

Michaela Wilhelm

List of Publications by Year in descending order

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72
papers

1,763
citations

257357

24
h-index

315616

38
g-index

74
all docs

74
docs citations

74
times ranked

1983
citing authors

#	ARTICLE	IF	CITATIONS
1	Protein adsorption on colloidal alumina particles functionalized with amino, carboxyl, sulfonate and phosphate groups. <i>Acta Biomaterialia</i> , 2012, 8, 1221-1229.	4.1	104
2	Nanostructured Praseodymium Oxide: Preparation, Structure, and Catalytic Properties. <i>Journal of Physical Chemistry C</i> , 2008, 112, 3054-3063.	1.5	95
3	Silicon carbide filters and porous membranes: A review of processing, properties, performance and application. <i>Journal of Membrane Science</i> , 2020, 610, 118193.	4.1	87
4	The use of design of experiments for the evaluation of the production of surface rich activated carbon from sewage sludge via microwave and conventional pyrolysis. <i>Applied Thermal Engineering</i> , 2016, 93, 590-597.	3.0	83
5	Preparation of novel adsorbents based on combinations of polysiloxanes and sewage sludge to remove pharmaceuticals from aqueous solutions. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2016, 497, 304-315.	2.3	73
6	Fabrication, microstructure, and properties of fired clay bricks using construction and demolition waste sludge as the main additive. <i>Journal of Cleaner Production</i> , 2020, 258, 120733.	4.6	64
7	Ceramics functional materials for adsorption techniques. <i>Journal of the European Ceramic Society</i> , 2005, 25, 271-276.	2.8	61
8	Hierarchically ordered micro/meso/macroporous polymer-derived ceramic monoliths fabricated by freeze-casting. <i>Journal of the European Ceramic Society</i> , 2016, 36, 51-58.	2.8	57
9	New proton conducting hybrid membranes for HT-PEMFC systems based on polysiloxanes and SO ₃ H-functionalized mesoporous Si-MCM-41 particles. <i>Journal of Membrane Science</i> , 2008, 316, 164-175.	4.1	53
10	Synthesis and Properties of Porous Hybrid Materials containing Metallic Nanoparticles. <i>Advanced Engineering Materials</i> , 2008, 10, 241-245.	1.6	48
11	Activated carbon from sewage sludge for removal of sodium diclofenac and nimesulide from aqueous solutions. <i>Korean Journal of Chemical Engineering</i> , 2016, 33, 3149-3161.	1.2	48
12	Development of a Novel Zinc/Air Fuel Cell with a Zn Foam Anode, a PVA/KOH Membrane and a MnO ₂ /SiOC-Based Air Cathode. <i>ECS Transactions</i> , 2010, 28, 13-24.	0.3	42
13	The First Structurally Authenticated Organomercury(1+) Thioether Complexes Mercury-Carbon Bond Activation Related to the Mechanism of the Bacterial Enzyme Organomercurial Lyase. <i>European Journal of Inorganic Chemistry</i> , 2004, 2004, 2301-2312.	1.0	41
14	Pyrolyzed polysiloxane membranes with tailorable hydrophobicity, porosity and high specific surface area. <i>Microporous and Mesoporous Materials</i> , 2013, 169, 160-167.	2.2	38
15	The influence of carbon nanotubes and graphene oxide sheets on the morphology, porosity, surface characteristics and thermal and electrical properties of polysiloxane derived ceramics. <i>RSC Advances</i> , 2017, 7, 37559-37567.	1.7	38
16	Porous polymer derived ceramic (PDC)-montmorillonite-H ₃ PMo ₁₂ O ₄₀ /SiO ₂ composite membranes for microbial fuel cell (MFC) application. <i>Ceramics International</i> , 2018, 44, 19191-19199.	2.3	35
17	Hierarchically ordered foams derived from polysiloxanes with catalytically active coatings. <i>Journal of the European Ceramic Society</i> , 2014, 34, 1715-1725.	2.8	34
18	SiOC-based polymer derived-ceramic porous anodes for microbial fuel cells. <i>Biochemical Engineering Journal</i> , 2019, 148, 29-36.	1.8	33

