Bastian J M Etzold

List of Publications by Year
in descending order

113 papers	3,695 citations	117625 34 h-index	149698 56 g-index
120 all docs	120 docs citations	120 times ranked	4202 citing authors

#	Article	IF	Citations
1	Covalent Incorporation of Aminated Nanodiamond into an Epoxy Polymer Network. ACS Nano, 2011, 5, 7494-7502.	14.6	262
2	Photonic crystal fibres for chemical sensing and photochemistry. Chemical Society Reviews, 2013, 42, 8629.	38.1	252
3	Solid Catalyst with Ionic Liquid Layer (SCILL) â€“ A New Concept to Improve Selectivity Illustrated by Hydrogenation of Cyclooctadiene. Chemical Engineering and Technology, 2007, 30, 985-994.	1.5	212
4	Accelerating Oxygenâ€Reduction Catalysts through Preventing Poisoning with Nonâ€Reactive Species by Using Hydrophobic Ionic Liquids. Angewandte Chemie - International Edition, 2016, 55, 2257-2261.	13.8	125
5	Analysis of evaporation and thermal decomposition of ionic liquids by thermogravimetrical analysis at ambient pressure and high vacuum. Green Chemistry, 2011, 13, 1453.	9.0	119
6	Carbon structure in nanodiamonds elucidated from Raman spectroscopy. Carbon, 2017, 121, 322-329.	10.3	101
7	An improved method to measure the rate of vaporisation and thermal decomposition of high boiling organic and ionic liquids by thermogravimetrical analysis. Physical Chemistry Chemical Physics, 2010, 12, 12089.	2.8	94
8	Ionic liquids in electrocatalysis. Journal of Energy Chemistry, 2016, 25, 199-207.	12.9	94
9	Boosting Performance of Low Temperature Fuel Cell Catalysts by Subtle Ionic Liquid Modification. ACS Applied Materials & Interfaces, 2015, 7, 3562-3570.	8.0	90
10	Tuning the Electrocatalytic Performance of Ionic Liquid Modified Pt Catalysts for the Oxygen Reduction Reaction via Cationic Chain Engineering. ACS Catalysis, 2018, 8, 8244-8254.	11.2	82
11	Modifier-Free Microfluidic Electrochemical Sensor for Heavy-Metal Detection. ACS Omega, 2017, 2, 4593-4603.	3.5	81
12	Towards best practices for improving paper-based microfluidic fuel cells. Electrochimica Acta, 2019, 298, 389-399.	5.2	69
13	Improved electrochemical performance of Fe-N-C catalysts through ionic liquid modification in alkaline media. Journal of Power Sources, 2018, 375, 222-232.	7.8	66
14	High selectivity of TiC-CDC for CO2/N2 separation. Carbon, 2013, 59, 221-228.	10.3	60
15	Effect of Ionic Liquid Modification on the ORR Performance and Degradation Mechanism of Trimetallic PtNiMo/C Catalysts. ACS Catalysis, 2019, 9, 8682-8692.	11.2	60
16	Benchmarking Fuel Cell Electrocatalysts Using Gas Diffusion Electrodes: Inter-lab Comparison and Best Practices. ACS Energy Letters, 2022, 7, 816-826.	17.4	58
17	Chlorination of titanium carbide for the processing of nanoporous carbon: A kinetic study. Chemical Engineering Journal, 2010, 159, 236-241.	12.7	57
18	Cathodic activated stainless steel mesh as a highly active electrocatalyst for the oxygen evolution reaction with self-healing possibility. Journal of Energy Chemistry, 2020, 49, 153-160.	12.9	57

