ZdenÄ›k MatÄ›j

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/3633756/publications.pdf

Version: 2024-02-01

80 papers	1,457 citations	331642 21 h-index	345203 36 g-index
82 all docs	82 docs citations	82 times ranked	2178 citing authors

#	Article	IF	Citations
1	Preparation and characterization of Ag-doped crystalline titania for photocatalysis applications. Applied Catalysis B: Environmental, 2012, 111-112, 119-125.	20.2	117
2	Controlled Aggregation of Magnetic Ions in a Semiconductor: An Experimental Demonstration. Physical Review Letters, 2008, 101, 135502.	7.8	106
3	Preparation, characterization and photocatalytic properties of cerium doped TiO2: On the effect of Ce loading on the photocatalytic reduction of carbon dioxide. Applied Catalysis B: Environmental, 2014, 152-153, 172-183.	20.2	104
4	Reaction-driven Ion Exchange of Copper into Zeolite SSZ-13. ACS Catalysis, 2015, 5, 6209-6218.	11.2	75
5	XRD total pattern fitting applied to study of microstructure of TiO₂films. Powder Diffraction, 2010, 25, 125-131.	0.2	74
6	Microstructure and thermal stability of ultra fine grained Mg-based alloys prepared by high-pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 462, 121-126.	5.6	67
7	Novel cerium doped titania catalysts for photocatalytic decomposition of ammonia. Applied Catalysis B: Environmental, 2015, 178, 108-116.	20.2	63
8	Refining bimodal microstructure of materials with MSTRUCT. Powder Diffraction, 2014, 29, S35-S41.	0.2	39
9	Unraveling the Decomposition Process of Lead(II) Acetate: Anhydrous Polymorphs, Hydrates, and Byproducts and Room Temperature Phosphorescence. Inorganic Chemistry, 2016, 55, 8576-8586.	4.0	38
10	Insights into formation and stability of Ï„-MnAlZx (ZÂ=ÂC and B). Journal of Alloys and Compounds, 2017, 692, 198-203.	5.5	37
11	Microstructure of Equal-Channel Angular Pressed Cu and Cu-Zr Samples Studied by Different Methods. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2010, 41, 1174-1190.	2.2	35
12	Powder diffraction in Braggâ€“Brentano geometry with straight linear detectors. Journal of Applied Crystallography, 2015, 48, 613-618.	4.5	35
13	Thermal development of microstructure and precipitation effects in Mg-10wt%Gd alloy. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 466-477.	1.8	31
14	NanoMAX: the hard X-ray nanoprobe beamline at the MAX IV Laboratory. Journal of Synchrotron Radiation, 2021, 28, 1935-1947.	2.4	31
15	Super/subcritical fluid extractions for preparation of the crystalline titania. Journal of Supercritical Fluids, 2010, 52, 215-221.	3.2	28
16	Electronic properties of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Î±</mml:mi><mml:mtext>â^'</mml:mtext><mml:msub><mml:mi>Pd</mml:mi><mml:mi>x</mml:mi></mml:msub><mml:msub><mml:mi>Pt</mml:mi><mml:mrow><mml:mn>1</mml:mn><mml:mtext>â^'</mml:mtext><mml:mi>x</mml:mi></mml:mrow></mml:msub></mml:mrow></mml:math> by Zr. Physical Review B, 2015, 91, .	3.2	28
17	Reverse micelles directed synthesis of TiO2â€“CeO2 mixed oxides and investigation of their crystal structure and morphology. Journal of Solid State Chemistry, 2013, 198, 485-495.	2.9	26
18	Characterization of Surface Structure and Oxidation/Reduction Behavior of Pdâ€“Pt/Al₂O₃ Model Catalysts. Journal of Physical Chemistry C, 2016, 120, 28009-28020.	3.1	25

