Hubert Koller

List of Publications by Year
in descending order

71 papers	2,926 citations	136950 32 h-index	168389 53 g-index
79 all docs	79 docs citations	79 times ranked	2218 citing authors

#	Article	IF	Citations
1	23Na NMR Spectroscopy of Solids: Interpretation of Quadrupole Interaction Parameters and Chemical Shifts. The Journal of Physical Chemistry, 1994, 98, 1544-1551.	2.9	277
2	SiO-.cntdot. .cntdot. .cntdot.HOSi Hydrogen Bonds in As-Synthesized High-Silica Zeolites. The Journal of Physical Chemistry, 1995, 99, 12588-12596.	2.9	233
3	Five-Coordinate Silicon in High-Silica Zeolites. Journal of the American Chemical Society, 1999, 121, 3368-3376.	13.7	187
4	High silica zeolites with three-dimensional systems of large pore channels. Microporous and Mesoporous Materials, 2001, 48, 11-22.	4.4	133
5	ITQ-12: a new microporous silica polymorph potentially useful for light hydrocarbon separationsElectronic supplementary information (ESI) available: details of the structure solution, Rietveld refinements in space groups C2/m and Cm and energy minimisation calculations in C2/m, Cm and C2. See http://www.rsc.org/suppdata/cc/b3/b306440a/. Chemical Communications, 2003, , 2114.	4.1	105
6	Location of Na+ and Cs+ cations in CsNaY zeolites studied by 23Na and 133Cs magic-angle spinning nuclear magnetic resonance spectroscopy combined with X-ray structure analysis by Rietveld refinement. Microporous Materials, 1995, 5, 219-232.	1.6	103
7	Multiple-Quantum1H MAS NMR Studies of Defect Sites in As-Made All-Silica ZSM-12 Zeolite. Journal of the American Chemical Society, 2000, 122, 6659-6663.	13.7	103
8	Characterization of sodium cations in dehydrated faujasites and zeolite EMT by 23Na DOR, 2D nutation, and MAS NMR. Solid State Nuclear Magnetic Resonance, 1993, 2, 111-120.	2.3	94
9	Five-Coordinate Silicon in Zeolites: Probing SiO4/2Fâ˜ Sites in Nonasil and ZSM-5 with29Si Solid-State NMR Spectroscopy. Angewandte Chemie International Edition in English, 1997, 36, 2823-2825.	4.4	92
10	Cation-induced transformation of boron-coordination in zeolites. Physical Chemistry Chemical Physics, 2000, 2, 3091-3098.	2.8	92
11	Direct Observation of BrÃ¸nsted Acidic Sites in Dehydrated Zeolite H-ZSM5 Using DFS-Enhanced27Al MQMAS NMR Spectroscopy. Journal of the American Chemical Society, 2001, 123, 2925-2926.	13.7	77
12	Outer-Sphere Control of Catalysis on Surfaces: A Comparative Study of Ti(IV) Single-Sites Grafted on Amorphous versus Crystalline Silicates for Alkene Epoxidation. Journal of the American Chemical Society, 2018, 140, 4956-4960.	13.7	62
13	27Al quadrupole interaction in zeolites loaded with probe moleculesâ€"a quantum-chemical study of trends in electric field gradients and chemical bonds in clusters. Solid State Nuclear Magnetic Resonance, 1997, 9, 165-175.	2.3	60
14	Strategies for extracting NMR parameters from MAS, DOR and MQMAS spectra. A case study for Na4P2O7. Solid State Nuclear Magnetic Resonance, 1999, 15, 171-180.	2.3	58
15	Variable anchoring of boron in zeolite beta. Microporous and Mesoporous Materials, 2005, 79, 215-224.	4.4	56
16	Guestâ˜Host Interactions in As-Made Al-ZSM-12:Â Implications for the Synthesis of Zeolite Catalysts. Journal of Physical Chemistry B, 1999, 103, 10858-10865.	2.6	51