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19	Polymer-derived Co/Ni@SiOC(N) ceramic electrocatalysts for oxygen reduction reaction in fuel cells. <i>Catalysis Science and Technology</i> , 2019, 9, 854-866.	2.1	30
20	Polysiloxane derived hybrid ceramics with nanodispersed Pt. <i>Microporous and Mesoporous Materials</i> , 2012, 151, 195-200.	2.2	29
21	Detailed Simulation and Characterization of Highly Proton Conducting Sulfonic Acid Functionalized Mesoporous Materials under Dry and Humidified Conditions. <i>Journal of Physical Chemistry C</i> , 2009, 113, 19218-19227.	1.5	28
22	Microbial fuel cell performance of graphitic carbon functionalized porous polysiloxane based ceramic membranes. <i>Bioelectrochemistry</i> , 2019, 129, 259-269.	2.4	27
23	Colloidal Nanoparticles Embedded in Ceramers: Toward Structurally Designed Catalysts. <i>Journal of Physical Chemistry C</i> , 2010, 114, 14224-14232.	1.5	26
24	Tailoring amine functionalized hybrid ceramics to control CO ₂ adsorption. <i>Chemical Engineering Journal</i> , 2014, 235, 198-206.	6.6	26
25	Polysiloxane-Derived Ceramics Containing Nanowires with Catalytically Active Tips. <i>Journal of the American Ceramic Society</i> , 2014, 97, 959-966.	1.9	24
26	Tailoring surfaces of hybrid ceramics for gas adsorption – From alkanes to CO ₂ . <i>Separation and Purification Technology</i> , 2014, 129, 80-89.	3.9	24
27	Proton Conducting Membranes for the High Temperature-Polymer Electrolyte Membrane-Fuel Cell (HT-PEMFC) Based on Functionalized Polysiloxanes. <i>Fuel Cells</i> , 2007, 7, 40-46.	1.5	21
28	Detection of Homogeneous Distribution of Functional Groups in Mesoporous Silica by Small Angle Neutron Scattering and in Situ Adsorption of Nitrogen or Water. <i>Langmuir</i> , 2011, 27, 5516-5522.	1.6	21
29	Modified solution based freeze casting process of polysiloxanes to adjust pore morphology and surface functions of SiOC monoliths. <i>Materials and Design</i> , 2018, 160, 1295-1304.	3.3	21
30	Intracellular Degradation of Diorganomercury Compounds by Biological Thiols – Insights from Model Reactions. <i>Angewandte Chemie - International Edition</i> , 2000, 39, 784-786.	7.2	20
31	Water-based freeze casting: Adjusting hydrophobic polymethylsiloxane for obtaining hierarchically ordered porous SiOC. <i>Journal of the American Ceramic Society</i> , 2017, 100, 1907-1918.	1.9	20
32	Macro/mesoporous SiOC ceramics of anisotropic structure for cryogenic engineering. <i>Materials and Design</i> , 2017, 134, 207-217.	3.3	20
33	Nickel-containing hybrid ceramics derived from polysiloxanes with hierarchical porosity for CO ₂ methanation. <i>Microporous and Mesoporous Materials</i> , 2019, 278, 156-166.	2.2	19
34	Adapted MR velocimetry of slow liquid flow in porous media. <i>Journal of Magnetic Resonance</i> , 2017, 276, 103-112.	1.2	18
35	Metal-Containing Ceramic Composite with in Situ Grown Carbon Nanotube as a Cathode Catalyst for Anion Exchange Membrane Fuel Cell and Rechargeable Zinc-Air Battery. <i>ACS Applied Energy Materials</i> , 2019, 2, 6078-6086.	2.5	18
36	Tailoring hydrophilic and porous nature of polysiloxane derived ceramer and ceramic membranes for enhanced bioelectricity generation in microbial fuel cell. <i>Ionics</i> , 2019, 25, 5907-5918.	1.2	18

