Eric Breynaert

List of Publications by Year
in descending order

89 papers	2,106 citations	304602 22 h-index	265120 42 g-index
97 all docs	97 docs citations	97 times ranked	2847 citing authors

#	Article	IF	Citations
1	Dispersing carbomers, mixing technology matters!. RSC Advances, 2022, 12, 7830-7834.	1.7	3
2	Hierarchical COK-X Materials for Applications in Catalysis and Adsorptive Separation and Controlled Release. Frontiers in Chemical Engineering, 2022, 4, .	1.3	4
3	Isotopological Fingerprinting Using ¹H/D Scrambling Identifies the Stereochemistry of Hyperpolarization Catalysts Transferring Spin Polarization from Parahydrogen to Substrates Using Signal Amplification by Reversible Exchange. Journal of Physical Chemistry Letters, 2022, 13, 3516-3522.	2.1	3
4	Selective catalytic reduction of NO_x with ammonia (NH₃-SCR) over copper loaded LEV type zeolites synthesized with different templates. Physical Chemistry Chemical Physics, 2022, 24, 15428-15438.	1.3	4
5	HSIL-Based Synthesis of Ultracrystalline K,Na-JBW, a Zeolite Exhibiting Exceptional Framework Ordering and Flexibility. Chemistry of Materials, 2022, 34, 7159-7166.	3.2	5
6	Ion-Pairs in Aluminosilicate-Alkali Synthesis Liquids Determine the Aluminum Content and Topology of Crystallizing Zeolites. Chemistry of Materials, 2022, 34, 7150-7158.	3.2	13
7	Nucleation of Porous Crystals from Ion-Paired Prenucleation Clusters. Chemistry of Materials, 2022, 34, 7139-7149.	3.2	11
8	Super-ions of sodium cations with hydrated hydroxide anions: inorganic structure-directing agents in zeolite synthesis. Materials Horizons, 2021, 8, 2576-2583.	6.4	16
9	Mesostructuring layered materials: self-supported mesoporous layered double hydroxide nanotubes. Nanoscale, 2021, 13, 11781-11792.	2.8	3
10	Hierarchical ISI-1 zeolite catalyst for hydroconversion of long-chain paraffins. Catalysis Science and Technology, 2021, 11, 1519-1525.	2.1	4
11	¹H Diffusion-Ordered Nuclear Magnetic Resonance Spectroscopic Analysis of Water-Extractable Arabinoxylan in Wheat (Triticum aestivum L.) Flour. Journal of Agricultural and Food Chemistry, 2021, 69, 3912-3922.	2.4	5
12	Longâ€Term Generation of Longitudinal Spin Order Controlled by Ammonia Ligation Enables Rapid SABRE Hyperpolarized 2D NMR. ChemPhysChem, 2021, 22, 1170-1177.	1.0	4
13	Longâ€Term Generation of Longitudinal Spin Order Controlled by Ammonia Ligation Enables Rapid SABRE Hyperpolarized 2D NMR. ChemPhysChem, 2021, 22, 1150-1150.	1.0	2
14	Hydrogen Clathrates: Next Generation Hydrogen Storage Materials. Energy Storage Materials, 2021, 41, 69-107.	9.5	89
15	Spherical coreâ€“shell alumina support particles for model platinum catalysts. Nanoscale, 2021, 13, 4221-4232.	2.8	5
16	Interfacial study of clathrates confined in reversed silica pores. Journal of Materials Chemistry A, 2021, 9, 21835-21844.	5.2	8
17	NMR Crystallography Reveals Carbonate Induced Alâ€Ordering in ZnAl Layered Double Hydroxide. Chemistry - A European Journal, 2021, 27, 15944-15953.	1.7	9
18	IZM-7: A new stable aluminosilicogermanate with a promising catalytic activity. Journal of Catalysis, 2021, , .	3.1	1

