# Eric Breynaert

List of Publications by Year
in descending order



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|---|---|---|---|
| 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 | Strongly Reducing (Diarylamino)benzene-Based Covalent Organic Framework for Metal-Free Visible Light Photocatalytic H<sub>2</sub>O<sub>2</sub> Generation. Journal of the American Chemical Society, 2020, 142, 20107-20116. | 6.6 | 239 |
| 2 | Design of zeolite by inverse sigma transformation. Nature Materials, 2012, 11, 1059-1064. | 13.3 | 161 |
| 3 | 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 |
| 4 | 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 |
| 5 | 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 |
| 6 | Hydrogen Clathrates: Next Generation Hydrogen Storage Materials. Energy Storage Materials, 2021, 41, 69-107. | 9.5 | 89 |
| 7 | Alumina: discriminative analysis using 3D correlation of solid-state NMR parameters. Chemical Society Reviews, 2019, 48, 134-156. | 18.7 | 85 |
| 8 | Alkaline cations directing the transformation of FAU zeolites into five different framework types. Chemical Communications, 2013, 49, 11737. | 2.2 | 84 |
| 9 | XANESâ”EXAFS Analysis of Se Solid-Phase Reaction Products Formed upon Contacting Se(IV) with FeS<sub>2</sub>and FeS. Environmental Science & Technology, 2008, 42, 3595-3601. | 4.6 | 76 |
| 10 | Water as a tuneable solvent: a perspective. Chemical Society Reviews, 2020, 49, 2557-2569. | 18.7 | 51 |
| 11 | 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 |
| 12 | 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 |
| 13 | 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 |
| 14 | Framework flexibility-driven CO<sub>2</sub> adsorption on a zeolite. Materials Horizons, 2020, 7, 1528-1532. | 6.4 | 39 |
| 15 | Zeolite synthesis in hydrated silicate ionic liquids. Faraday Discussions, 2015, 179, 437-449. | 1.6 | 34 |
| 16 | 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 |
| 17 | In Situ Solid-State <sup>13</sup>C 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 |
| 18 | Reduction of Se(IV) in Boom Clay: XAS Solid Phase Speciation. Environmental Science & Technology, 2010, 44, 6649-6655. | 4.6 | 29 |

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|---|---|---|---|
| 19 | Silica-Immobilized Chromium Colloids for Cyclohexane Autoxidation. Angewandte Chemie - International Edition, 2006, 45, 7584-7588. | 7.2 | 28 |
| 20 | Hydrolysis of carboxyesters promoted by vanadium(<scp>v</scp>) oxyanions. Dalton Transactions, 2011, 40, 295-300. | 1.6 | 26 |
| 21 | 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 |
| 22 | Solvent Polarity-Induced Pore Selectivity in H-ZSM-5 Catalysis. ACS Catalysis, 2017, 7, 4248-4252. | 5.5 | 24 |
| 23 | Evolution of the crystal growth mechanism of zeolite W (MER) with temperature. Microporous and Mesoporous Materials, 2019, 274, 379-384. | 2.2 | 23 |
| 24 | Absolute Quantification of Water in Microporous Solids with <sup>1</sup>H Magic Angle Spinning NMR and Standard Addition. Analytical Chemistry, 2017, 89, 6940-6943. | 3.2 | 22 |
| 25 | 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 |
| 26 | 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 |
| 27 | Hierarchical self-supported ZnAlEu LDH nanotubes hosting luminescent CdTe quantum dots. Chemical Communications, 2017, 53, 7341-7344. | 2.2 | 19 |
| 28 | Rationalizing Acid Zeolite Performance on the Nanoscale by Correlative Fluorescence and Electron Microscopy. ACS Catalysis, 2017, 7, 5234-5242. | 5.5 | 19 |
| 29 | Eu@COK-16, a host sensitized, hybrid luminescent metalâ€“organic framework. Dalton Transactions, 2014, 43, 13480-13484. | 1.6 | 18 |
| 30 | Multidiagnostic analysis of silicate speciation in clear solutions/sols for zeolite synthesis. Microporous and Mesoporous Materials, 2014, 189, 158-162. | 2.2 | 17 |
| 31 | Postsynthetic High-Alumina Zeolite Crystal Engineering in Organic-Free Hyper-Alkaline Media. Chemistry of Materials, 2017, 29, 629-638. | 3.2 | 17 |
| 32 | 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 |
| 33 | 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 |
| 34 | COKâ€16: A Cationâ€Exchanging Metalâ€“Organic Framework Hybrid. ChemPlusChem, 2013, 78, 402-406. | 1.3 | 15 |
| 35 | Cation Exchange Properties of Zeolites in Hyper Alkaline Aqueous Media. Environmental Science & Technology, 2015, 49, 1729-1737. | 4.6 | 15 |
| 36 | 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 |