#	Article	IF	Citations
19	Probing CO₂ Reduction Pathways for Copper Catalysis Using an Ionic Liquid as a Chemical Trapping Agent. Angewandte Chemie - International Edition, 2020, 59, 18095-18102.	13.8	56
20	Paper-based microfluidic aluminumâ€“air batteries: toward next-generation miniaturized power supply. Lab on A Chip, 2019, 19, 3438-3447.	6.0	55
21	Aqueous-phase reforming of xylitol over Pt/C and Pt/TiC-CDC catalysts: catalyst characterization and catalytic performance. Catalysis Science and Technology, 2014, 4, 387-401.	4.1	54
22	Mesoporous and Graphitic Carbide-Derived Carbons as Selective and Stable Catalysts for the Dehydrogenation Reaction. Chemistry of Materials, 2015, 27, 5719-5725.	6.7	53
23	Titanium carbide-derived carbon as a novel support for platinum catalysts in direct methanol fuel cell application. Journal of Power Sources, 2012, 199, 22-28.	7.8	49
24	Vapor Pressure of Water in Mixtures with Hydrophilic Ionic Liquids â€“ A Contribution to the Design of Processes for Drying of Gases by Absorption in Ionic Liquids. Chemical Engineering and Technology, 2010, 33, 1625-1634.	1.5	45
25	Size-controlled PtNi nanoparticles as highly efficient catalyst for hydrodechlorination reactions. Applied Catalysis B: Environmental, 2016, 192, 1-7.	20.2	45
26	Methanol conversion on borocarbonitride catalysts: Identification and quantification of active sites. Science Advances, 2020, 6, eaba5778.	10.3	45
27	Aqueous-phase reforming of alcohols with three carbon atoms on carbon-supported Pt. Catalysis Today, 2018, 301, 78-89.	4.4	44
28	Layer-by-Layer Oxidation for Decreasing the Size of Detonation Nanodiamond. Chemistry of Materials, 2014, 26, 3479-3484.	6.7	42
29	Paperâ€Based Microfluidics for Electrochemical Applications. ChemElectroChem, 2020, 7, 10-30.	3.4	40
30	Understanding the activity transport nexus in water and CO2 electrolysis: State of the art, challenges and perspectives. Chemical Engineering Journal, 2021, 424, 130501.	12.7	38
31	Deducing kinetic constants for the hydrodechlorination of 4-chlorophenol using high adsorption capacity catalysts. Chemical Engineering Journal, 2016, 285, 228-235.	12.7	37
32	Oxidative dehydrogenation on nanocarbon: Effect of heteroatom doping. Applied Catalysis B: Environmental, 2019, 258, 117982.	20.2	37
33	Nanoscale Hybrid Amorphous/Graphitic Carbon as Key Towards Nextâ€Generation Carbonâ€Based Oxidative Dehydrogenation Catalysts. Angewandte Chemie - International Edition, 2021, 60, 5898-5906.	13.8	37
34	Hierarchical pipe cactus-like Ni/NiCo-LDH coreâ€“shell nanotube networks as a self-supported battery-type electrode for supercapacitors with high volumetric energy density. Journal of Materials Chemistry A, 2022, 10, 12473-12488.	10.3	36
35	Synthesis of carbon coreâ€“shell pore structures and their performance as supercapacitors. Microporous and Mesoporous Materials, 2015, 218, 130-136.	4.4	35
36	Photochemistry in a soft-glass single-ring hollow-core photonic crystal fibre. Analyst, The, 2017, 142, 925-929.	3.5	35

#	Article	IF	Citations
37	Highly efficient removal of pharmaceuticals from water by well-defined carbide-derived carbons. Chemical Engineering Journal, 2018, 347, 595-606.	12.7	34
38	In-situ thermal activation of carbide-derived carbon. Carbon, 2011, 49, 3679-3686.	10.3	33
39	Polymer-based spherical activated carbon as catalytic support for hydrodechlorination reactions. Applied Catalysis B: Environmental, 2017, 218, 498-505.	20.2	31
40	Process specific catalyst supportsâ€"Selective electron beam melted cellular metal structures coated with microporous carbon. Chemical Engineering Journal, 2012, 181-182, 725-733.	12.7	30
41	Chemical and (Photo)â€Catalytical Transformations in Photonic Crystal Fibers. ChemCatChem, 2013, 5, 641-650.	3.7	30
42	Boosting the Activity in Supported Ionic Liquid-Phase-Catalyzed Hydroformylation via Surface Functionalization of the Carbon Support. ACS Catalysis, 2016, 6, 2280-2286.	11.2	30
43	Vanadium pentoxide/carbide-derived carbon coreâ€"shell hybrid particles for high performance electrochemical energy storage. Journal of Materials Chemistry A, 2016, 4, 18899-18909.	10.3	30
44	Improved synthesis and hydrothermal stability of Pt/C catalysts based on size-controlled nanoparticles. Catalysis Science and Technology, 2016, 6, 5196-5206.	4.1	29
45	Activated Carbon in the Third Dimensionâ€"3D Printing of a Tuned Porous Carbon. Advanced Science, 2019, 6, 1901340.	11.2	28
46	Shrinking core like fluid solid reactionsâ€"A dispersion model accounting for fluid phase volume change and solid phase particle size distributions. Chemical Engineering Science, 2012, 69, 492-502.	3.8	27
47	Emerging Applications of Solid Catalysts with Ionic Liquid Layer Concept in Electrocatalysis. Advanced Functional Materials, 2021, 31, 2010977.	14.9	26
48	Determination of vapor pressure and thermal decomposition using thermogravimetrical analysis. Thermochimica Acta, 2015, 622, 9-17.	2.7	25
49	Fast production of monolithic carbide-derived carbons with secondary porosity produced by chlorination of carbides containing a free metal phase. Carbon, 2011, 49, 4359-4367.	10.3	24
50	Methanol oxidative dehydrogenation and dehydration on carbon nanotubes: active sites and basic reaction kinetics. Catalysis Science and Technology, 2020, 10, 4952-4959.	4.1	24
51	Ultraâ€Low Concentration Monitoring of Catalytic Reactions in Photonic Crystal Fiber. Chemistry - A European Journal, 2012, 18, 1586-1590.	3.3	23
52	Epimerisation of menthol stereoisomers: Kinetic studies of the heterogeneously catalysed menthol production. Catalysis Today, 2009, 140, 30-36.	4.4	22
53	Preparation of carbide-derived carbon supported platinum catalysts. Catalysis Today, 2015, 249, 30-37.	4.4	22
54	Polymerâ€Based Spherical Activated Carbon as Easyâ€toâ€Handle Catalyst Support forÂHydrogenation Reactions. Chemical Engineering and Technology, 2016, 39, 276-284.	1.5	22

