Mato Knez

List of Publications by Year
in descending order

136 papers	8,329 citations	57631 44 h-index	48187 88 g-index
157 all docs	157 docs citations	157 times ranked	10884 citing authors

#	Article	IF	Citations
1	Biocompatible Silicon-Based Hybrid Nanolayers for Functionalization of Complex Surface Morphologies. ACS Applied Nano Materials, 2022, 5, 2762-2768.	2.4	3
2	Facile Fabrication of Gold Nanorods@Polystyrenesulfonate Yolkâ€“Shell Nanoparticles for Spaser Applications. ACS Applied Nano Materials, 2022, 5, 4629-4633.	2.4	4
3	Radical-triggered cross-linking for molecular layer deposition of SiAlCOH hybrid thin films. Chemical Communications, 2021, 57, 2160-2163.	2.2	7
4	Ultrathin Hybrid SiAlCOH Dielectric Films through Ring-Opening Molecular Layer Deposition of Cyclic Tetrasiloxane. Chemistry of Materials, 2021, 33, 1022-1030.	3.2	17
5	Amorphous AlN films grown by ALD from trimethylaluminum and monomethylhydrazine. Dalton Transactions, 2021, 50, 15062-15070.	1.6	7
6	In-situ multi-step pulsed vapor phase surface functionalization of zirconia nanoparticles via copper-free click chemistry. Applied Surface Science, 2021, 539, 148254.	3.1	6
7	Lasing Spaser in Photonic Crystals. ACS Omega, 2021, 6, 4417-4422.	1.6	3
8	Recent Progress on Conductive Metalâ€Organic Framework Films. Advanced Materials Interfaces, 2021, 8, 2002151.	1.9	37
9	Control of Stepwise Hg²⁺ Reduction on Gold to Selectively Tune its Peroxidase and Catalaseâ€Like Activities and the Mechanism. Advanced Materials Interfaces, 2021, 8, 2100086.	1.9	13
10	ALD coating of centrifugally spun polymeric fibers and postannealing: case study for nanotubular TiO₂ photocatalyst. Nanoscale Advances, 2021, 3, 4589-4596.	2.2	5
11	Building organosilica hybrid nanohemispheres via thiol-ene click reaction on alumina thin films deposited by atomic layer deposition (ALD). Journal of Colloid and Interface Science, 2020, 560, 303-311.	5.0	5
12	Particle atomic layer deposition as an effective way to enhance Li-S battery energy density. Materials Today Energy, 2020, 18, 100567.	2.5	4
13	Omniphobic Etched Aluminum Surfaces with Anti-Icing Ability. Langmuir, 2020, 36, 10916-10922.	1.6	21
14	Nanoconfined (Bio)Catalysts as Efficient Glucoseâ€Responsive Nanoreactors. Advanced Functional Materials, 2020, 30, 2002990.	7.8	14
15	Molecular layer deposition of hybrid siloxane thin films by ring opening of cyclic trisiloxane (V₃D₃) and azasilane. Chemical Communications, 2020, 56, 8778-8781.	2.2	8
16	Vapor phase processing: a novel approach for fabricating functional hybrid materials. Nanotechnology, 2020, 31, 342001.	1.3	28
17	SCIP: a new simultaneous vapor phase coating and infiltration process for tougher and UV-resistant polymer fibers. RSC Advances, 2020, 10, 15976-15982.	1.7	14
18	Controlled Atomic Layer Deposition of Aluminum Oxide to Improve the Performance of Lithiumâ€“Sulfur Batteries. Energy Technology, 2020, 8, 1901432.	1.8	7