17	Title is missing!. Topics in Catalysis, 1999, 9, 163-180.	2.8	46
18	Quantitative Comparison of REAPDOR and TRAPDOR Experiments by Numerical Simulations and Determination of Hâ€“Al Distances in Zeolites. Solid State Nuclear Magnetic Resonance, 2002, 21, 145-157.	2.3	46

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19	Solid State NMR of Porous Materials. Topics in Current Chemistry, 2011, 306, 189-227.	4.0	45
20	Synthesis and Characterization of Gallosilicate Molecular Sieves with High Gallium Contents:Â Examples of Structure Direction Exerted by Gallium. Chemistry of Materials, 2000, 12, 2292-2300.	6.7	43
21	Ultrastabilization of Zeoliteâ€…Y Transforms BrÃ¸nstedâ€“BrÃ¸nsted Acid Pairs into BrÃ¸nstedâ€“Lewis Acid Pairs. Angewandte Chemie - International Edition, 2018, 57, 14281-14285.	13.8	43
22	27Al and 23Na double-rotation NMR of sodalites. Solid State Nuclear Magnetic Resonance, 1992, 1, 127-135.	2.3	42
23	Synthesis and Characterization of Zincosilicates with the SOD Topology. Chemistry of Materials, 1994, 6, 2193-2199.	6.7	42
24	Hydrogen Bond Formation of BrÃ¸nsted Acid Sites in Zeolites. Chemistry of Materials, 2020, 32, 1564-1574.	6.7	42
25	A simple procedure for the determination of the quadrupole interaction parameters and isotropic chemical shifts from magic angle spinning NMR spectra of half-integer spin nuclei in solids. Magnetic Resonance in Chemistry, 1991, 29, 941-945.	1.9	40
26	Defect Models of Asâ€‰Made Highâ€‰Silica Zeolites: Clusters of Hydrogenâ€‰Bonds and Their Interaction with the Organic Structureâ€‰Directing Agents Determined from ¹H Double and Triple Quantum NMR Spectroscopy. Angewandte Chemie - International Edition, 2016, 55, 14459-14463.	13.8	39
27	Disentangling BrÃ¸nsted Acid Sites and Hydrogen-Bonded Silanol Groups in High-Silica Zeolite H-ZSM-5. Journal of Physical Chemistry C, 2020, 124, 23380-23386.	3.1	37
28	Structural links between zeolite-type and clathrate hydrate-type materials: Redetermination of the crystal structure of [N(CH3)4]8[Si8O20]Â·65H2O by single-crystal X-ray diffraction and variable-temperature MAS NMR spectroscopy. Microporous Materials, 1993, 2, 55-63.	1.6	36
29	Anion-Promoted Cation Motion and Conduction in Zeolites. Journal of the American Chemical Society, 2006, 128, 558-567.	13.7	36
30	Preventing sintering of Au and Ag nanoparticles in silica-based hybrid gels using phenyl spacer groups. Journal of Materials Chemistry, 2010, 20, 3840.	6.7	35
31	Evidence for Selective Association of Tetrahedral BO4 Units with Na+ and of Trigonal BO3 Units with H+ in Dehydrated Zeolite B-ZSM-5 from Solid-State NMR Spectroscopy. Angewandte Chemie - International Edition, 1998, 37, 2505-2507.	13.8	34
32	A Stable Silanol Triad in the Zeolite Catalyst SSZâ€‰70. Angewandte Chemie - International Edition, 2020, 59, 10939-10943.	13.8	33
33	BrÃ¸nsted sites and structural stabilization effect of acidic low-silica zeolite A prepared by partial ammonium exchange. Microporous and Mesoporous Materials, 2015, 212, 110-116.	4.4	31
34	Selectivities in Post-Synthetic Modification of Borosilicate Zeolites. Topics in Catalysis, 2015, 58, 451-479.	2.8	31