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19	¹³C-DOSY-TOSY NMR Correlation for In Situ Analysis of Structure, Size Distribution, and Dynamics of Prebiotic Oligosaccharides. Journal of Agricultural and Food Chemistry, 2020, 68, 3250-3259.	2.4	2
20	Strongly Reducing (Diarylamino)benzene-Based Covalent Organic Framework for Metal-Free Visible Light Photocatalytic H₂O₂ Generation. Journal of the American Chemical Society, 2020, 142, 20107-20116.	6.6	239
21	Trace Level Detection and Quantification of Crystalline Silica in an Amorphous Silica Matrix with Natural Abundance ²⁹Si NMR. Analytical Chemistry, 2020, 92, 13004-13009.	3.2	8
22	Hyperpolarized Magnetic Resonance of Exchangeable Protons Using Parahydrogen and Aminosilane. Journal of Physical Chemistry C, 2020, 124, 14541-14549.	1.5	10
23	Water as a tuneable solvent: a perspective. Chemical Society Reviews, 2020, 49, 2557-2569.	18.7	51
24	Self-organization of silicates on different length scales exemplified by amorphous mesoporous silica and mesoporous zeolite beta using multiammonium surfactants. RSC Advances, 2020, 10, 20928-20938.	1.7	4
25	Framework flexibility-driven CO₂ adsorption on a zeolite. Materials Horizons, 2020, 7, 1528-1532.	6.4	39
26	Low-temperature activation of carbon black by selective photocatalytic oxidation. Nanoscale Advances, 2019, 1, 2873-2880.	2.2	14
27	A Porous POSiSil Suited for Pressureâ€Driven Reversible Confinement of Solutions: PSSâ€². Chemistry - A European Journal, 2019, 25, 12957-12965.	1.7	5
28	Alumina: discriminative analysis using 3D correlation of solid-state NMR parameters. Chemical Society Reviews, 2019, 48, 134-156.	18.7	85
29	Luminescent Layered Double Hydroxides Intercalated with an Anionic Photosensitizer via the Memory Effect. Crystals, 2019, 9, 153.	1.0	11
30	â€œClickâ€•Silicaâ€Supported Sulfonic Acid Catalysts with Variable Acid Strength and Surface Polarity. Chemistry - A European Journal, 2019, 25, 6753-6762.	1.7	16
31	Enhanced luminescence in ZnAlEu layered double hydroxides with interlamellar carboxylate and Î²-diketone ligands. Journal of Alloys and Compounds, 2019, 771, 578-583.	2.8	12
32	Evolution of the crystal growth mechanism of zeolite W (MER) with temperature. Microporous and Mesoporous Materials, 2019, 274, 379-384.	2.2	23
33	Investigation of chabazitic materials as Cs-137 sorbents from cementitious aqueous solutions. Microporous and Mesoporous Materials, 2018, 266, 183-188.	2.2	8
34	Reversible room temperature ammonia gas absorption in pore water of microporous silicaâ€“alumina for sensing applications. Physical Chemistry Chemical Physics, 2018, 20, 13528-13536.	1.3	13
35	Unraveling Direct Formation of Hierarchical Zeolite Beta by Dynamic Light Scattering, Small Angle X-ray Scattering, and Liquid and Solid-State NMR: Insights at the Supramolecular Level. Chemistry of Materials, 2018, 30, 2676-2686.	3.2	15
36	Low-cost disposable high-pressure setup for in situ X-ray experiments. Journal of Synchrotron Radiation, 2018, 25, 1893-1894.	1.0	4

