Tom Tb Breugelmans

List of Publications by Year
in descending order

89 papers	2,100 citations	236925 25 h-index	289244 40 g-index
92 all docs	92 docs citations	92 times ranked	2460 citing authors

#	Article	IF	Citations
1	Insight in the behavior of bipolar membrane equipped carbon dioxide electrolyzers at low electrolyte flowrates. Chemical Engineering Journal, 2022, 428, 131170.	12.7	21
2	Steering Hydrocarbon Selectivity in CO₂ Electroreduction over Soft-Landed CuO_x Nanoparticle-Functionalized Gas Diffusion Electrodes. ACS Applied Materials & Interfaces, 2022, 14, 2691-2702.	8.0	9
3	A Stateâ€ofâ€theâ€Art Update on Integrated CO₂ Capture and Electrochemical Conversion Systems. ChemElectroChem, 2022, 9, .	3.4	37
4	Electrocatalysis under a magnetic lens: A combined electrochemistry and electron paramagnetic resonance review. Electrochimica Acta, 2022, 407, 139704.	5.2	11
5	The importance of target product engineering for long-term operation of CO2 zero-gap electrolysers. Journal of Environmental Chemical Engineering, 2022, 10, 107836.	6.7	3
6	Use of Nanoscale Carbon Layers on Ag-Based Gas Diffusion Electrodes to Promote CO Production. ACS Applied Nano Materials, 2022, 5, 7723-7732.	5.0	3
7	Engineering Aspects for the Design of a Bicarbonate Zero-Gap Flow Electrolyzer for the Conversion of CO₂ to Formate. ACS Applied Materials & Interfaces, 2022, 14, 30760-30771.	8.0	14
8	Reactive oxygen species formation at Pt nanoparticles revisited by electron paramagnetic resonance and electrochemical analysis. Electrochemistry Communications, 2021, 122, 106878.	4.7	9
9	A simple method to clean ligand contamination on TEM grids. Ultramicroscopy, 2021, 221, 113195.	1.9	12
10	Size-controlled electrodeposition of Cu nanoparticles on gas diffusion electrodes in methanesulfonic acid solution. Journal of Applied Electrochemistry, 2021, 51, 317-330.	2.9	3
11	Two-steps synthesis of D-glucaric acid via D-gluconic acid by electrocatalytic oxidation of D-glucose on gold electrode: Influence of operational parameters. Electrochimica Acta, 2021, 374, 137852.	5.2	25
12	The inhibition of the proton donor ability of bicarbonate promotes the electrochemical conversion of CO2 in bicarbonate solutions. Journal of CO2 Utilization, 2021, 48, 101521.	6.8	26
13	Enhanced CO2 electroreduction with metal-nitrogen-doped carbons in a continuous flow reactor. Journal of CO2 Utilization, 2021, 50, 101583.	6.8	17
14	Mapping Compositionâ€“Selectivity Relationships of Supported Sub-10 nm Cuâ€“Ag Nanocrystals for High-Rate CO₂ Electroreduction. ACS Nano, 2021, 15, 14858-14872.	14.6	28
15	Field application of a novel active-passive sampling technique for the simultaneous measurement of a wide range of contaminants in water. Chemosphere, 2021, 279, 130598.	8.2	7
16	Effects of Benzyl-Functionalized Cationic Surfactants on the Inhibition of the Hydrogen Evolution Reaction in CO₂ Reduction Systems. ACS Applied Materials & Interfaces, 2021, 13, 56205-56216.	8.0	15
17	Electroreduction of CO₂/CO to C₂ Products: Process Modeling, Downstream Separation, System Integration, and Economic Analysis. Industrial & Engineering Chemistry Research, 2021, 60, 17862-17880.	3.7	35
18	Sn-Based Electrocatalyst Stability: A Crucial Piece to the Puzzle for the Electrochemical CO₂ Reduction toward Formic Acid. ACS Energy Letters, 2021, 6, 4317-4327.	17.4	51