#	Article	IF	Citations
19	â€˜Sandwichâ€™-like hybrid ZnO thin films produced by a combination of atomic layer deposition and wet-chemistry using a mercapto silane as single organic precursor. Nanotechnology, 2020, 31, 185603.	1.3	9
20	Ligand-induced reduction concerted with coating by atomic layer deposition on the example of TiO₂-coated magnetite nanoparticles. Chemical Science, 2019, 10, 2171-2178.	3.7	11
21	Carrierless Immobilization Route for Highly Robust Metalâ€“Organic Hybrid Enzymes. ACS Omega, 2019, 4, 5172-5179.	1.6	15
22	Introducing the concept of pulsed vapor phase copper-free surface click-chemistry using the ALD technique. Chemical Communications, 2019, 55, 3109-3112.	2.2	8
23	Porous Fe2O3 nanotubes with Î±-Î³ phase junction for enhanced charge separation and photocatalytic property produced by molecular layer deposition. Applied Catalysis B: Environmental, 2019, 248, 218-225.	10.8	54
24	Coupling Enzymes and Inorganic Piezoelectric Materials for Electricity Production from Renewable Fuels. ACS Applied Energy Materials, 2018, 1, 2032-2040.	2.5	6
25	AZO Embedded Interdigitated Electrodes for Monitoring Stimuli Responsive Materials. Advanced Functional Materials, 2018, 28, 1803127.	7.8	5
26	Advanced Oxide Materials â” Growth, Application, Characterization. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1800546.	0.8	0
27	One-transistor one-resistor (1T1R) cell for large-area electronics. Applied Physics Letters, 2018, 113, .	1.5	9
28	Vapor phase infiltration: from a bioinspired process to technologic application, a prospective review. MRS Communications, 2018, 8, 727-741.	0.8	26
29	Imidazoleâ€Grafted Nanogels for the Fabrication of Organicâ€“Inorganic Protein Hybrids. Advanced Functional Materials, 2018, 28, 1803115.	7.8	20
30	Efficient and controllable vapor to solid doping of the polythiophene P3HT by low temperature vapor phase infiltration. Journal of Materials Chemistry C, 2017, 5, 2686-2694.	2.7	54
31	Reversible and Irreversible Reactions of Trimethylaluminum with Common Organic Functional Groups as a Model for Molecular Layer Deposition and Vapor Phase Infiltration. Advanced Materials Interfaces, 2017, 4, 1700237.	1.9	34
32	Laponite-Based Surfaces with Holistic Self-Cleaning Functionality by Combining Antistatics and Omniphobicity. ACS Applied Materials & Interfaces, 2017, 9, 39078-39085.	4.0	22
33	Conductive Polymerâ€“Inorganic Hybrid Materials through Synergistic Mutual Doping of the Constituents. ACS Applied Materials & Interfaces, 2017, 9, 27964-27971.	4.0	30
34	Suppressing the Thermal and Ultraviolet Sensitivity of Kevlar by Infiltration and Hybridization with ZnO. Chemistry of Materials, 2017, 29, 10068-10074.	3.2	50
35	A Novel Fabrication Technique for MEMS Based on Agglomeration of Powder by ALD. Journal of Microelectromechanical Systems, 2017, 26, 1093-1098.	1.7	16
36	Design of active and stable oxygen reduction reaction catalysts by embedding Co x O y nanoparticles into nitrogen-doped carbon. Nano Research, 2017, 10, 97-107.	5.8	25

#	Article	IF	Citations
37	Tuning the Conductivity of Polyaniline through Doping by Means of Single Precursor Vapor Phase Infiltration. Advanced Materials Interfaces, 2017, 4, 1600806.	1.9	32
38	Ferritin-mediated siRNA delivery and gene silencing in human tumor and primary cells. Biomaterials, 2016, 98, 143-151.	5.7	65
39	Comparison of two endogenous delivery agents in cancer therapy: Exosomes and ferritin. Pharmacological Research, 2016, 110, 1-9.	3.1	28
40	Hybrid nanomaterials through molecular and atomic layer deposition: Top down, bottom up, and in-between approaches to new materials. Progress in Materials Science, 2016, 75, 1-37.	16.0	148
41	Highly reflective polymeric substrates functionalized utilizing atomic layer deposition. Applied Physics Letters, 2015, 107, .	1.5	5
42	Multilayer Fresnel Zone Plates for X-ray Microscopy. Microscopy and Microanalysis, 2015, 21, 1987-1988.	0.2	1
43	Preface: physica status solidi (c) 7/2015. Physica Status Solidi C: Current Topics in Solid State Physics, 2015, 12, 853-855.	0.8	0
44	Ultrasensitive and label-free molecular-level detection enabled by light phase control in magnetoplasmonic nanoantennas. Nature Communications, 2015, 6, 6150.	5.8	172
45	Hâ€Chain Ferritin: A Natural Nuclei Targeting and Bioactive Delivery Nanovector. Advanced Healthcare Materials, 2015, 4, 1305-1310.	3.9	50
46	High-resolution high-efficiency multilayer Fresnel zone plates for soft and hard x-rays. Proceedings of SPIE, 2015, , .	0.8	7
47	Functionalization of Defect Sites in Graphene with RuO₂ for High Capacitive Performance. ACS Applied Materials & Interfaces, 2015, 7, 20513-20519.	4.0	36
48	Tuning the Tensile Strength of Cellulose through Vapor-Phase Metalation. Chemistry of Materials, 2015, 27, 181-188.	3.2	55
49	Multilayer Fresnel zone plates for high energy radiation resolve 21 nm features at 12 keV. Optics Express, 2014, 22, 18440.	1.7	20
50	Ferritin light-chain subunits: key elements for the electron transfer across the protein cage. Chemical Communications, 2014, 50, 15358-15361.	2.2	50
51	In Situ Raman Spectroscopic Study of Al-Infiltrated Spider Dragline Silk under Tensile Deformation. ACS Applied Materials & Interfaces, 2014, 6, 16827-16834.	4.0	31
52	Tuning, inhibiting and restoring the enzyme mimetic activities of Ptâ€“apoferritin. Chemical Communications, 2014, 50, 701-703.	2.2	27
53	Semi-artificial and bioactive ferroxidase with nanoparticles as the active sites. Chemical Communications, 2014, 50, 8021-8023.	2.2	26
54	Single phase ZnO submicrotubes as a replica of electrospun polymer fiber template by atomic layer deposition. Thin Solid Films, 2014, 562, 291-298.	0.8	14