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37	EU-7 zeolite: a synthetic BIK type zeolite with high hydrothermal stability. Chemical Communications, 2018, 54, 5626-5629.	2.2	6
38	Hierarchical self-supported ZnAlEu LDH nanotubes hosting luminescent CdTe quantum dots. Chemical Communications, 2017, 53, 7341-7344.	2.2	19
39	Rationalizing Acid Zeolite Performance on the Nanoscale by Correlative Fluorescence and Electron Microscopy. ACS Catalysis, 2017, 7, 5234-5242.	5.5	19
40	Alternating Copolymer of Double Four Ring Silicate and Dimethyl Silicone Monomerâ€“PSSâ€¦. Chemistry - A European Journal, 2017, 23, 11286-11293.	1.7	5
41	Double-Four-Ring [Si₈O₁₂][OH]₈ Cyclosilicate and Functionalized Spherosilicate Synthesis from [N(n-C₄H₉)₄]H₇[Si₈O₂₀]Â·5.33H₂O Cyclosilicate Hydrate Crystals. Chemistry of Materials, 2017, 29, 5063-5069.	3.2	7
42	Solvent Polarity-Induced Pore Selectivity in H-ZSM-5 Catalysis. ACS Catalysis, 2017, 7, 4248-4252.	5.5	24
43	Revisiting Silicalite-1 Nucleation in Clear Solution by Electrochemical Impedance Spectroscopy. Langmuir, 2017, 33, 2581-2589.	1.6	7
44	Postsynthetic High-Alumina Zeolite Crystal Engineering in Organic-Free Hyper-Alkaline Media. Chemistry of Materials, 2017, 29, 629-638.	3.2	17
45	Impact of Amino Acids on the Isomerization of the Aluminum Tridecamer Al₁₃. Inorganic Chemistry, 2017, 56, 12401-12409.	1.9	10
46	Absolute Quantification of Water in Microporous Solids with ¹H Magic Angle Spinning NMR and Standard Addition. Analytical Chemistry, 2017, 89, 6940-6943.	3.2	22
47	3D porous nanostructured platinum prepared using atomic layer deposition. Journal of Materials Chemistry A, 2017, 5, 19007-19016.	5.2	10
48	Synthesis of aluminum-containing hierarchical mesoporous materials with columnar mesopore ordering by evaporation induced self-assembly. Microporous and Mesoporous Materials, 2016, 234, 186-195.	2.2	7
49	Zeolite Beta Formation from Clear Sols: Silicate Speciation, Particle Formation and Crystallization Monitored by Complementary Analysis Methods. Chemistry - A European Journal, 2016, 22, 15307-15319.	1.7	21
50	Monitoring early zeolite formation via in situ electrochemical impedance spectroscopy. Chemical Communications, 2016, 52, 5478-5481.	2.2	7
51	Water electrolyte promoted oxidation of functional thiol groups. Food Chemistry, 2016, 197, 1235-1239.	4.2	2
52	In Situ Solid-State ¹³C NMR Observation of Pore Mouth Catalysis in Etherification of Î²-Citronellene with Ethanol on Zeolite Beta. Journal of the American Chemical Society, 2016, 138, 2802-2808.	6.6	31
53	Synthesis of an IWW-type germanosilicate zeolite using 5-azonia-spiro[4,4]nonane as a structure directing agent. New Journal of Chemistry, 2016, 40, 4319-4324.	1.4	11
54	An Inner-/Outer-Sphere Stabilized Sn Active Site in Î²-Zeolite: Spectroscopic Evidence and Kinetic Consequences. ACS Catalysis, 2016, 6, 31-46.	5.5	89

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55	Cation Exchange Properties of Zeolites in Hyper Alkaline Aqueous Media. Environmental Science & Technology, 2015, 49, 1729-1737.	4.6	15
56	Chabazite: Stable Cation-Exchanger in Hyper Alkaline Concrete Pore Water. Environmental Science & Technology, 2015, 49, 2358-2365.	4.6	13
57	Molecular self-assembly and clustering in nucleation processes: general discussion. Faraday Discussions, 2015, 179, 155-197.	1.6	10
58	Self-Assembly of Pluronic F127â€"Silica Spherical Coreâ€"Shell Nanoparticles in Cubic Close-Packed Structures. Chemistry of Materials, 2015, 27, 5161-5169.	3.2	47
59	Time and space resolved methods: general discussion. Faraday Discussions, 2015, 179, 247-267.	1.6	7
60	Nucleation in complex multi-component and multi-phase systems: general discussion. Faraday Discussions, 2015, 179, 503-542.	1.6	6
61	Zeolite synthesis in hydrated silicate ionic liquids. Faraday Discussions, 2015, 179, 437-449.	1.6	34
62	Enhanced Selfâ€Assembly of Metal Oxides and Metalâ€Organic Frameworks from Precursors with Magnetohydrodynamically Induced Longâ€Lived Collective Spin States. Advanced Materials, 2014, 26, 5173-5178.	11.1	8
63	Selfâ€Assembly: Enhanced Selfâ€Assembly of Metal Oxides and Metalâ€Organic Frameworks from Precursors with Magnetohydrodynamically Induced Longâ€Lived Collective Spin States (Adv. Mater. 30/2014). Advanced Materials, 2014, 26, 5223-5223.	11.1	0
64	Multidiagnostic analysis of silicate speciation in clear solutions/sols for zeolite synthesis. Microporous and Mesoporous Materials, 2014, 189, 158-162.	2.2	17
65	Eu@COK-16, a host sensitized, hybrid luminescent metalâ€"organic framework. Dalton Transactions, 2014, 43, 13480-13484.	1.6	18
66	Catalytic activation of OKO zeolite with intersecting pores of 10- and 12-membered rings using atomic layer deposition of aluminium. Chemical Communications, 2014, 50, 4610-4612.	2.2	24
67	Flexibility versus rigidity: what determines the stability of zeolite frameworks? A case study. Materials Horizons, 2014, 1, 582-587.	6.4	13
68	Molybdenumâ€"vanadiumâ€"antimony mixed oxide catalyst for isobutane partial oxidation synthesized using magneto hydrodynamic forces. Applied Catalysis A: General, 2014, 474, 18-25.	2.2	10
69	Alkaline cations directing the transformation of FAU zeolites into five different framework types. Chemical Communications, 2013, 49, 11737.	2.2	84
70	Erbium enhanced formation and growth of photoluminescent Er/Si nanocrystals. Thin Solid Films, 2013, 536, 196-201.	0.8	11
71	COKâ€16: A Cationâ€Exchanging Metalâ€"Organic Framework Hybrid. ChemPlusChem, 2013, 78, 402-406.	1.3	15
72	On the role of hydrodynamic forces in vanadium oxide nanoscroll synthesis. Catalysis Today, 2012, 192, 63-66.	2.2	5