#	Article	IF	Citations
55	Carbide-Derived Niobium Pentoxide with Enhanced Charge Storage Capacity for Use as a Lithium-Ion Battery Electrode. ACS Applied Energy Materials, 2020, 3, 4275-4285.	5.1	22
56	Oxygen assisted butanol conversion on bifunctional carbon nanotube catalysts: Activity of oxygen functionalities. Carbon, 2020, 170, 580-588.	10.3	20
57	Insights into the redox kinetics of vanadium substituted heteropoly acids through liquid core waveguide membrane microreactor studies. Chemical Engineering Journal, 2019, 369, 443-450.	12.7	19
58	Carbide-derived carbon with hollow core structure and its performance as catalyst support for methanol electro-oxidation. Electrochemistry Communications, 2017, 82, 12-15.	4.7	18
59	Molecular Modeling of Microporous Structures of Carbide-Derived Carbon-Based Supercapacitors. Journal of Physical Chemistry C, 2017, 121, 7221-7231.	3.1	16
60	Introducing sulphur surface groups in microporous carbons: A mechanistic study on carbide derived carbons. Catalysis Today, 2018, 301, 191-195.	4.4	16
61	An advanced method to manufacture hierarchically structured carbide-derived carbon monoliths. Carbon, 2014, 70, 30-37.	10.3	15
62	Controlled synthesis of PVP-based carbon-supported Ru nanoparticles: synthesis approaches, characterization, capping agent removal and catalytic behavior. Catalysis Science and Technology, 2016, 6, 8490-8504.	4.1	15
63	Exploring the role of the catalytic support sorption capacity on the hydrodechlorination kinetics by the use of carbide-derived carbons. Applied Catalysis B: Environmental, 2017, 203, 591-598.	20.2	15
64	Controlled synthesis of core-shell carbide-derived carbons through in situ generated chlorine. Carbon, 2017, 115, 422-429.	10.3	15
65	Combined Computational and Experimental Study on the Influence of Surface Chemistry of Carbon-Based Electrodes on Electrodeâ€“Electrolyte Interactions in Supercapacitors. Journal of Physical Chemistry C, 2019, 123, 2716-2727.	3.1	15
66	The effect of temperature on ionic liquid modified Fe-N-C catalysts for alkaline oxygen reduction reaction. Journal of Energy Chemistry, 2022, 68, 324-329.	12.9	14
67	Synthesis of Microporous Carbon Foams as Catalyst Supports. Chemical Engineering and Technology, 2010, 33, 698-703.	1.5	12
68	In Situ Heterogeneous Catalysis Monitoring in a Hollowâ€Core Photonic Crystal Fiber Microflow Reactor. Advanced Materials Interfaces, 2014, 1, 1300093.	3.7	12
69	Thermal and Electrical Conductivity of Amorphous and Graphitized Carbideâ€Derived Carbon Monoliths. Chemical Engineering and Technology, 2016, 39, 1121-1129.	1.5	12
70	Producing high quality carbide-derived carbon from low quality byproducts stemming from SiC production. Chemical Engineering Journal, 2016, 283, 676-681.	12.7	12
71	Characterization of Vâ€“Moâ€“W Mixed Oxide Catalyst Surface Species by ⁵¹V Solid-State Dynamic Nuclear Polarization NMR. Journal of Physical Chemistry C, 2017, 121, 20857-20864.	3.1	12
72	Combining autoclave and LCWM reactor studies to shed light on the kinetics of glucose oxidation catalyzed by doped molybdenum-based heteropoly acids. RSC Advances, 2019, 9, 29347-29356.	3.6	11