#	Article	IF	Citations
19	TiO2 powders synthesized by pressurized fluid extraction and supercritical drying: Effect of water and methanol on structural properties and purity. Materials Research Bulletin, 2012, 47, 3573-3579.	5.2	23
20	Ferromagnetism withTC=200K in the amorphous5fcompound UH3Mo0.18. Physical Review B, 2013, 88, .	3.2	23
21	Elimination of Inclusions in (CdZn)Te Substrates by Post-grown Annealing. Journal of Electronic Materials, 2007, 36, 1025-1030.	2.2	22
22	In-situ X-ray diffraction studies of time and thickness dependence of crystallization of amorphous TiO2 thin films and stress evolution. Thin Solid Films, 2010, 519, 1649-1654.	1.8	22
23	Growth of Ï‰ inclusions in Ti alloys: An X-ray diffraction study. Acta Materialia, 2013, 61, 6635-6645.	7.9	20
24	Mn incorporation in as-grown and annealed (Ga,Mn)As layers studied by x-ray diffraction and standing-wave fluorescence. Physical Review B, 2006, 74, .	3.2	19
25	Magnetostructural transition in Fe5SiB2 observed with neutron diffraction. Journal of Solid State Chemistry, 2016, 235, 113-118.	2.9	19
26	Structural investigations of submicrocrystalline metals obtained by high-pressure torsion deformation. Journal of Alloys and Compounds, 2004, 378, 242-247.	5.5	18
27	UH3-based ferromagnets: New look at an old material. Journal of Magnetism and Magnetic Materials, 2016, 400, 130-136.	2.3	18
28	Generation of an ordered Ge quantum dot array in an amorphous silica matrix by ion beam irradiation: Modeling and structural characterization. Physical Review B, 2010, 81, .	3.2	17
29	Magneto-elastic coupling across the first-order transition in the distorted kagome lattice antiferromagnet Dy3Ru4Al12. Journal of Magnetism and Magnetic Materials, 2016, 400, 125-129.	2.3	17
30	XRD analysis of nanocrystalline anatase powders prepared by various chemical routes: correlations between micro-structure and crystal structure parameters. Powder Diffraction, 2013, 28, S161-S183.	0.2	16
31	Effect of hydrogenation on the crystal structure of La2Pd2In. Journal of Alloys and Compounds, 2011, 509, 4185-4189.	5.5	15
32	Temperature evolution of microstructure of turbostratic high melting coal-tar synthetic pitch studied using wide-angle X-ray scattering method. Carbon, 2015, 81, 272-283.	10.3	15
33	Crystallization kinetics study of cerium titanate CeTi2O6. Journal of Physics and Chemistry of Solids, 2014, 75, 265-270.	4.0	14
34	CO Oxidation and Site Speciation for Alloyed Palladiumâ€“Platinum Model Catalysts Studied by in Situ FTIR Spectroscopy. Journal of Physical Chemistry C, 2017, 121, 26321-26329.	3.1	14
35	TiO₂ and Nitrogen Doped TiO₂ Prepared by Different Methods; on the (Micro)structure and Photocatalytic Activity in CO₂ Reduction and N₂O Decomposition. Journal of Nanoscience and Nanotechnology, 2018, 18, 688-698.	0.9	14
36	EBSD investigation of the grain boundary distributions in ultrafine-grained Cu and Cuâ€“Zr polycrystals prepared by equal-channel angular pressing. International Journal of Materials Research, 2009, 100, 785-789.	0.3	13

#	Article	IF	Citations
37	Electrical resistivity of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mn>5</mml:mn><mml:mi>f</mml:mi></mml:math> -electron systems affected by static and dynamic spin disorder. Physical Review B, 2017, 95, .	3.2	13
38	Design and performance of a dedicated coherent X-ray scanning diffraction instrument at beamline NanoMAX of MAX IV. Journal of Synchrotron Radiation, 2022, 29, 876-887.	2.4	13
39	X-Ray Diffraction Analysis of Residual Stress in Thin Polycrystalline Anatase Films and Elastic Anisotropy of Anatase. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 3323-3332.	2.2	12
40	Structural studies of submicrocrystalline copper and copper composites by different methods. Zeitschrift FÃ¼r Kristallographie, Supplement, 2008, 2008, 73-80.	0.5	11
41	Synthesis and single crystal study of CuMn3As2 and Cu2Mn4As3. Journal of Alloys and Compounds, 2015, 650, 224-227.	5.5	9
42	Strong 5f Ferromagnetism in UH3-Based Materials. MRS Advances, 2016, 1, 2987-2992.	0.9	9
43	Polymorphism of PrIr2Si2 â€“ In situ XRPD experiments and theoretical calculations. Intermetallics, 2009, 17, 927-929.	3.9	8
44	A facile synthesis of well-defined titania nanocrystallites: Study on their growth, morphology and surface properties. Microporous and Mesoporous Materials, 2012, 154, 187-195.	4.4	8
45	Structure and properties of hydrides of Î³-U alloys. Journal of Alloys and Compounds, 2015, 645, S190-S192.	5.5	8
46	Current status and future opportunities for serial crystallography at MAX IV Laboratory. Journal of Synchrotron Radiation, 2020, 27, 1095-1102.	2.4	7
47	Magnetron deposited TiO2thin films - crystallization and temperature dependence of microstructure and phase composition. Zeitschrift FÃ¼r Kristallographie, Supplement, 2008, 2008, 287-294.	0.5	7
48	Time and thickness dependence of crystallization of amorphous magnetron deposited TiO2thin films. Zeitschrift FÃ¼r Kristallographie, Supplement, 2009, 2009, 235-240.	0.5	7
49	Crystal structure of defect-containing semiconductor nanocrystals â€“ an X-ray diffraction study. Journal of Applied Crystallography, 2009, 42, 660-672.	4.5	6
50	XRD profile analysis of ECAP Cu and Cu + Zr samples. International Journal of Materials Research, 2009, 100, 880-883.	0.3	6
51	Thermal stability of titanate nanorods and titania nanowires formed from titanate nanotubes by heating. Materials Characterization, 2014, 98, 26-36.	4.4	5
52	Nanostructured TiO2 and ZnO prepared by using pressurized hot water and their eco-toxicological evaluation. Journal of Nanoparticle Research, 2017, 19, 1.	1.9	5
53	Nanostructured ZrO 2 synthesized by using pressurized and supercritical fluidsâ€”Its structural and microstructural evolution and thermal stability. Journal of Supercritical Fluids, 2017, 128, 182-193.	3.2	5
54	Coplanar grazing exit X-ray diffraction on thin polycrystalline films. Zeitschrift FÃ¼r Kristallographie, Supplement, 2009, 2009, 157-162.	0.5	5