#	Article	IF	Citations
55	Nanoporous Nitrogenâ€Doped Titanium Dioxide with Excellent Photocatalytic Activity under Visible Light Irradiation Produced by Molecular Layer Deposition. Angewandte Chemie - International Edition, 2013, 52, 9196-9200.	7.2	72
56	Structural analysis and mapping of individual protein complexes by infrared nanospectroscopy. Nature Communications, 2013, 4, 2890.	5.8	319
57	Recent advances in use of atomic layer deposition and focused ion beams for fabrication of Fresnel zone plates for hard x-rays. , 2013, , .		4
58	Novel Threeâ€Dimensional Nanoporous Alumina as a Template for Hierarchical TiO₂ Nanotube Arrays. Small, 2013, 9, 1025-1029.	5.2	42
59	Tuning of optical properties by atomic layer deposition. , 2013, , .		0
60	Atomic Layer Deposition for Biomimicry. , 2013, , 399-428.		2
61	Efficient focusing of 8â€…keV X-rays with multilayer Fresnel zone plates fabricated by atomic layer deposition and focused ion beam milling. Journal of Synchrotron Radiation, 2013, 20, 433-440.	1.0	24
62	Hierarchical Structures: Novel Threeâ€Dimensional Nanoporous Alumina as a Template for Hierarchical TiO₂ Nanotube Arrays (Small 7/2013). Small, 2013, 9, 1120-1120.	5.2	1
63	Waveguides: Bottom-Up Tailoring of Plasmonic Nanopeapods Making Use of the Periodical Topography of Carbon Nanocoil Templates (Adv. Funct. Mater. 24/2012). Advanced Functional Materials, 2012, 22, 5284-5284.	7.8	0
64	Enhanced Catalytic Activity for Methanol Electroâ€oxidation of Uniformly Dispersed Nickel Oxide Nanoparticlesâ€"Carbon Nanotube Hybrid Materials. Small, 2012, 8, 3390-3395.	5.2	144
65	Hybrid Materials: Enhanced Catalytic Activity for Methanol Electroâ€oxidation of Uniformly Dispersed Nickel Oxide Nanoparticlesâ€"Carbon Nanotube Hybrid Materials (Small 22/2012). Small, 2012, 8, 3540-3540.	5.2	0
66	Nanoscale Patterning of Organosilane Molecular Thin Films from the Gas Phase and Its Applications: Fabrication of Multifunctional Surfaces and Large Area Molecular Templates for Site-Selective Material Deposition. Langmuir, 2012, 28, 3045-3052.	1.6	25
67	Diffusion phenomena in atomic layer deposition. Semiconductor Science and Technology, 2012, 27, 074001.	1.0	22
68	Bottomâ€Up Tailoring of Plasmonic Nanopeapods Making Use of the Periodical Topography of Carbon Nanocoil Templates. Advanced Functional Materials, 2012, 22, 5157-5165.	7.8	13
69	Black silicon with controllable macropore array for enhanced photoelectrochemical performance. Applied Physics Letters, 2012, 101, .	1.5	51
70	High aspect ratio deep UV wire grid polarizer fabricated by double patterning. Microelectronic Engineering, 2012, 98, 433-435.	1.1	22
71	Atomic layer deposition of metal fluorides through oxide chemistry. Journal of Materials Chemistry, 2011, 21, 14461.	6.7	31
72	Structure-Based Color of Natural Petals Discriminated by Polymer Replication. ACS Applied Materials & Interfaces, 2011, 3, 30-34.	4.0	23