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37	Colloid deposition in monolithic porous media – Experimental investigations using X-ray computed microtomography and magnetic resonance velocimetry. <i>Chemical Engineering Science</i> , 2018, 175, 257-266.	1.9	17
38	Tailoring asymmetric Al ₂ O ₃ membranes by combining tape casting and phase inversion. <i>Journal of Membrane Science</i> , 2021, 623, 119056.	4.1	17
39	Controlled hierarchical porosity of hybrid ceramics by leaching water soluble templates and pyrolysis. <i>Journal of the European Ceramic Society</i> , 2014, 34, 1501-1509.	2.8	16
40	Tape casting of polysiloxane-derived ceramic with controlled porosity and surface properties. <i>Journal of the European Ceramic Society</i> , 2018, 38, 4899-4905.	2.8	16
41	Porous SiOC monoliths with catalytic activity by in situ formation of Ni nanoparticles in solution-based freeze casting. <i>Journal of the American Ceramic Society</i> , 2020, 103, 2991-3001.	1.9	16
42	Polysiloxane microspheres encapsulated in carbon allotropes: A promising material for supercapacitor and carbon dioxide capture. <i>Journal of Colloid and Interface Science</i> , 2019, 542, 91-101.	5.0	15
43	The Influence of the Pyrolysis Temperature on the Material Properties of Cobalt and Nickel Containing Precursor Derived Ceramics and their Catalytic Use for CO ₂ Methanation and Fischer-Tropsch Synthesis. <i>Catalysis Letters</i> , 2017, 147, 472-482.	1.4	14
44	Generation of Pt- and Pt/Zn-containing ceramers and their structuring as macro/microporous foams. <i>Chemical Engineering Journal</i> , 2014, 247, 205-215.	6.6	13
45	Premix membrane emulsification using flat microfiltration inorganic membranes with tailored structure and composition. <i>Journal of Membrane Science</i> , 2020, 608, 118124.	4.1	13
46	Novel tape-cast SiOC-based porous ceramic electrode materials for potential application in bioelectrochemical systems. <i>Journal of Materials Science</i> , 2019, 54, 6471-6487.	1.7	12
47	Asymmetric mullite membranes manufactured by phase-inversion tape casting from polymethylsiloxane and aluminum diacetate. <i>Journal of Membrane Science</i> , 2019, 581, 421-429.	4.1	12
48	Photocatalytic microfiltration membranes produced by magnetron sputtering with self-cleaning capabilities. <i>Thin Solid Films</i> , 2022, 747, 139143.	0.8	11
49	Coordination chemistry of lipoic acid and related compounds.. <i>New Journal of Chemistry</i> , 2002, 26, 560-566.	1.4	10
50	Surfactant assisted syntheses of monolithic hybrid ceramics with hierarchical porosity. <i>Journal of the European Ceramic Society</i> , 2015, 35, 2963-2972.	2.8	10
51	Hierarchical emulsion based hybrid ceramics synthesized with different siloxane precursor and with embedded nickel nanoparticles. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2016, 492, 160-169.	2.3	10
52	Metal Silicide Nanosphere Decorated Carbon-Rich Polymer-Derived Ceramics: Bifunctional Electrocatalysts towards Oxygen and their Application in Anion Exchange Membrane Fuel Cells. <i>ChemElectroChem</i> , 2019, 6, 3268-3278.	1.7	10
53	Characterization of functionalized zirconia membranes manufactured by aqueous tape casting. <i>Ceramics International</i> , 2020, 46, 16096-16103.	2.3	10
54	A new silicon oxycarbide based gas diffusion layer for zinc-air batteries. <i>Journal of Colloid and Interface Science</i> , 2020, 577, 494-502.	5.0	10