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19	Mass transfer and hydrodynamic characterization of structured 3D electrodes for electrochemistry. Chemical Engineering Journal, 2020, 384, 123283.	12.7	27
20	Electrochemical Oxidation of <scp>d</scp>â€Glucose in Alkaline Medium: Impact of Oxidation Potential and Chemical Side Reactions on the Selectivity to <scp>d</scp>â€Gluconic and <scp>d</scp>â€Glucaric Acid. ChemElectroChem, 2020, 7, 86-95.	3.4	57
21	Bifunctional Nickelâ€“Nitrogen-Doped-Carbon-Supported Copper Electrocatalyst for CO₂Reduction. Journal of Physical Chemistry C, 2020, 124, 1369-1381.	3.1	23
22	Nickel-containing N-doped carbon as effective electrocatalysts for the reduction of CO₂ to CO in a continuous-flow electrolyzer. Sustainable Energy and Fuels, 2020, 4, 1296-1311.	4.9	13
23	Electrochemical reduction of halogenated aromatic compounds at metal cathodes in acetonitrile. Electrochimica Acta, 2020, 332, 135484.	5.2	14
24	Ferrite@TiO2-nanocomposites as Z-scheme photocatalysts for CO2 conversion: Insight into the correlation of the Co-Zn metal composition and the catalytic activity. Journal of CO2 Utilization, 2020, 36, 177-186.	6.8	26
25	A Versatile Inâ€Situ Electron Paramagnetic Resonance Spectroâ€electrochemical Approach for Electrocatalyst Research. ChemElectroChem, 2020, 7, 4578-4586.	3.4	12
26	Direct Water Injection in Catholyteâ€Free Zeroâ€Gap Carbon Dioxide Electrolyzers. ChemElectroChem, 2020, 7, 3839-3843.	3.4	51
27	Ligand-Mode Directed Selectivity in Cuâ€“Ag Coreâ€“Shell Based Gas Diffusion Electrodes for CO₂ Electroreduction. ACS Catalysis, 2020, 10, 13468-13478.	11.2	24
28	Integration of a photoelectrochemical cell in a flow system for quantification of 4-aminophenol with titanium dioxide. Electrochemistry Communications, 2020, 117, 106767.	4.7	3
29	Covalent triazine framework/carbon nanotube hybrids enabling selective reduction of CO₂ to CO at low overpotential. Green Chemistry, 2020, 22, 3095-3103.	9.0	16
30	Influence of flow and pressure distribution inside a gas diffusion electrode on the performance of a flow-by CO2 electrolyzer. Chemical Engineering Journal, 2019, 378, 122224.	12.7	90
31	Characterization of the accumulation of metals and organic contaminants on a novel active-passive sampling device under controlled water flow conditions. Chemosphere, 2019, 236, 124400.	8.2	5
32	Recent advances in industrial CO2 electroreduction. Current Opinion in Green and Sustainable Chemistry, 2019, 16, 47-56.	5.9	158
33	Current trends in enzymatic electrosynthesis for CO2 reduction. Current Opinion in Green and Sustainable Chemistry, 2019, 16, 65-70.	5.9	37
34	Electrochemical Reduction of CO₂: Effect of Convective CO₂ Supply in Gas Diffusion Electrodes. ChemElectroChem, 2019, 6, 5596-5602.	3.4	65
35	High-Pressure Electrochemical Reduction of CO₂ to Formic Acid/Formate: Effect of pH on the Downstream Separation Process and Economics. Industrial & Engineering Chemistry Research, 2019, 58, 22718-22740.	3.7	84
36	Performance study of a microfluidic reactor for cogeneration of chemicals and electricity. Chemical Engineering Research and Design, 2019, 142, 336-345.	5.6	2