35	Exploring Cation Siting in Zeolites by Solid-State NMR of Quadrupolar Nuclei. Studies in Surface Science and Catalysis, 1994, 84, 421-428.	1.5	28
36	29Si NMR of Inorganic Solids. Nmr, 1994, , 1-29.	0.5	27

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37	Synthesis and Physicochemical Characterization of an Aluminosilicate Zeolite with IFR Topology, Prepared by the Fluoride Route. Chemistry of Materials, 2001, 13, 2332-2341.	6.7	27
38	Non-covalent interactions of a drug molecule encapsulated in a hybrid silica gel. Chemical Communications, 2007, , 5194.	4.1	27
39	13C and 23Na Solid-State NMR Study on Zeolite Y Loaded with Mo(CO)6. Journal of Physical Chemistry B, 1997, 101, 1754-1761.	2.6	26
40	Drug Release from Self-Assembled Inorganicâ^'Organic Hybrid Gels and Gated Porosity Detected by Positron Annihilation Lifetime Spectroscopy. Chemistry of Materials, 2006, 18, 664-672.	6.7	26
41	Modern solid state double resonance NMR strategies for the structural characterization of adsorbate complexes involved in the MTG process. Physical Chemistry Chemical Physics, 2002, 4, 1665-1674.	2.8	25
42	Control of Al for B framework substitution in zeolite Beta by counterions. Microporous and Mesoporous Materials, 2012, 148, 80-87.	4.4	22
43	Single-crystal X-ray diffraction and variable-temperature MAS NMR study on the heterogeneous network clathrate Na[N(CH3)4]7[Si8O20].54H2O. Acta Crystallographica Section B: Structural Science, 1992, 48, 449-458.	1.8	17
44	Characterizing the First and Second ²⁷Al Neighbors of BrÃ¸nsted and Lewis Acid Protons in Zeolites and the Distribution of ²⁷Al Quadrupolar Couplings by ¹H{²⁷Al} Offset REAPDOR. Journal of Physical Chemistry C, 2017, 121, 25930-25940.	3.1	17
45	Charge-Induced Partial Ordering of Boron around Structure Directing Agents in Zeolites Observed by13C{11B} Rotational Echo Double Resonance NMR. Journal of the American Chemical Society, 2000, 122, 12590-12591.	13.7	15
46	Post-Synthesis Conversion of Borosilicate Zeolite Beta to an Aluminosilicate with Isolated Acid Sites: A Quantitative Distance Analysis by Solid-State NMR. Journal of Physical Chemistry C, 2016, 120, 9811-9820.	3.1	15
47	Hydrothermal synthesis, crystal structure and thermal behaviour of a zincoborophosphate, (H4TETA)1.5[Zn6B6P12O48]Â·1.5H2O (TETA=triethylenetetraamine), with a chiral tetrahedral framework (CZP framework type). Microporous and Mesoporous Materials, 2005, 78, 97-102.	4.4	13
48	Controlling Drug Release of Solâ^'Gel Encapsulated Persantin and Propranolol by Surface Interactions. Chemistry of Materials, 2008, 20, 5083-5089.	6.7	12
49	Post-synthetic modifications of as-made zeolite frameworks near the structure-directing agents. Journal of Materials Chemistry A, 2014, 2, 10470.	10.3	11
50	Ultrastabilisierung von Zeolith Y wandelt BrÃ¸nstedâ€BrÃ¸nstedâ€SÃurepaare in BrÃ¸nstedâ€Lewisâ€SÃurepaare um. Angewandte Chemie, 2018, 130, 14477-14481.	2.0	11
51	FÃ¼nffach koordiniertes Silicium in Zeolithen: Nachweis von SiO_{4/2}F^{â^'}â€Gruppen in Nonasil und ZSMâ€5 durch ²⁹Siâ€FestkÃ¶rperâ€NMRâ€Spektroskopie. Angewandte Chemie, 1997, 109, 2939-2940.	2.0	10