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55	Asymmetric polysiloxane-based SiOC membranes produced via phase inversion tape casting process. <i>Materials and Design</i> , 2021, 198, 109328.	3.3	9
56	High surface area SiC(O)-based ceramic by pyrolysis of poly (ethylene glycol) methacrylate-modified polycarbosilane. <i>Journal of the American Ceramic Society</i> , 2019, 102, 7187-7197.	1.9	8
57	One-dimensional polymer-derived ceramic nanowires with electrocatalytically active metallic silicide tips as cathode catalysts for Zn-air batteries. <i>RSC Advances</i> , 2021, 11, 39707-39717.	1.7	8
58	Phenylmercury Chloride: Its Single-Crystal X-Ray Structure and Some Aspects of its Biological Chemistry. <i>Zeitschrift Fur Naturforschung - Section B Journal of Chemical Sciences</i> , 2000, 55, 35-38.	0.3	7
59	Solution based freeze cast polymer derived ceramics for isothermal wicking - relationship between pore structure and imbibition. <i>Science and Technology of Advanced Materials</i> , 2019, 20, 1207-1221.	2.8	7
60	Impact of a tert-butyl alcohol-cyclohexane system used in unidirectional freeze-casting of SiOC on compressive strength and mass transport. <i>Materials and Design</i> , 2021, 212, 110186.	3.3	7
61	Coordination Chemistry of Lipoic Acid and Related Compounds V [1]. New Heteroditopic Ligands Derived from Monoazacrown Ethers and Lipoic Acid. <i>Monatshefte Für Chemie</i> , 2002, 133, 1097-1108.	0.9	6
62	Unidirectional solution-based freeze cast polymer-derived ceramics: influence of freezing conditions and templating solvent on capillary transport in isothermal wicking. <i>Journal of Materials Science</i> , 2020, 55, 4157-4169.	1.7	5
63	Porous asymmetric microfiltration membranes shaped by combined alumina freeze and tape casting. <i>Journal of the European Ceramic Society</i> , 2021, 41, 871-879.	2.8	5
64	Influence of the Pyrolysis Temperature and TiO ₂ -Incorporation on the Properties of SiOC/SiC Composites for Efficient Wastewater Treatment Applications. <i>Membranes</i> , 2022, 12, 175.	1.4	5
65	Synthesis of Porous Ni/SiC(O)-Based Nanocomposites: Effect of Nickel Acetylacetonate and Poly(Ethylene Glycol) Methacrylate Modification on Specific Surface Area and Porosity. <i>Advanced Engineering Materials</i> , 2020, 22, 1901036.	1.6	4
66	Image data analysis of high resolution ³¹ P NMR data for the characterization of pore orientation and pore space interconnectivity in freeze cast ceramics. <i>Materials Characterization</i> , 2021, 174, 110966.	1.9	4
67	Functionalized mesoporous materials used as proton conductive additives for high temperature PEM fuel cell membranes. <i>Studies in Surface Science and Catalysis</i> , 2007, 170, 1540-1545.	1.5	3
68	Polysiloxane Based Membranes for High Temperature Polymer Electrolyte Membrane Fuel Cells (HT-PEMFC). <i>ECS Transactions</i> , 2009, 25, 1669-1675.	0.3	3
69	Surface Functionalization of Mesoporous Membranes: Impact on Pore Structure and Gas Flow Mechanisms. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 39388-39396.	4.0	2
70	Continuous Multistep Encapsulation Process for the Generation of Multiple Emulsions. <i>Chemical Engineering and Technology</i> , 2021, 44, 15-22.	0.9	2
71	Impact of Surface Properties of Porous SiOC-Based Materials on the Performance of <i>Geobacter</i> Biofilm Anodes. <i>ChemElectroChem</i> , 2021, 8, 850-857.	1.7	2
72	Effect of MgO on the microstructure and properties of mullite membranes made by phase-inversion tape casting. <i>Journal of Asian Ceramic Societies</i> , 0, , 1-11.	1.0	0