

# Matthias Heuchel

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/4244005/publications.pdf>

Version: 2024-02-01

64  
papers

2,452  
citations

218592

26  
h-index

197736

49  
g-index

65  
all docs

65  
docs citations

65  
times ranked

2480  
citing authors

#	ARTICLE	IF	CITATIONS
1	Thin-layer studies on surface functionalization of polyetherimide: Hydrolysis versus amidation. <i>Journal of Materials Research</i> , 2022, 37, 67-76.	1.2	1
2	Design and fabrication of fiber mesh actuators. <i>Applied Materials Today</i> , 2022, 29, 101562.	2.3	1
3	Anisotropy Effects in the Shape-Memory Performance of Polymer Foams. <i>Macromolecular Materials and Engineering</i> , 2021, 306, 2000730.	1.7	4
4	Fiber diameter as design parameter for tailoring the macroscopic shape-memory performance of electrospun meshes. <i>Materials and Design</i> , 2021, 202, 109546.	3.3	12
5	Hydrolytic stability of polyetherimide investigated in ultrathin films. <i>Journal of Materials Research</i> , 2021, 36, 2987-2994.	1.2	1
6	Non-woven shape-memory polymer blend actuators. <i>MRS Advances</i> , 2021, 6, 781-785.	0.5	3
7	Matching Magnetic Heating and Thermal Actuation for Sequential Coupling in Hybrid Composites by Design. <i>Macromolecular Rapid Communications</i> , 2020, 41, 1900440.	2.0	4
8	Surface hydrophilization of highly porous poly(ether imide) microparticles by covalent attachment of poly(vinyl pyrrolidone). <i>Polymer</i> , 2020, 210, 123045.	1.8	2
9	Effects of extracts prepared from modified porous poly(ether imide) microparticulate absorbers on cytotoxicity, macrophage differentiation and proinflammatory behavior of human monocytic (THP-1) cells. <i>Clinical Hemorheology and Microcirculation</i> , 2018, 69, 175-185.	0.9	1
10	Surface immobilization strategies for tyrosinase as biocatalyst applicable to polymer network synthesis. <i>MRS Advances</i> , 2018, 3, 3875-3881.	0.5	1
11	Reprogrammable, magnetically controlled polymeric nanocomposite actuators. <i>Materials Horizons</i> , 2018, 5, 861-867.	6.4	46
12	Morphological analysis of differently sized highly porous poly(ether imide) microparticles by mercury porosimetry. <i>Polymers for Advanced Technologies</i> , 2017, 28, 1269-1277.	1.6	3
13	Integrin $\alpha$ 2 $\beta$ 1 activation by micro-scale curvature promotes pro-angiogenic secretion of human mesenchymal stem cells. <i>Journal of Materials Chemistry B</i> , 2017, 5, 7415-7425.	2.9	13
14	Water-Blown Polyurethane Foams Showing a Reversible Shape-Memory Effect. <i>Polymers</i> , 2016, 8, 412.	2.0	21
15	Thermomechanical Characterization of a Series of Crosslinked Poly[ethylene-co-(vinyl acetate)] (PEVA) Copolymers. <i>Materials Research Society Symposia Proceedings</i> , 2015, 1718, 123-130.	0.1	2
16	Integrated process for preparing porous, surface functionalized polyetherimide microparticles. <i>Polymers for Advanced Technologies</i> , 2015, 26, 1447-1455.	1.6	11
17	Modeling of stress relaxation of a semi-crystalline multiblock copolymer and its deformation behavior. <i>Clinical Hemorheology and Microcirculation</i> , 2015, 60, 109-120.	0.9	4
18	Atomistic Simulation of the Shape-Memory Effect in Dry and Water Swollen Poly[( <i>rac</i> -lactide)- <i>co</i> -glycolide] and Copolyester Urethanes Thereof. <i>Macromolecular Chemistry and Physics</i> , 2014, 215, 65-75.	1.1	13