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73	Redox-active phases and radionuclide equilibrium valence state in subsurface environments â€“ New insights from 6th EC FP IP FUNMIG. Applied Geochemistry, 2012, 27, 404-413.	1.4	11
74	Design of zeolite by inverse sigma transformation. Nature Materials, 2012, 11, 1059-1064.	13.3	161
75	Chromateâ€Mediated Oneâ€Step Quantitative Transformation of PW₁₂ into P₂W₂₀ Polyoxometalates. European Journal of Inorganic Chemistry, 2012, 2012, 3852-3858.	1.0	5
76	Recovery and reuse of heteropolyacid catalyst in liquid reaction medium through reversible encapsulation in Cu3(BTC)2 metalâ€“organic framework. Chemical Science, 2012, 3, 1847.	3.7	41
77	Hydrolysis of carboxyesters promoted by vanadium(<scp>v</scp>) oxyanions. Dalton Transactions, 2011, 40, 295-300.	1.6	26
78	Stability improvement of Cu3(BTC)2 metalâ€“organic frameworks under steaming conditions by encapsulation of a Keggin polyoxometalate. Chemical Communications, 2011, 47, 8037.	2.2	98
79	Model System to Study the Influence of Aggregation on the Hemolytic Potential of Silica Nanoparticles. Chemical Research in Toxicology, 2011, 24, 1869-1875.	1.7	48
80	Effect of Keggin polyoxometalate on Cu(ii) speciation and its role in the assembly of Cu3(BTC)2 metalâ€“organic framework. Journal of Materials Chemistry, 2011, 21, 9768.	6.7	33
81	Direct growth of Keggin polyoxometalates incorporated copper 1,3,5-benzenetricarboxylate metal organic framework films on a copper metal substrate. Thin Solid Films, 2011, 519, 5437-5440.	0.8	20
82	Direct Observation of Molecularâ€Level Template Action Leading to Selfâ€Assembly of a Porous Framework. Chemistry - A European Journal, 2010, 16, 3926-3932.	1.7	106
83	Reduction of Se(IV) in Boom Clay: XAS Solid Phase Speciation. Environmental Science & Technology, 2010, 44, 6649-6655.	4.6	29
84	EXAFS and DFT: Evidence for the [Tcî€O]2+ core. Dalton Transactions, 2009, , 9398.	1.6	8
85	XANESâ^'EXAFS Analysis of Se Solid-Phase Reaction Products Formed upon Contacting Se(IV) with FeS₂and FeS. Environmental Science & Technology, 2008, 42, 3595-3601.	4.6	76
86	Silica-supported chromium oxide: colloids as building blocks. Physical Chemistry Chemical Physics, 2007, 9, 5382.	1.3	7
87	Designing a Novel Heterogeneous Catalytic System for Cyclohexane Autoxidation. Studies in Surface Science and Catalysis, 2007, , 373-376.	1.5	0
88	Silica-Immobilized Chromium Colloids for Cyclohexane Autoxidation. Angewandte Chemie - International Edition, 2006, 45, 7584-7588.	7.2	28
89	Column Precipitation Chromatography:Â An Approach to Quantitative Analysis of Eigencolloids. Analytical Chemistry, 2005, 77, 5048-5054.	3.2	6