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|---|---|---|---|
| 37 | Low-temperature activation of carbon black by selective photocatalytic oxidation. Nanoscale Advances, 2019, 1, 2873-2880. | 2.2 | 14 |
| 38 | Flexibility versus rigidity: what determines the stability of zeolite frameworks? A case study. Materials Horizons, 2014, 1, 582-587. | 6.4 | 13 |
| 39 | Chabazite: Stable Cation-Exchanger in Hyper Alkaline Concrete Pore Water. Environmental Science & Technology, 2015, 49, 2358-2365. | 4.6 | 13 |
| 40 | 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 |
| 41 | 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 |
| 42 | 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 |
| 43 | 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 |
| 44 | Erbium enhanced formation and growth of photoluminescent Er/Si nanocrystals. Thin Solid Films, 2013, 536, 196-201. | 0.8 | 11 |
| 45 | 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 |
| 46 | Luminescent Layered Double Hydroxides Intercalated with an Anionic Photosensitizer via the Memory Effect. Crystals, 2019, 9, 153. | 1.0 | 11 |
| 47 | Nucleation of Porous Crystals from Ion-Paired Prenucleation Clusters. Chemistry of Materials, 2022, 34, 7139-7149. | 3.2 | 11 |
| 48 | 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 |
| 49 | Molecular self-assembly and clustering in nucleation processes: general discussion. Faraday Discussions, 2015, 179, 155-197. | 1.6 | 10 |
| 50 | Impact of Amino Acids on the Isomerization of the Aluminum Tridecamer Al<sub>13</sub>. Inorganic Chemistry, 2017, 56, 12401-12409. | 1.9 | 10 |
| 51 | 3D porous nanostructured platinum prepared using atomic layer deposition. Journal of Materials Chemistry A, 2017, 5, 19007-19016. | 5.2 | 10 |
| 52 | Hyperpolarized Magnetic Resonance of Exchangeable Protons Using Parahydrogen and Aminosilane. Journal of Physical Chemistry C, 2020, 124, 14541-14549. | 1.5 | 10 |
| 53 | NMR Crystallography Reveals Carbonate Induced Alâ€Ordering in ZnAl Layered Double Hydroxide. Chemistry - A European Journal, 2021, 27, 15944-15953. | 1.7 | 9 |
| 54 | EXAFS and DFT: Evidence for the [Tcî€Ọ]2+ core. Dalton Transactions, 2009, , 9398. | 1.6 | 8 |