#	ARTICLE	IF	CITATIONS
19	Influence of expansion cooling regime on morphology of poly( $\epsilon$ -caprolactone) foams prepared by pressure quenching using supercritical CO <sub>2</sub> . <i>Polymers for Advanced Technologies</i> , 2014, 25, 1349-1355.	1.6	4
20	Thermally induced shape-memory effects in polymers: Quantification and related modeling approaches. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2013, 51, 621-637.	2.4	48
21	Gas sorption isotherms in swelling glassy polymers—Detailed atomistic simulations. <i>Journal of Membrane Science</i> , 2013, 428, 523-532.	4.1	68
22	Quantifying the Shape-Memory Effect of Polymers by Cyclic Thermomechanical Tests. <i>Polymer Reviews</i> , 2013, 53, 6-40.	5.3	76
23	Simulating the Shape-Memory Behavior of Amorphous Switching Domains of Poly(L-lactide) by Molecular Dynamics. <i>Macromolecular Chemistry and Physics</i> , 2013, 214, 1273-1283.	1.1	26
24	Simulation of Volumetric Swelling of Degradable Poly[(Rac-Lactide)-Co-Glycolide] Based Polyesterurethanes Containing Different Urethane-Linkers. <i>Journal of Applied Biomaterials and Functional Materials</i> , 2012, 10, 293-301.	0.7	6
25	Influence of Different Heating Regimes on the Shape-Recovery Behavior of Poly(L-Lactide) in Simulated Thermomechanical Tests. <i>Journal of Applied Biomaterials and Functional Materials</i> , 2012, 10, 259-264.	0.7	8
26	Influence of a Polyester Coating of Magnetic Nanoparticles on Magnetic Heating Behavior of Shape-Memory Polymer-Based Composites. <i>Journal of Applied Biomaterials and Functional Materials</i> , 2012, 10, 203-209.	0.7	4
27	Formation and size distribution of pores in poly( $\epsilon$ -caprolactone) foams prepared by pressure quenching using supercritical CO <sub>2</sub> . <i>Journal of Supercritical Fluids</i> , 2012, 61, 175-190.	1.6	57
28	In Vitro Evaluation of Elastic Multiblock Co-polymers as a Scaffold Material for Reconstruction of Blood Vessels. <i>Journal of Biomaterials Science, Polymer Edition</i> , 2011, 22, 2205-2226.	1.9	10
29	Mechanically active scaffolds from radioopaque shape-memory polymer-based composites. <i>Polymers for Advanced Technologies</i> , 2011, 22, 180-189.	1.6	62
30	Shape-Memory Nanocomposites with Magnetically Adjustable Apparent Switching Temperatures. <i>Advanced Materials</i> , 2011, 23, 4157-4162.	11.1	67
31	Relaxation based modeling of tunable shape recovery kinetics observed under isothermal conditions for amorphous shape-memory polymers. <i>Polymer</i> , 2010, 51, 6212-6218.	1.8	64
32	Intermolecular Interactions: New Way to Govern Transport Properties of Membrane Materials. <i>Industrial &amp; Engineering Chemistry Research</i> , 2010, 49, 12031-12037.	1.8	46
33	The role of dipole-dipole interactions in the formation of the structure of amorphous Teflon AF2400 and complexation of acetone with perfluorodioxolane rings. <i>Russian Chemical Bulletin</i> , 2009, 58, 1663-1668.	0.4	5
34	Characterization Methods for Shape-Memory Polymers. <i>Advances in Polymer Science</i> , 2009, , 97-145.	0.4	87
35	Comparative Study of Different Probing Techniques for the Analysis of the Free Volume Distribution in Amorphous Glassy Perfluoropolymers. <i>Macromolecules</i> , 2009, 42, 7589-7604.	2.2	78
36	Characterization Methods for Shape-Memory Polymers. <i>Advances in Polymer Science</i> , 2009, , 97-145.	0.4	14

