Martin MÃ¼ller

List of Publications by Year
in descending order

42 papers	1,962 citations	304743 22 h-index	302126 39 g-index
43 all docs	43 docs citations	43 times ranked	2440 citing authors

#	Article	IF	Citations
1	Bioinspired Adhesion: Multiple Mechanical Gradients are Responsible for the Strong Adhesion of Spider Attachment Hair (Adv. Mater. 37/2020). Advanced Materials, 2020, 32, 2070280.	21.0	0
2	Highâ€Temperature Stable Zirconia Particles Doped with Yttrium, Lanthanum, and Gadolinium. Particle and Particle Systems Characterization, 2016, 33, 645-655.	2.3	18
3	Determination of the packing fraction in photonic glass using synchrotron radiation nanotomography. Journal of Synchrotron Radiation, 2016, 23, 1440-1446.	2.4	9
4	Phase Transformations During Solidification of a Laser-Beam-Welded TiAl Alloyâ€"An In Situ Synchrotron Study. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 5761-5770.	2.2	6
5	Strain-dependent fractional molecular diffusion in humid spider silk fibres. Journal of the Royal Society Interface, 2016, 13, 20160506.	3.4	6
6	Phase Transformation and Residual Stress in a Laser Beam Spot-Welded TiAl-Based Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 5750-5760.	2.2	8
7	Nanostructured MWCNT/Polypyrrole Actuators with Anisotropic Strain Response. Advanced Engineering Materials, 2016, 18, 597-607.	3.5	11
8	Large-scale parallel alignment of platelet-shaped particles through gravitational sedimentation. Scientific Reports, 2015, 5, 9984.	3.3	40
9	On radiation damage in FIB-prepared softwood samples measured by scanning X-ray diffraction. Journal of Synchrotron Radiation, 2015, 22, 267-272.	2.4	6
10	In situ study of phase transformations during laser-beam welding of a TiAl alloy for grain refinement and mechanical property optimization. Intermetallics, 2015, 62, 27-35.	3.9	26
11	Fractional dynamics in silk: From molecular picosecond subdiffusion to macroscopic long-time relaxation. Physical Review E, 2015, 91, 042716.	2.1	5
12	Synthesis and thermal stability of zirconia and yttria-stabilized zirconia microspheres. Journal of Colloid and Interface Science, 2015, 448, 582-592.	9.4	70
13	Micro- and Nanodiffraction. , 2015, , 55-87.		1
14	P05 imaging beamline at PETRA III: first results. Proceedings of SPIE, 2014, , .	0.8	33
15	Determination of Silkworm Silk Fibroin Compressibility Using High Hydrostatic Pressure with in Situ X-ray Microdiffraction. Macromolecules, 2014, 47, 7187-7193.	4.8	8
16	Orientation Distribution of Vertically Aligned Multiwalled Carbon Nanotubes. Journal of Physical Chemistry C, 2014, 118, 9507-9513.	3.1	29
17	Structure changes in Nephila dragline: The influence of pressure. Polymer, 2012, 53, 5507-5512.	3.8	12
18	Wood and Silk: Hierarchically Structured Biomaterials Investigated In Situ With Xâ€Ray and Neutron Scattering. Advanced Engineering Materials, 2011, 13, 767-772.	3.5	8

#	Article	IF	Citations
19	Increased molecular mobility in humid silk fibers under tensile stress. Physical Review E, 2011, 83, 016104.	2.1	19
20	Analytical description of the scattering of cellulose nanocrystals in tracheid wood cells. Journal of Applied Crystallography, 2010, 43, 256-263.	4.5	9
21	X-ray microdiffraction reveals the orientation of cellulose microfibrils and the size of cellulose crystallites in single Norway spruce tracheids. Trees - Structure and Function, 2008, 22, 49-61.	1.9	35
22	Anisotropic Elastic Properties of Cellulose Measured Using Inelastic X-ray Scattering. Macromolecules, 2008, 41, 9755-9759.	4.8	207
23	Synchrotron Radiation X-Ray Scattering Techniques for Studying the Micro- and Nanostructure of Wood and their Relation to the Mechanical Properties. Materials Science Forum, 2008, 599, 107-125.	0.3	4
24	Mechanical Properties of Silk: Interplay of Deformation on Macroscopic and Molecular Length Scales. Physical Review Letters, 2008, 100, 048104.	7.8	86
25	Silkworm Silk under Tensile Strain Investigated by Synchrotron X-ray Diffraction and Neutron Spectroscopy. Macromolecules, 2007, 40, 1035-1042.	4.8	44
26	Skin-core structure and bimodal Weibull distribution of the strength of carbon fibers. Carbon, 2007, 45, 2801-2805.	10.3	60
27	The effect of axial strain on crystalline cellulose in Norway spruce. Wood Science and Technology, 2007, 41, 565-583.	3.2	51
28	Direct investigation of the structural properties of tension wood cellulose microfibrils using microbeam X-ray fibre diffraction. Holzforschung, 2006, 60, 474-479.	1.9	74
29	Negative Poisson Ratio of Crystalline Cellulose in Kraft Cooked Norway Spruce. Biomacromolecules, 2006, 7, 1521-1528.	5.4	45
30	Structural studies of single wood cell walls by synchrotron X-ray microdiffraction and polarised light microscopy. Nuclear Instruments & Methods in Physics Research B, 2005, 238, 16-20.	1.4	21
31	Mechanical properties of cellulose fibres and wood. Orientational aspectsin situinvestigated with synchrotron radiation. Journal of Synchrotron Radiation, 2005, 12, 739-744.	2.4	49
32	Structure and mechanical properties of carbon fibres: a review of recent microbeam diffraction studies with synchrotron radiation. Journal of Synchrotron Radiation, 2005, 12, 758-764.	2.4	19
33	Identification of ancient textile fibres from Khirbet Qumran caves using synchrotron radiation microbeam diffraction. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2004, 59, 1669-1674.	2.9	26
34	Elastic moduli of nanocrystallites in carbon fibers measured by in-situ X-ray microbeam diffraction. Carbon, 2003, 41, 563-570.	10.3	72
35	Cell-wall recovery after irreversible deformation of wood. Nature Materials, 2003, 2, 810-813.	27.5	427
36	In Vitro Versus in VivoCellulose Microfibrils from Plant Primary Wall Synthases: Structural Differences. Journal of Biological Chemistry, 2002, 277, 36931-36939.	3.4	141

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37	X-ray Microbeam and Electron Diffraction Experiments on Developing Xylem Cell Walls. Biomacromolecules, 2002, 3, 182-186.	5.4	33
38	Cross-sectional texture of carbon fibres analysed by scanning microbeam X-ray diffraction. Journal of Applied Crystallography, 2001, 34, 473-479.	4.5	23
39	All Disordered Regions of Native Cellulose Show Common Low-Frequency Dynamics. Macromolecules, 2000, 33, 1834-1840.	4.8	61
40	Intracrystalline Deuteration of Native Cellulose. Macromolecules, 1999, 32, 2078-2081.	4.8	70
41	In Situ X-ray Diffraction during Forced Silking of Spider Silk. Macromolecules, 1999, 32, 4464-4466.	4.8	90
42	<i>In Situ</i> Experiment for Laser Beam Welding of Ti Alloys Using High-Energy X-Rays. Materials Science Forum, 0, 905, 114-119.	0.3	0