of Physical Chemistry B, 2001, 105, 10217-10222.	2.6	97
6	Influence of Water on Diffusion in Imidazolium-Based Ionic Liquids: A Pulsed Field Gradient NMR study. Journal of Physical Chemistry B, 2009, 113, 6353-6359.	2.6	97
7	Influence of Defects on the External Crystal Surface on Molecular Uptake into MFI-Type Zeolites. Chemistry of Materials, 2004, 16, 3552-3558.	6.7	89
8	Quantitation of diffusion in zeolite catalysts. Microporous and Mesoporous Materials, 2005, 85, 195-206.	4.4	82
9	Evidence for the existence of intracrystalline transport barriers in MFI-type zeolites: a model consistency check using MC simulations. Microporous and Mesoporous Materials, 2002, 55, 139-145.	4.4	81
10	Regular Intergrowth in the AFI-Type Crystals:â€‰ Influence on the Intracrystalline Adsorbate Distribution As Observed by Interference and FTIR-Microscopy. Journal of the American Chemical Society, 2002, 124, 8690-8692.	13.7	81
11	Diffusion in Fluid Catalytic Cracking Catalysts on Various Displacement Scales and Its Role in Catalytic Performance. Chemistry of Materials, 2005, 17, 2466-2474.	6.7	74
12	Internal Concentration Gradients of Guest Molecules in Nanoporous Host Materials:Â Measurement and Microscopic Analysis. Journal of Physical Chemistry B, 2006, 110, 23821-23828.	2.6	59
13	Sorption Kinetics and Intracrystalline Diffusion of Methanol in Ferrierite: An Example of Disguised Kinetics. Adsorption, 2005, 11, 235-244.	3.0	56
14	Inhomogeneous Distribution of Water Adsorbed under Low Pressure in CrAPO-5 and SAPO-5:Â An Interference Microscopy Study. Journal of Physical Chemistry B, 2003, 107, 4685-4687.	2.6	47
15	Pulsed field gradient nuclear magnetic resonance study of longâ€“range diffusion in beds of NaX zeolite: Evidence for different apparent tortuosity factors in the Knudsen and bulk regimes. Journal of Chemical Physics, 2002, 117, 1935-1938.	3.0	46
16	Combined Application of High-Field Diffusion NMR and Molecular Dynamics Simulations To Study Dynamics in a Mixture of Carbon Dioxide and an Imidazolium-Based Ionic Liquid. Journal of Physical Chemistry B, 2012, 116, 9141-9151.	2.6	45
17	Molecular dynamics under confinement to one dimension: options of measurement and accessible information. New Journal of Physics, 2005, 7, 15-15.	2.9	42
18	Relationship between mixed and pure gas self-diffusion for ethane and ethene in ZIF-8/6FDA-DAM mixed-matrix membrane by pulsed field gradient NMR. Journal of Membrane Science, 2016, 499, 12-19.	8.2	41

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19	Determination of Genuine Diffusivities in Heterogeneous Media Using Stimulated Echo Pulsed Field Gradient NMR. Journal of Magnetic Resonance, 2001, 149, 228-233.	2.1	39
20	On the diffusion of water in silicalite-1: MD simulations using ab initio fitted potential and PFG NMR measurements. Applied Catalysis A: General, 2002, 232, 59-66.	4.3	39
21	Intracrystalline monitoring of molecular uptake into the one-dimensional channels of the AFI-type crystals using interference microscopy. Journal of Chemical Physics, 2003, 118, 6129-6132.	3.0	36
22	Diffusion of Tetrafluoromethane in Single-Walled Aluminosilicate Nanotubes: Pulsed Field Gradient NMR and Molecular Dynamics Simulations. Journal of Physical Chemistry C, 2012, 116, 21350-21355.	3.1	36
23	Different time regimes of tracer exchange in single-file systems. Physical Review E, 2002, 66, 052601.	2.1	33
24	Observation of Acetyl Radical in a Zeolite by Time-Resolved FT-IR Spectroscopy. Journal of the American Chemical Society, 1998, 120, 4031-4032.	13.7	32
25	Relationship between long-range diffusion and diffusion in the ZIF-8 and polymer phases of a mixed-matrix membrane by high field NMR diffusometry. Journal of Membrane Science, 2015, 477, 123-130.	8.2	32