#	ARTICLE	IF	CITATIONS
55	Influence of ceramic nanoparticles on grain growth in ultra fine grained copper prepared by high pressure torsion. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 3587-3590.	0.8	4
56	Microstructure, Optical and Photocatalytic Properties of TiO2 Thin Films Prepared by Chelating-Agent Assisted Solâ€“Gel Method. Journal of Nanoscience and Nanotechnology, 2016, 16, 504-514.	0.9	4
57	The effect of Zr loading in Zr/TiO2 prepared by pressurized hot water on its surface, morphological and photocatalytic properties. Journal of Sol-Gel Science and Technology, 2019, 90, 369-379.	2.4	4
58	In Situ X-Ray Diffraction Study of Thermal Stability of Cu and Cu-Zr Samples Processed by ECAP. Materials Science Forum, 2013, 753, 279-284.	0.3	3
59	GaMnAs annealing under various conditions: air vs. As cap. AIP Conference Proceedings, 2007, , .	0.4	2
60	X-ray Diffraction Investigations of TiO2 Thin Films and Their Thermal Stability. Materials Research Society Symposia Proceedings, 2011, 1352, 57.	0.1	2
61	Structural and magnetic study of SmTAl single crystals (T=Pd and Ni). Journal of Applied Physics, 2012, 111, 07E146.	2.5	2
62	Determination of the thickness of polycrystalline thin films by using X-ray methods. Thin Solid Films, 2015, 591, 215-218.	1.8	2
63	Radiation damage in sulfides: Radioactive galena from burning heaps, after coal mining in the Lower Silesian basin (Czech Republic). American Mineralogist, 2017, 102, 1788-1795.	1.9	2
64	Crystallization of Zr0.1Ti0.9On mixed oxide by pressurized hot water and its effect on microstructural properties and photoactivity. Journal of Supercritical Fluids, 2018, 141, 39-48.	3.2	2
65	Structural Study of Tailored Titania Thin Layers. Collection of Czechoslovak Chemical Communications, 2008, 73, 1222-1230.	1.0	2
66	Optical Properties of BST Thin Films by Spectroscopic Ellipsometry and Optical Reflectivity. Ferroelectrics, 2008, 370, 126-131.	0.6	1
67	Structure and magnetic properties of hydrides based on Uranium bcc alloys. Materials Research Society Symposia Proceedings, 2014, 1683, 1.	0.1	1
68	Powder diffraction in Bragg-Brentano geometry with straight linear detectors. Acta Crystallographica Section A: Foundations and Advances, 2015, 71, s496-s496.	0.1	1
69	The MAX IV imaging concept. Advanced Structural and Chemical Imaging, 2016, 2, 16.	4.0	1
70	Crystal centering using deep learning in X-ray crystallography. , 2019, , .		1
71	First x-ray nanoimaging experiments at NanoMAX. , 2017, , .		1
72	Microstructure investigations of ultra-fine grained Mg-Gd alloys prepared by high pressure torsion. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 3591-3594.	0.8	0

#	Article	IF	Citations
73	Preparation and Characterization of Thin Nanocrystalline Tio2 Layers. NATO Science for Peace and Security Series C: Environmental Security, 2008, , 441-446.	0.2	0
74	STUDY OF STRUCTURAL DISCONTINUITY IN (Ce, Y)PdAl COMPOUNDS AT LOW AND HIGH TEMPERATURES. , 2010, , .		0
75	In situstudy of time and thickness dependence of crystallization of amorphous TiO2thin films and powders. Acta Crystallographica Section A: Foundations and Advances, 2009, 65, s81-s82.	0.3	0
76	Crystallization and microstructure evolution of TiO2thin films and powders studied by XRD total pattern fitting and stress analysis. Acta Crystallographica Section A: Foundations and Advances, 2009, 65, s233-s233.	0.3	0
77	Structural phase transitions in (Ce,La)Pd2Al(2-x)Gaxseries. Acta Crystallographica Section A: Foundations and Advances, 2015, 71, s339-s339.	0.1	0
78	Structural study of ceria-doped TiO2prepared at different conditions. Acta Crystallographica Section A: Foundations and Advances, 2015, 71, s380-s380.	0.1	0
79	Temperature evolution of microstructure of deformed submicrocrystalline Cuâ€“Zr samples. Acta Crystallographica Section A: Foundations and Advances, 2017, 73, C553-C553.	0.1	0
80	Azimuthal integration and crystallographic algorithms on malleable hardware. Acta Crystallographica Section A: Foundations and Advances, 2019, 75, e734-e734.	0.1	0