#	Article	IF	Citations
73	Synthesis strategies towards amorphous porous carbons with selective oxygen functionalization for the application as reference material. Carbon, 2021, 171, 658-670.	10.3	11
74	Kinetic Study of the Asymmetric Hydrogenation of Methyl Acetoacetate in the Presence of a Ruthenium Binaphthophosphepine Complex. Advanced Synthesis and Catalysis, 2009, 351, 235-245.	4.3	10
75	AktivitÃ¤tssteigerung von Sauerstoffreduktionskatalysatoren durch UnterdrÃ¼ckung der Katalysatorvergiftung mittels hydrophober ionischer FlÃ¼ssigkeiten. Angewandte Chemie, 2016, 128, 2298-2302.	2.0	10
76	An Optical Microreactor Enabling In Situ Spectroscopy Combined with Fast Gasâ€Liquid Mass Transfer. Chemie-Ingenieur-Technik, 2018, 90, 1855-1863.	0.8	10
77	Dynamics of Bulk Oxygen in the Selective Oxidation of Acrolein. ChemCatChem, 2017, 9, 2390-2398.	3.7	9
78	Methodology for the identification of carbonyl absorption maxima of carbon surface oxides in DRIFT spectra. Carbon Trends, 2021, 3, 100020.	3.0	9
79	Activity Hysteresis during Cyclic Temperatureâ€Programmed Reactions in the Partial Oxidation of Acrolein to Acrylic Acid. Chemical Engineering and Technology, 2017, 40, 2084-2095.	1.5	8
80	Stable Immobilization of Sizeâ€Controlled Bimetallic Nanoparticles in Photonic Crystal Fiber Microreactor. Chemie-Ingenieur-Technik, 2018, 90, 653-659.	0.8	8
81	Mechanistic Study on the Selective Oxidation of Acrolein to Acrylic Acid: Identification of the Rateâ€Limiting Step via Perdeuterated Acrolein. ChemCatChem, 2019, 11, 3242-3252.	3.7	8
82	Improving control of carbide-derived carbon microstructure by immobilization of a transition-metal catalyst within the shell of carbide/carbon coreâ€“shell structures. Beilstein Journal of Nanotechnology, 2019, 10, 419-427.	2.8	8
83	Mesoporous and crystalline carbide-derived carbons: Towards a general correlation on synthesis temperature and precursor structure influence. Carbon, 2021, 175, 215-222.	10.3	8
84	3D-printed activated carbon for post-combustion CO2 capture. Microporous and Mesoporous Materials, 2022, 335, 111818.	4.4	8
85	Comparing Different Synthesis Procedures for Carbideâ€Derived Carbonâ€Based Structured Catalyst Supports. Chemical Engineering and Technology, 2014, 37, 453-461.	1.5	7
86	Oxygenâ€Functionalized Boron Nitride for the Oxidative Dehydrogenation of Propane â€“ The Case for Supported Liquid Phase Catalysis. ChemCatChem, 2022, 14, .	3.7	7
87	Adsorption of Nickel Ions on Oxygenâ€Functionalized Carbons. Chemical Engineering and Technology, 2016, 39, 715-722.	1.5	6
88	Heterogeneously Catalyzed Hydrogenation of Supercritical CO₂ to Methanol. Chemical Engineering and Technology, 2017, 40, 1907-1915.	1.5	6
89	Probing CO 2 Reduction Pathways for Copper Catalysis Using an Ionic Liquid as a Chemical Trapping Agent. Angewandte Chemie, 2020, 132, 18251-18258.	2.0	6
90	Avoiding Pitfalls in Comparison of Activity and Selectivity of Solid Catalysts for Electrochemical HMF Oxidation. ChemistryOpen, 2021, 10, 600-606.	1.9	6