26	UVâ^'Visible Absorption Spectroscopy and Photochemistry of an AlkeneÂ·O2Contact Charge-Transfer System in Large NaY Crystals. Journal of Physical Chemistry B, 1997, 101, 4539-4543.	2.6	31
27	Internal Transport Resistances and their Influence on Diffusion in Zeolites as Traced by Microscopic Measuring Techniques. Adsorption, 2005, 11, 455-460.	3.0	31
28	Sticking Probability on Zeolites. Journal of Physical Chemistry B, 2005, 109, 13523-13528.	2.6	31
29	Ethane diffusion in mixed linker zeolitic imidazolate framework-7-8 by pulsed field gradient NMR in combination with single crystal IR microscopy. Physical Chemistry Chemical Physics, 2018, 20, 23967-23975.	2.8	31
30	Synthesis of large crystals of all-silica zeolite ferrierite. Microporous and Mesoporous Materials, 2007, 104, 179-184.	4.4	30
31	Influence of Hydrogen Sulfide Exposure on the Transport and Structural Properties of the Metalâ€"Organic Framework ZIF-8. Journal of Physical Chemistry C, 2018, 122, 7278-7287.	3.1	30
32	Diffusion of Methane and Carbon Dioxide in Carbon Molecular Sieve Membranes by Multinuclear Pulsed Field Gradient NMR. Langmuir, 2012, 28, 10296-10303.	3.5	29
33	Mesoscopic simulations of the diffusivity of ethane in beds of NaX zeolite crystals: Comparison with pulsed field gradient NMR measurements. Journal of Chemical Physics, 2007, 126, 094702.	3.0	28
34	Strongly Bound Sodium Dodecyl Sulfate Surrounding Single-Wall Carbon Nanotubes. Langmuir, 2017, 33, 5006-5014.	3.5	26
35	Time-Resolved FT-Infrared Spectroscopy of Visible Light-Induced Alkene Oxidation by O2 in a Zeolite. Journal of Physical Chemistry B, 1998, 102, 8177-8182.	2.6	25
36	Time-Resolved Study of Acetyl Radical in Zeolite NaY by Step-Scan FT-IR Spectroscopy. Journal of Physical Chemistry A, 2000, 104, 4327-4332.	2.5	25

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37	Surface barriers on nanoporous particles: A new method of their quantitation by PFG NMR. Microporous and Mesoporous Materials, 2007, 104, 89-96.	4.4	25
38	Combined Application of Tracer Zero Length Column Technique and Pulsed Field Gradient Nuclear Magnetic Resonance for Studies of Diffusion of Small Sorbate Molecules in Mesoporous Silica SBA-15. Journal of Physical Chemistry C, 2010, 114, 16298-16308.	3.1	24
39	Influence of confinement in mesoporous silica on diffusion of a mixture of carbon dioxide and an imidazolium-based ionic liquid by high field diffusion NMR. Microporous and Mesoporous Materials, 2015, 206, 177-183.	4.4	23
40	Relationship between ethane and ethylene diffusion inside ZIF-11 crystals confined in polymers to form mixed-matrix membranes. Journal of Membrane Science, 2020, 593, 117440.	8.2	23
41	The influence of the desorption barrier on the transport of molecules through the external surface of nanoporous crystals. Chemical Physics Letters, 2006, 430, 60-66.	2.6	22
42	Xenon in <scp>l</scp>-Alanyl-<scp>l</scp>-Valine Nanochannels: A Highly Ideal Molecular Single-File System. Journal of Physical Chemistry Letters, 2013, 4, 3263-3267.	4.6	22
43	Microscopic diffusion of pure and mixed methane and carbon dioxide in ZIF-11 by high field diffusion NMR. Microporous and Mesoporous Materials, 2017, 248, 158-163.	4.4	22
44	Single-crystal-to-single-crystal guest exchange in columnar assembled brominated triphenylamine bis-urea macrocycles. Chemical Communications, 2019, 55, 5619-5622.	4.1	21
45	Structure-mobility relations of molecular diffusion in nanoporous materials. Magnetic Resonance Imaging, 2003, 21, 185-191.	1.8	19
46	Heterogeneity of Polyelectrolyte Diffusion in Polyelectrolyteâ^'Protein Coacervates:â€‰ A ¹H Pulsed Field Gradient NMR Study. Journal of Physical Chemistry B, 2008, 112, 4961-4966.	2.6	18