52	Intermolecular interactions of inorganic and organic molecules embedded in zeolite-type materials probed by near-infrared Fourier transform Raman spectroscopy. Journal of Molecular Structure, 1999, 480-481, 699-704.	3.6	9
53	Matrix Effect on Motional Coupling and Long-Range Transport of Cations in Zeolites. Angewandte Chemie - International Edition, 2007, 46, 3359-3362.	13.8	9
54	Defektmodelle in siliciumreichen Zeolithen: Cluster von WasserstoffbrÃ¼cken und ihre Wechselwirkungen mit organischen Strukturdirigenten aus ¹Hâ€Doppelâ€und Tripelquantenâ€NMR. Angewandte Chemie, 2016, 128, 14675-14679.	2.0	9

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55	Hydrogen Bonds Dominate BrÃ¸nsted Acid Sites in Zeolite SSZâ€42: A Classification of Their Diversity. Angewandte Chemie - International Edition, 2022, 61, e202109313.	13.8	9
56	Effect of Al on Zeolite Beta Solid State Chemistry. Topics in Catalysis, 2012, 55, 1332-1343.	2.8	8
57	Stabile Silanoltriaden im Zeolithkatalysator SSZâ€70. Angewandte Chemie, 2020, 132, 11032-11036.	2.0	8
58	Studying Ionic Motion in Tetrahydroxoborate Sodalite by Second Moment Analysis Using23Na{11B} Rotational Echo Double Resonance Data. Journal of Physical Chemistry B, 2004, 108, 58-63.	2.6	7
59	Two-Dimensional pH Mapping of Release Kinetics of Silica-Encapsulated Drugs. Journal of Pharmaceutical Sciences, 2011, 100, 4401-4412.	3.3	6
60	High Aluminum Ordering in SSZ-59: Residual ¹Hâ€“²⁷Al Dipolar Coupling Effects in ¹H MAS NMR Spectra of BrÃ¸nsted Acid Sites in Zeolites. Journal of Physical Chemistry C, 2021, 125, 4869-4877.	3.1	6
61	Ordered Heteroatom Siting Preserved by B/Al Exchange in Zeolites. Chemistry of Materials, 2022, 34, 3479-3488.	6.7	6
62	29Si NMR studies of the transformation of silicate anions in the system Na2OÂ·SiO2Â·nH2O (n= 9,5) in crystals, melts, and solution. Journal of the Chemical Society Chemical Communications, 1990, , 371-372.	2.0	5
63	Characterization of a Molecule Partially Confined at the Pore Mouth of a Zeotype. Angewandte Chemie - International Edition, 2021, 60, 10239-10246.	13.8	5
64	Fluoride Containing Guest Species in Alumosilicates: Tetrafluoroborate in the Sodalite Na₈Al₆Si₆O₂₄(BF₄)₂. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2009, 635, 450-455.	1.2	4
65	Microheterogeneity in phenyl group modified inorganic/organic hybrid gels after aerosol drying or slow solvent evaporation. Solid State Nuclear Magnetic Resonance, 2011, 39, 142-150.	2.3	4
66	New developments of NMR spectroscopy applied to zeolite catalysts. Studies in Surface Science and Catalysis, 2004, 149, 105-122.	1.5	3
67	Scientific biography of Dr. GÃ¼nter Engelhardt. Solid State Nuclear Magnetic Resonance, 1997, 9, ix-xi.	2.3	1
68	Imprinting With Phenyl Group Interactions: A Case Study of the Hybrid Solâ^'Gel Encapsulation of the Complex {Na[Ph₂P(O)â^'CH₂â^'P(O)Ph₂]₃}⁺. Journal of Physical Chemistry C, 2010, 114, 22590-22596.	3.1	1
69	New Developments of NMR Spectroscopy Applied to Zeolite Catalysts. ChemInform, 2003, 34, no.	0.0	0
70	Characterization of a Molecule Partially Confined at the Pore Mouth of a Zeotype. Angewandte Chemie, 2021, 133, 10327-10334.	2.0	0
71	BrÃ¸nstedsÃ¤urezentren in Zeolith SSZâ€42 werden von WasserstoffbrÃ¼cken dominiert â€“ eine Einteilung ihrer Vielfalt. Angewandte Chemie, 2022, 134, .	2.0	0