#	Article	IF	Citations
91	Activity, Selectivity and Initial Degradation of Iron Molybdate in the Oxidative Dehydrogenation of Ethanol. ChemCatChem, 2022, 14, .	3.7	6
92	Recommendations for the Production of Silicon Carbideâ€derived Carbon Based on Intrinsic Kinetic Data. Chemical Engineering and Technology, 2012, 35, 1495-1503.	1.5	5
93	A Feasible Way to Remove the Heat during Adsorptive Methane Storage. Environmental Science & Technology, 2015, 49, 672-678.	10.0	5
94	Porous graphite as stationary phase for the chromatographic separation of polymer additives - determination of adsorption capability by Raman spectroscopy and physisorption. Journal of Chromatography A, 2020, 1625, 461302.	3.7	5
95	Thermodynamic equilibrium investigation to operational capabilities and process tolerance of plasma gasification for various feedstock. Chemical Engineering Science, 2022, 250, 117401.	3.8	5
96	Oxygen reduction reaction measurements on platinum electrocatalysts in gas diffusion electrode half-cells: Influence of electrode preparation, measurement protocols and common pitfalls. Journal of Power Sources, 2022, 539, 231530.	7.8	5
97	Simulative Approach for Linking Electrode and Electrolyte Properties to Supercapacitor Performance. Chemie-Ingenieur-Technik, 2019, 91, 889-899.	0.8	4
98	Heterogeneously Catalyzed Epimerization of Menthol Stereoisomers - An Instructive Example to Account for Diffusion Limitations in Complex Reaction Networks. Chemical Engineering and Technology, 2008, 31, 1282-1289.	1.5	3
99	Preparation of hollow mesoporous carbon spheres and their performances for electrochemical applications. IOP Conference Series: Materials Science and Engineering, 2018, 316, 012018.	0.6	3
100	Nanoskaliger hybrider amorph/graphitischer Kohlenstoff als SchlÃ¼ssel zur nÃchsten Generation von kohlenstoffbasierten Katalysatoren fÃ¼r oxidative Dehydrierungen. Angewandte Chemie, 2021, 133, 5962-5971.	2.0	3
101	Mechanistic Study on the Selective Oxidation of Acrolein to Acrylic Acid concerning the Role of Water. ChemCatChem, 2020, 12, 3560-3575.	3.7	3
102	The Highâ€Temperature Acidity Paradox of Oxidized Carbon: An inâ€…situ DRIFTS Study. ChemCatChem, 0, , .	3.7	3
103	Trendbericht Technische Chemie. Nachrichten Aus Der Chemie, 2018, 66, 489-495.	0.0	2
104	Investigation of the acrolein oxidation on heteropolyacid catalysts by transient response methods. Catalysis Science and Technology, 2020, 10, 5231-5244.	4.1	2
105	Carbonâ€Methanol Based Adsorption Heat Pumps: Identifying Accessible Parameter Space with Carbideâ€Derived Carbon Model Materials. Chemical Engineering and Technology, 2020, 43, 1876-1883.	1.5	2
106	Editoral special issue CarboCat-VII. Catalysis Today, 2018, 301, 1.	4.4	1
107	Optically monitored catalytic photonic crystal fibre microreactor. , 2013, , .		0
108	Photochemistry on soft-glass hollow-core photonic crystal fibre. , 2014, , .		0

#	Article	IF	Citations
109	InnenrÃ¼cktitelbild: AktivitÃtssteigerung von Sauerstoffreduktionskatalysatoren durch UnterdrÃ¼ckung der Katalysatorvergiftung mittels hydrophober ionischer FlÃ¼ssigkeiten (Angew. Chem.) Tj ETQq1 1 0.784314 rgBT /O	2.0	0
110	Investigation of the Phase Equilibria of CO 2 /CH 3 OH/H 2 O and CO 2 /CH 3 OH/H 2 O/H 2 Mixtures. Chemical Engineering and Technology, 2019, 42, 2386-2392.	1.5	0
111	InnenrÃ¼cktitelbild: Probing CO₂ Reduction Pathways for Copper Catalysis Using an Ionic Liquid as a Chemical Trapping Agent (Angew. Chem. 41/2020). Angewandte Chemie, 2020, 132, 18431-18431.	2.0	0
112	Comparison of the selective oxidation kinetics between acrolein and methacrolein on Mo/V/W-mixed oxides. Catalysis Today, 2021, 363, 85-92.	4.4	0
113	Innentitelbild: Nanoskaliger hybrider amorph/graphitischer Kohlenstoff als SchlÃ¼ssel zur nÃchsten Generation von kohlenstoffbasierten Katalysatoren fÃ¼r oxidative Dehydrierungen (Angew. Chem.) Tj ETQq1 1 0.784314 rgBT /Overloc	2.0	0