#	ARTICLE	IF	CITATIONS
37	Atomistic packing model and free volume distribution of a polymer with intrinsic microporosity (PIM-1). <i>Journal of Membrane Science</i> , 2008, 318, 84-99.	4.1	227
38	Determination of solvent/polymer interaction parameters of moderately concentrated polymer solutions by vapor pressure osmometry. <i>Polymer</i> , 2008, 49, 2587-2594.	1.8	26
39	Simulation of experimentally observed dilation phenomena during integral gas sorption in glassy polymers. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2008, 46, 59-71.	2.4	28
40	Knowledge-based Approach to Gas Sorption in Glassy Polymers by Combining Experimental and Molecular Simulation Techniques. <i>Materials Research Society Symposia Proceedings</i> , 2008, 1130, 61001.	0.1	0
41	A generalized direct-particle-deletion scheme for the calculation of chemical potential and solubilities of small- and medium-sized molecules in amorphous polymers. <i>Journal of Computational Chemistry</i> , 2007, 28, 877-889.	1.5	13
42	A lattice-fluid model for the determination of the water/polymer interaction parameter from water uptake measurements. <i>Journal of Membrane Science</i> , 2007, 292, 80-91.	4.1	16
43	CO <sub>2</sub> Sorption Induced Dilation in Polysulfone: A Comparative Analysis of Experimental and Molecular Modeling Results. <i>Macromolecules</i> , 2006, 39, 9590-9604.	2.2	50
44	Atomistic packing models for experimentally investigated swelling states induced by CO <sub>2</sub> in glassy polysulfone and poly(ether sulfone). <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2006, 44, 1874-1897.	2.4	40
45	Atomistic packing models for experimentally investigated swelling states induced by CO <sub>2</sub> in glassy polymers. <i>Desalination</i> , 2006, 199, 443-444.	4.0	3
46	Atomistic modelling and simulation of membrane phenomena. <i>Desalination</i> , 2006, 199, 9-11.	4.0	0
47	Gas-induced structural changes in polymeric membrane materials combining experiment, phenomenological models and simulation. <i>Desalination</i> , 2006, 200, 166-168.	4.0	0
48	Determination of water/polymer interaction parameter for membrane-forming systems by sorption measurement and a fitting technique. <i>Journal of Membrane Science</i> , 2005, 265, 1-12.	4.1	47
49	Free Volume in Polyimides: A Positron Annihilation Experiments and Molecular Modeling. <i>Macromolecules</i> , 2005, 38, 9638-9643.	2.2	82
50	Molecular Modeling of Small-Molecule Permeation in Polyimides and Its Correlation to Free-Volume Distributions. <i>Macromolecules</i> , 2004, 37, 201-214.	2.2	148
51	Molecular Modeling Investigation of Free Volume Distributions in Stiff Chain Polymers with Conventional and Ultrahigh Free Volume: A Comparison between Molecular Modeling and Positron Lifetime Studies. <i>Macromolecules</i> , 2003, 36, 8528-8538.	2.2	197
52	Molecular Modeling of Free Volume Distributions of Amorphous Membrane Polymers. <i>Materials Research Society Symposia Proceedings</i> , 2002, 752, 1.	0.1	0
53	Fibrinogen adsorption and platelet interactions on polymer membranes. <i>Journal of Biomaterials Science, Polymer Edition</i> , 2002, 13, 1033-1050.	1.9	48
54	Free Volume Distributions in Ultrahigh and Lower Free Volume Polymers: A Comparison between Molecular Modeling and Positron Lifetime Studies. <i>Macromolecules</i> , 2002, 35, 2129-2140.	2.2	230

#	ARTICLE	IF	CITATIONS
55	Characterization of Acidic OH Groups in Zeolites of Different Types: An Interpretation of NH <sub>3</sub> -TPD Results in the Light of Confinement Effects. <i>Journal of Physical Chemistry B</i> , 2002, 106, 3882-3889.	1.2	89
56	Molecular modelling of polyimide membranes for gas separation. <i>Desalination</i> , 2002, 144, 67-72.	4.0	70
57	Adsorption of Methanol on ZSM-5 Zeolites. <i>Langmuir</i> , 1997, 13, 6249-6254.	1.6	60
58	Adsorption of CH <sub>4</sub> /CF <sub>4</sub> Mixtures in Silicalite: Simulation, Experiment, and Theory. <i>Langmuir</i> , 1997, 13, 6795-6804.	1.6	136
59	Adsorption equilibria of methane and tetrafluoromethane and their binary mixtures on silicalite. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1997, 93, 1621-1628.	1.7	24
60	Type III isotherms for the adsorption of ethanol/water mixtures on solid adsorbents. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1995, 91, 535-538.	1.7	2
61	Adsorbed phase composition in liquid-phase adsorption of organic compounds from aqueous solutions on hydrophobic zeolites. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1995, 91, 971-974.	1.7	9
62	Liquid-phase adsorption of ethanol/water mixtures on NaZSM-5 zeolite with inorganic and organic binders. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1991, 87, 1283-1286.	1.7	2
63	Liquid-phase adsorption of binary ethanol/water mixtures on high-silica adsorbents. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1991, 87, 1279-1282.	1.7	11
64	Liquid-phase adsorption of binary ethanol/water mixtures on NaZSM-5 zeolites with different silicon/aluminium ratios. <i>Journal of the Chemical Society Faraday Transactions I</i> , 1989, 85, 4277.	1.0	19