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37	Indirect 3D Printed Electrode Mixers. ChemElectroChem, 2019, 6, 378-382.	3.4	20
38	Detection of Free Oxygen Reduction Reaction Intermediates Generated at Pt Nanoparticles By Electron Paramagnetic Resonance Spectroscopy. ECS Meeting Abstracts, 2019, , .	0.0	0
39	Cutting the Gordian Knot of electrodeposition via controlled cathodic corrosion enabling the production of supported metal nanoparticles below 5â€¯nm. Applied Catalysis B: Environmental, 2018, 226, 396-402.	20.2	27
40	Identifying intermediates in the reductive intramolecular cyclisation of allyl 2-bromobenzyl ether by an improved electron paramagnetic resonance spectroelectrochemical electrode design combined with density functional theory calculations. Electrochimica Acta, 2018, 271, 10-18.	5.2	10
41	Influence of the Composition and Preparation of the Rotating Disk Electrode on the Performance of Mesoporous Electrocatalysts in the Alkaline Oxygen Reduction Reaction. ChemElectroChem, 2018, 5, 119-128.	3.4	17
42	A continuous in-situ EPR electrochemical reactor as a rapid in-depth mechanistic screening tool for electrocatalysis. Electrochemistry Communications, 2018, 97, 42-45.	4.7	7
43	Stability study of silver nanoparticles towards the halide electroreduction. Electrochimica Acta, 2018, 286, 123-130.	5.2	13
44	A novel active-passive sampling approach for measuring time-averaged concentrations of pollutants in water. Chemosphere, 2018, 209, 363-372.	8.2	22
45	Influence of Growth Mechanism and Potential Cycling on the Active Surface Area of Electrodeposited Highly Porous Pt Nanoparticles. ECS Meeting Abstracts, 2018, , .	0.0	0
46	Design of an Electrocatalytic Flow Reactor for the Electrosynthetic Aldol Reaction of Acetone. ECS Meeting Abstracts, 2018, , .	0.0	0
47	Ordered Three Dimensional Electrodes for Enhanced Mass Transfer. ECS Meeting Abstracts, 2018, , .	0.0	0
48	An activity scale of cathode materials for the electrochemical cyclisation of allyl 2-bromobenzyl ether. Electrochimica Acta, 2017, 234, 28-36.	5.2	4
49	Electrodeposition of Highly Porous Pt Nanoparticles Studied by Quantitative 3D Electron Tomography: Influence of Growth Mechanisms and Potential Cycling on the Active Surface Area. ACS Applied Materials & Interfaces, 2017, 9, 16168-16177.	8.0	27
50	The application of an electrochemical microflow reactor for the electrosynthetic aldol reaction of acetone to diacetone alcohol. Chemical Engineering Research and Design, 2017, 128, 205-213.	5.6	5
51	3Dâ€Printed Electrodes with Improved Mass Transport Properties. ChemElectroChem, 2017, 4, 3309-3313.	3.4	40
52	Increase of electrodeposited catalyst stability via plasma grown vertically oriented graphene nanoparticle movement restriction. Chemical Communications, 2017, 53, 9340-9343.	4.1	13
53	Separation of Co(II)/Ni(II) with Cyanex 272 using a flat membrane microcontactor: Stripping kinetics study, upscaling and continuous operation. Chemical Engineering Research and Design, 2016, 111, 305-315.	5.6	9
54	A new multisine-based impedimetric aptasensing platform. Electrochemistry Communications, 2016, 71, 23-27.	4.7	4

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55	Electrochemical Behavior of Electrodeposited Nanoporous Pt Catalysts for the Oxygen Reduction Reaction. ACS Catalysis, 2016, 6, 5856-5864.	11.2	56
56	Electrochemical characterisation of a microfluidic reactor for cogeneration of chemicals and electricity. Electrochimica Acta, 2016, 210, 337-345.	5.2	9
57	The reduction of benzylbromide at Ag-Ni deposits prepared by galvanic replacement. Electrochimica Acta, 2016, 196, 756-768.	5.2	21
58	Membrane deflection in a flat membrane microcontactor: Experimental study of spacer features. Journal of Membrane Science, 2016, 504, 153-161.	8.2	13
59	Investigation of the electrosynthetic pathway of the aldol condensation of acetone. Chemical Engineering Journal, 2016, 289, 554-561.	12.7	14
60	Separation of Co(II)/Ni(II) with Cyanex 272 using a flat membrane microcontactor: Extraction kinetics study. Journal of Membrane Science, 2016, 499, 370-378.	8.2	10
61	Influence of the support material and the resulting particle distribution on the deposition of Ag nanoparticles for the electrocatalytic activity of benzyl bromide reduction. Applied Catalysis B: Environmental, 2016, 181, 542-549.	20.2	16
62	Chromatography as an inspiration for microreactors. Journal of Chemical Technology and Biotechnology, 2015, 90, 2122-2131.	3.2	5
63	Investigation of the Adsorption Mechanism of Heterocyclic Molecules on Copper using Potentiodynamic ORP-EIS and In-situ Ramans pectroscopy. Electrochimica Acta, 2015, 156, 308-315.	5.2	9
64	Breakthrough in a flat channel membrane microcontactor. Chemical Engineering Research and Design, 2015, 94, 98-104.	5.6	16
65	Multistage counter-current solvent extraction in a flat membrane microcontactor. Chemical Engineering Journal, 2015, 273, 138-146.	12.7	31
66	N-doped ordered mesoporous carbons prepared by a two-step nanocasting strategy as highly active and selective electrocatalysts for the reduction of O2 to H2O2. Applied Catalysis B: Environmental, 2015, 176-177, 212-224.	20.2	117
67	Labelâ€Free Impedance Aptasensor for Major Peanut Allergen Ara h 1. Electroanalysis, 2015, 27, 32-37.	2.9	16
68	Strategies to integrate porous layers in microfluidic devices. Microelectronic Engineering, 2015, 132, 1-13.	2.4	16
69	An Electrochemical Impedimetric Aptasensing Platform for Sensitive and Selective Detection of Small Molecules Such as Chloramphenicol. Sensors, 2014, 14, 12059-12069.	3.8	58
70	Corrosion study on Al-rich metal-coated steel by odd random phase multisine electrochemical impedance spectroscopy. Electrochimica Acta, 2014, 124, 165-175.	5.2	19
71	Surface and electrochemical characterisation of a Pt-Cu/C nano-structured electrocatalyst, prepared by galvanic displacement. Applied Catalysis B: Environmental, 2014, 150-151, 249-256.	20.2	49
72	Pure and Alloyed Copperâ€Based Nanoparticles Supported on Activated Carbon: Synthesis and Electrocatalytic Application in the Reduction of Nitrobenzene. ChemElectroChem, 2014, 1, 1198-1210.	3.4	28