47	Influence of Boundaries of Nanoporous Crystals on Molecular Exchange under the Conditions of Single-File Diffusion. Journal of Physical Chemistry B, 2005, 109, 16711-16717.	2.6	17
48	Single-File Nanochannel Persistence Lengths from NMR. Analytical Chemistry, 2014, 86, 2200-2204.	6.5	17
49	Ethylene diffusion in crystals of zeolitic imidazole Framework-11 embedded in polymers to form mixed-matrix membranes. Microporous and Mesoporous Materials, 2019, 274, 163-170.	4.4	17
50	Diffusion in Zeolites. , 2003, , .		16
51	Modeling molecular diffusion in channel networks via displacements between the channel segments. Physical Chemistry Chemical Physics, 2004, 6, 3676-3679.	2.8	16
52	Molecular dynamics simulation study of the concentration dependence of the self-diffusivity of methanol in NaX zeolite. Microporous and Mesoporous Materials, 2010, 127, 176-181.	4.4	15
53	The origin of a large apparent tortuosity factor for the Knudsen diffusion inside monoliths of a samariaâ€“alumina aerogel catalyst: a diffusion NMR study. Physical Chemistry Chemical Physics, 2015, 17, 27481-27487.	2.8	15
54	Anomalous Relationship between Molecular Size and Diffusivity of Ethane and Ethylene inside Crystals of Zeolitic Imidazolate Framework-11. Journal of Physical Chemistry C, 2019, 123, 16813-16822.	3.1	15

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55	Pulsed-field gradient nuclear magnetic resonance study of transport properties of fluid catalytic cracking catalysts. Magnetic Resonance Imaging, 2005, 23, 233-237.	1.8	14
56	Single-File Diffusion near Channel Boundaries. Langmuir, 2006, 22, 5728-5733.	3.5	14
57	Application of Pulsed Field Gradient NMR with High Gradient Strength for Studies of Self-Diffusion in Lipid Membranes on the Nanoscale. Langmuir, 2008, 24, 7365-7370.	3.5	13
58	Self-diffusion of heptane inside aggregates of porous alumina particles by pulsed field gradient NMR. Microporous and Mesoporous Materials, 2016, 229, 117-123.	4.4	12
59	PFG NMR observation of an extremely strong dependence of the ammonia self-diffusivity on its loading in H-ZSM-5. Journal of Catalysis, 2003, 213, 321-323.	6.2	11
60	Toward Observation of Single-File Diffusion Using the Tracer Zero-Length Column Method. Journal of Physical Chemistry B, 2008, 112, 3821-3825.	2.6	11
61	Self-diffusion of pure and mixed gases in mixed-linker zeolitic imidazolate framework-7-8 by high field diffusion NMR. Microporous and Mesoporous Materials, 2019, 288, 109603.	4.4	11
62	Observation of intraparticle transport barriers in FAU/EMT intergrowth by pulsed field gradient NMR. Microporous and Mesoporous Materials, 2010, 135, 30-36.	4.4	10
63	On the Sticking Probability of Aromatic Molecules on Zeolites. Reply to â€œComment on â€˜STICKING PROBABILITY ON ZEOLITES'â€• Journal of Physical Chemistry B, 2006, 110, 17694-17695.	2.6	9
64	Relationship between single-file diffusion of mixed and pure gases in dipeptide nanochannels by high field diffusion NMR. Chemical Communications, 2015, 51, 13346-13349.	4.1	9
65	Single-File Diffusion of Gas Mixtures in Nanochannels of the Dipeptide <scp>I</scp>-Ala-<scp>I</scp>-Val: High-Field Diffusion NMR Study. Journal of Physical Chemistry C, 2016, 120, 9914-9919.	3.1	9
66	Long-range diffusion in beds of nanoporous particles: pitfalls and potentials. Magnetic Resonance Imaging, 2005, 23, 139-145.	1.8	8
67	Diffusion of ethane and ethylene in carbon molecular sieve membranes by pulsed field gradient NMR. Microporous and Mesoporous Materials, 2013, 181, 228-232.	4.4	8
68	Relationship between Diffusion and Chemical Exchange in Mixtures of Carbon Dioxide and an Amine-Functionalized Ionic Liquid by High Field NMR and Kinetic Monte Carlo Simulations. Journal of Physical Chemistry Letters, 2014, 5, 1766-1770.	4.6	8