#	Article	IF	Citations
73	Atomic Layer Deposition Assisted Template Approach for Electrochemical Synthesis of Au Crescent-Shaped Half-Nanotubes. ACS Nano, 2011, 5, 788-794.	7.3	31
74	Unexpected Oxidation Behavior of Cu Nanoparticles Embedded in Porous Alumina Films Produced by Molecular Layer Deposition. Nano Letters, 2011, 11, 2503-2509.	4.5	48
75	Atomic layer deposition of iridium thin films and their application in gold electrodeposition. Proceedings of SPIE, 2011, , .	0.8	5
76	Multilayer Fresnel zone plate for soft X-ray microscopy resolves sub-39 nm structures. Ultramicroscopy, 2011, 111, 1706-1711.	0.8	40
77	Iridium wire grid polarizer fabricated using atomic layer deposition. Nanoscale Research Letters, 2011, 6, 558.	3.1	40
78	Receptorâ€Mediated Cellular Uptake of Nanoparticles: A Switchable Delivery System. Small, 2011, 7, 1538-1541.	5.2	30
79	An Alternative Route Towards Metalâ€“Polymer Hybrid Materials Prepared by Vaporâ€Phase Processing. Advanced Functional Materials, 2011, 21, 3047-3055.	7.8	60
80	Hybrid Materials: An Alternative Route Towards Metalâ€“Polymer Hybrid Materials Prepared by Vaporâ€Phase Processing (Adv. Funct. Mater. 16/2011). Advanced Functional Materials, 2011, 21, 3002-3002.	7.8	0
81	Metal Infiltration into Biomaterials by ALD and CVD: A Comparative Study. ChemPhysChem, 2011, 12, 791-798.	1.0	40
82	Immobilization of Apoferritinâ€Templated Seeds for Si Nanowire Growth. Chemical Vapor Deposition, 2011, 17, 149-154.	1.4	4
83	Progress and future directions for atomic layer deposition and ALD-based chemistry. MRS Bulletin, 2011, 36, 865-871.	1.7	178
84	Guided Mode Resonance Sensors for the Monitoring of Film Growth in Atomic Layer Deposition. , 2011, , .		0
85	Tunable Guidedâ€Mode Resonance Grating Filter. Advanced Functional Materials, 2010, 20, 2053-2062.	7.8	40
86	Formation of Metal Oxide Nanotubes in Neutral Aqueous Solution Based on a Photocatalytic Effect. Angewandte Chemie - International Edition, 2010, 49, 210-212.	7.2	6
87	Diffusionâ€Facilitated Fabrication of Goldâ€Decorated Zn₂SiO₄ Nanotubes by a Oneâ€Step Solidâ€State Reaction. Angewandte Chemie - International Edition, 2010, 49, 1442-1446.	7.2	48
88	Preparation and magnetoviscosity of nanotube ferrofluids by viral scaffolding and ALD on porous templates. Physica Status Solidi (B): Basic Research, 2010, 247, 2412-2423.	0.7	19
89	Flexible Replication Technique for Highâ€Aspectâ€Ratio Nanostructures. Small, 2010, 6, 2701-2707.	5.2	11
90	Preparation and Elastic Properties of Helical Nanotubes Obtained by Atomic Layer Deposition with Carbon Nanocoils as Templates. Small, 2010, 6, 910-914.	5.2	57