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73	Cu/CuxO and Pt nanoparticles supported on multi-walled carbon nanotubes as electrocatalysts for the reduction of nitrobenzene. Applied Catalysis B: Environmental, 2014, 147, 330-339.	20.2	46
74	The electrocatalytic behaviour of Pt and Cu nanoparticles supported on carbon nanotubes for the nitrobenzene reduction in ethanol. Electrochimica Acta, 2013, 111, 405-410.	5.2	37
75	Dynamic, in situ study of self-assembling organic phosphonic acid monolayers from ethanolic solutions on aluminium oxides by means of odd random phase multisine electrochemical impedance spectroscopy. Electrochimica Acta, 2013, 106, 342-350.	5.2	13
76	A high aspect ratio membrane reactor for liquidâ€“liquid extraction. Journal of Membrane Science, 2013, 436, 154-162.	8.2	23
77	The combination of surface enhanced Raman spectroscopy and an ionic liquid as a model system to study the adhesion interface between sulfur and brass. Journal of Raman Spectroscopy, 2013, 44, 377-381.	2.5	9
78	Measuring the adsorption of ethanol on aluminium oxides using odd random phase multisine electrochemical impedance spectroscopy. Electrochemistry Communications, 2012, 22, 124-127.	4.7	8
79	A membrane microcontactor as a tool for integrated sample preparation. Journal of Separation Science, 2012, 35, 2407-2413.	2.5	3
80	Odd random phase multisine electrochemical impedance spectroscopy to quantify a non-stationary behaviour: Theory and validation by calculating an instantaneous impedance value. Electrochimica Acta, 2012, 76, 375-382.	5.2	47
81	Odd random phase multisine EIS for organic coating analysis. Progress in Organic Coatings, 2010, 69, 215-218.	3.9	42
82	Odd random phase multisine EIS as a detection method for the onset of corrosion of coated steel. Electrochemistry Communications, 2010, 12, 2-5.	4.7	29
83	Modeling of mass and charge transfer in an inverted rotating disk electrode (IRDE) reactor. Journal of Electroanalytical Chemistry, 2008, 622, 44-50.	3.8	24
84	Potentiodynamic EIS investigation of the 2-methyl-5-mercapto-1,3,4-thiadiazole adsorption on copper. Electrochimica Acta, 2008, 53, 7451-7459.	5.2	23
85	Extraction of a quantitative reaction mechanism from linear sweep voltammograms obtained on a rotating disk electrode. Part II: Application to the redoxcouple. Journal of Electroanalytical Chemistry, 2007, 609, 1-7.	3.8	13
86	Ã‰tude de la formation de couches organiques auto assemblÃ©es Ã l'aide de la spectroscopie d'impÃ©dance Ã©lectrochimique "odd random phase multisine". Materiaux Et Techniques, 2007, 95, 411-415.	0.9	1
87	Extraction of a quantitative reaction mechanism from linear sweep voltammograms obtained on a rotating disk electrode. WIT Transactions on Engineering Sciences, 2007, , .	0.0	2
88	IRDE and RDE electrochemical cells evaluation: comparison of electron and mass transfer. WIT Transactions on Engineering Sciences, 2007, , .	0.0	3
89	Improvement of the impedance measurement reliability by some new experimental and data treatment procedures applied to the behavior of copper in neutral chloride solutions containing small heterocycle molecules. Electrochimica Acta, 2006, 51, 1403-1412.	5.2	19