69	Percolation diffusion of guest molecules in NaCaA zeolites: field gradient NMR studies and Monte Carlo simulations. Journal of Molecular Catalysis A, 2000, 158, 373-376.	4.8	7
70	Signatures of normal and anomalous diffusion in nanotube systems by NMR. Microporous and Mesoporous Materials, 2013, 178, 119-122.	4.4	7
71	Self-diffusion of carbon dioxide in samaria/alumina aerogel catalyst using high field NMR diffusometry. Journal of Chemical Physics, 2013, 139, 154703.	3.0	7
72	Quantifying diffusion of organic liquids in a MOF component of MOF/Polymer mixed-matrix membranes by high field NMR. Journal of Membrane Science, 2021, 640, 119786.	8.2	7

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73	Molecular dynamics study of sorbate diffusion in a simple porous membrane containing microporous nanocrystals and mesopores. Chemical Physics Letters, 2009, 479, 95-99.	2.6	6
74	Potentials and challenges of high-field PFG NMR diffusion studies with sorbates in nanoporous media. Adsorption, 2021, 27, 485-501.	3.0	6
75	Probing lateral diffusion in lipid membranes on nanoscale by PFG NMR with high gradient strength. Magnetic Resonance Imaging, 2007, 25, 493-496.	1.8	5
76	Pulsed Field Gradient Nuclear Magnetic Resonance Study of Time-Dependent Diffusion Behavior and Exchange of Lipids in Planar-Supported Lipid Bilayers. Journal of Physical Chemistry B, 2009, 113, 14355-14364.	2.6	5
77	Transition between Different Diffusion Regimes and Its Relationship with Structural Properties in Nafion by High Field Diffusion NMR in Combination with Small-Angle X-ray and Neutron Scattering. Journal of Physical Chemistry B, 2020, 124, 8943-8950.	2.6	5
78	Looking into the crystallites: diffusion studies by interference microscopy. Studies in Surface Science and Catalysis, 2007, , 739-747.	1.5	4
79	Monitoring the intracrystalline distribution of guest molecules in zeolites. Studies in Surface Science and Catalysis, 2004, 154, 1791-1796.	1.5	3
80	Influence of breakup and reformation of micelles on surfactant diffusion in pure and mixed micellar systems. Microporous and Mesoporous Materials, 2009, 125, 85-89.	4.4	3
81	Sorbate Transport in Carbon Molecular Sieve Membranes and FAU/EMT Intergrowth by Diffusion NMR. Materials, 2012, 5, 302-316.	2.9	3
82	Possible role of molecular clustering in single-file diffusion of mixed and pure gases in dipeptide nanochannels. Microporous and Mesoporous Materials, 2018, 269, 83-87.	4.4	3
83	Influence of vanillic acid immobilization in Nafion membranes on intramembrane diffusion and structural properties. Physical Chemistry Chemical Physics, 2022, 24, 10069-10078.	2.8	3
84	Porous Materials. , 2006, , 231-250.		2
85	Influence of 2-ethylimidazole linker-doping in ZIF-8 crystals on intracrystalline self-diffusion of gas molecules by high field diffusion NMR. Microporous and Mesoporous Materials, 2021, 315, 110897.	4.4	2
86	Relationship between Sorbate Transport Inside and at the Margins of Zeolite Crystals. Soft Materials, 2012, 10, 202-215.	1.7	1
87	Study of Carbon Dioxide Transport in a Samaria Aerogel Catalyst by High Field Diffusion NMR. Chemie-Ingenieur-Technik, 2013, 85, 1749-1754.	0.8	1
88	Editorial: The Fourteenth International Bologna Conference on Magnetic Resonance in Porous Media (MRPM14). Magnetic Resonance Imaging, 2019, 56, 1-2.	1.8	1
89	Self-diffusion of mixed xylene isomers in ZIF-71 crystals dispersed in a polymer to form a hybrid membrane. Microporous and Mesoporous Materials, 2022, , 111960.	4.4	1
90	Relation Between Structure and Diffusion in Nanostructured Porous Solids and in Lipid Membranes. Materials Research Society Symposia Proceedings, 2005, 899, 1.	0.1	0