| # | Article | IF | Citations |
|---|---|---|---|
| 55 | 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 |
| 56 | Investigation of chabazitic materials as Cs-137 sorbents from cementitious aqueous solutions. Microporous and Mesoporous Materials, 2018, 266, 183-188. | 2.2 | 8 |
| 57 | Trace Level Detection and Quantification of Crystalline Silica in an Amorphous Silica Matrix with Natural Abundance <sup>29</sup>Si NMR. Analytical Chemistry, 2020, 92, 13004-13009. | 3.2 | 8 |
| 58 | Interfacial study of clathrates confined in reversed silica pores. Journal of Materials Chemistry A, 2021, 9, 21835-21844. | 5.2 | 8 |
| 59 | Silica-supported chromium oxide: colloids as building blocks. Physical Chemistry Chemical Physics, 2007, 9, 5382. | 1.3 | 7 |
| 60 | Time and space resolved methods: general discussion. Faraday Discussions, 2015, 179, 247-267. | 1.6 | 7 |
| 61 | 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 |
| 62 | Monitoring early zeolite formation via in situ electrochemical impedance spectroscopy. Chemical Communications, 2016, 52, 5478-5481. | 2.2 | 7 |
| 63 | Double-Four-Ring [Si<sub>8</sub>O<sub>12</sub>][OH]<sub>8</sub> Cyclosilicate and Functionalized Spherosilicate Synthesis from [N(n-C<sub>4</sub>H<sub>9</sub>)<sub>4</sub>]H<sub>7</sub>[Si<sub>8</sub>O<sub>20</sub>]Â·5.33H<sub>2</sub>O Cyclosilicate Hydrate Crystals. Chemistry of Materials, 2017, 29, 5063-5069. | 3.2 | 7 |
| 64 | Revisiting Silicalite-1 Nucleation in Clear Solution by Electrochemical Impedance Spectroscopy. Langmuir, 2017, 33, 2581-2589. | 1.6 | 7 |
| 65 | Column Precipitation Chromatography:Â An Approach to Quantitative Analysis of Eigencolloids. Analytical Chemistry, 2005, 77, 5048-5054. | 3.2 | 6 |
| 66 | Nucleation in complex multi-component and multi-phase systems: general discussion. Faraday Discussions, 2015, 179, 503-542. | 1.6 | 6 |
| 67 | EU-7 zeolite: a synthetic BIK type zeolite with high hydrothermal stability. Chemical Communications, 2018, 54, 5626-5629. | 2.2 | 6 |
| 68 | On the role of hydrodynamic forces in vanadium oxide nanoscroll synthesis. Catalysis Today, 2012, 192, 63-66. | 2.2 | 5 |
| 69 | Chromateâ€Mediated Oneâ€Step Quantitative Transformation of PW<sub>12</sub> into P<sub>2</sub>W<sub>20</sub> Polyoxometalates. European Journal of Inorganic Chemistry, 2012, 2012, 3852-3858. | 1.0 | 5 |
| 70 | Alternating Copolymer of Double Four Ring Silicate and Dimethyl Silicone Monomerâ€“PSSâ€1. Chemistry - A European Journal, 2017, 23, 11286-11293. | 1.7 | 5 |
| 71 | A Porous POSiSil Suited for Pressureâ€Driven Reversible Confinement of Solutions: PSSâ€2. Chemistry - A European Journal, 2019, 25, 12957-12965. | 1.7 | 5 |
| 72 | <sup>1</sup>H 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 |

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| 73 | Spherical coreâ€“shell alumina support particles for model platinum catalysts. Nanoscale, 2021, 13, 4221-4232. | 2.8 | 5 |
| 74 | 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 |
| 75 | Low-cost disposable high-pressure setup for in situ X-ray experiments. Journal of Synchrotron Radiation, 2018, 25, 1893-1894. | 1.0 | 4 |
| 76 | 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 |
| 77 | Hierarchical ISI-1 zeolite catalyst for hydroconversion of long-chain paraffins. Catalysis Science and Technology, 2021, 11, 1519-1525. | 2.1 | 4 |
| 78 | 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 |
| 79 | Hierarchical COK-X Materials for Applications in Catalysis and Adsorptive Separation and Controlled Release. Frontiers in Chemical Engineering, 2022, 4, . | 1.3 | 4 |
| 80 | Selective catalytic reduction of NO<sub>x</sub> with ammonia (NH<sub>3</sub>-SCR) over copper loaded LEV type zeolites synthesized with different templates. Physical Chemistry Chemical Physics, 2022, 24, 15428-15438. | 1.3 | 4 |
| 81 | Mesostructuring layered materials: self-supported mesoporous layered double hydroxide nanotubes. Nanoscale, 2021, 13, 11781-11792. | 2.8 | 3 |
| 82 | Dispersing carbomers, mixing technology matters!. RSC Advances, 2022, 12, 7830-7834. | 1.7 | 3 |
| 83 | Isotopological Fingerprinting Using <sup>1</sup>H/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 |
| 84 | Water electrolyte promoted oxidation of functional thiol groups. Food Chemistry, 2016, 197, 1235-1239. | 4.2 | 2 |
| 85 | <sup>13</sup>C-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 |
| 86 | 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 |
| 87 | IZM-7: A new stable aluminosilicogermanate with a promising catalytic activity. Journal of Catalysis, 2021, , . | 3.1 | 1 |
| 88 | Designing a Novel Heterogeneous Catalytic System for Cyclohexane Autoxidation. Studies in Surface Science and Catalysis, 2007, , 373-376. | 1.5 | 0 |
| 89 | 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 |