#	Article	IF	Citations
91	Theoretical and Experimental Analysis of the Sensitivity of Guided Mode Resonance Sensors. Journal of Physical Chemistry C, 2010, 114, 21150-21157.	1.5	48
92	Reducing Stress on Cells with Apoferritin-Encapsulated Platinum Nanoparticles. Nano Letters, 2010, 10, 219-223.	4.5	191
93	Improved Mechanical Stability of Dried Collagen Membrane after Metal Infiltration. ACS Applied Materials & Interfaces, 2010, 2, 2436-2441.	4.0	72
94	Selected Applications of Atomic Layer Deposition Dielectric Nanolaminates as Functional Optical Coatings. , 2009, , .		0
95	Greatly Increased Toughness of Infiltrated Spider Silk. Science, 2009, 324, 488-492.	6.0	372
96	All dielectric hard x-ray mirror by atomic layer deposition. Applied Physics Letters, 2009, 94, .	1.5	24
97	Nanoscopic Morphologies in Block Copolymer Nanorods as Templates for Atomicâ€Layer Deposition of Semiconductors. Advanced Materials, 2009, 21, 2763-2766.	11.1	93
98	Chemical Infiltration during Atomic Layer Deposition: Metalation of Porphyrins as Model Substrates. Angewandte Chemie - International Edition, 2009, 48, 4982-4985.	7.2	41
99	Titania Nanostructures Fabricated by Atomic Layer Deposition Using Spherical Protein Cages. Langmuir, 2009, 25, 13284-13289.	1.6	21
100	Atomic layer deposition of Al_2O_3 and TiO_2 multilayers for applications as bandpass filters and antireflection coatings. Applied Optics, 2009, 48, 1727.	2.1	117
101	Unexpected Long-Term Instability of ZnO Nanowires â€œProtectedâ€•by a TiO₂ Shell. Journal of the American Chemical Society, 2009, 131, 13920-13921.	6.6	40
102	Low-temperature ZnO atomic layer deposition on biotemplates: flexible photocatalytic ZnO structures from eggshell membranes. Physical Chemistry Chemical Physics, 2009, 11, 3608.	1.3	56
103	Electric transport in 3D photonic crystal intermediate reflectors for micromorph thin-film tandem solar cells. Proceedings of SPIE, 2009, , .	0.8	2
104	TiO2 microstructures by inversion of macroporous silicon usingÂatomic layer deposition. Applied Physics A: Materials Science and Processing, 2008, 93, 399-403.	1.1	21
105	Transmission Electron Microscopy in situ Fabrication of ZnO/Al₂O₃ Composite Nanotubes by Electronâ€Beamâ€Irradiationâ€Induced Local Etching of ZnO/Al₂O₃ Core/Shell Nanowires. Small, 2008, 4, 2112-2117.	5.2	32
106	3D photonic crystal intermediate reflector for micromorph thinâ€film tandem solar cell. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 2796-2810.	0.8	82
107	Herstellung von Nanostrukturen mittels Atomlagenabscheidung. Chemie-Ingenieur-Technik, 2008, 80, 1719-1724.	0.4	0
108	Printing and Aligning Mesoscale Patterns of Tobacco mosaic virus on Surfaces. Advanced Materials, 2008, 20, 2195-2200.	11.1	35

#	Article	IF	Citations
109	Nanostructured Pure Anatase Titania Tubes Replicated from Electrospun Polymer Fiber Templates by Atomic Layer Deposition. Chemistry of Materials, 2008, 20, 3085-3091.	3.2	110
110	Influence of Temperature on Evolution of Coaxial ZnO/Al₂O₃One-Dimensional Heterostructures:â€‰ From Coreâ"Shell Nanowires to Spinel Nanotubes and Porous Nanowires. Journal of Physical Chemistry C, 2008, 112, 4068-4074.	1.5	73
111	Synthesis and optical properties of ZnO and carbon nanotube based coaxial heterostructures. Applied Physics Letters, 2008, 93, 103108.	1.5	27
112	Rayleigh-Instability-Induced Metal Nanoparticle Chains Encapsulated in Nanotubes Produced by Atomic Layer Deposition. Nano Letters, 2008, 8, 114-118.	4.5	118
113	Hierarchical Three-Dimensional ZnO and Their Shape-Preserving Transformation into Hollow ZnAl2O4 Nanostructures. Chemistry of Materials, 2008, 20, 3487-3494.	3.2	54
114	General Assembly Method for Linear Metal Nanoparticle Chains Embedded in Nanotubes. Nano Letters, 2008, 8, 3221-3225.	4.5	60
115	Three-dimensional photonic crystals as intermediate filter for thin-film tandem solar cells. , 2008, , .		4
116	Atomic Layer Deposition on Biological Macromolecules. ECS Transactions, 2007, 3, 219-225.	0.3	5
117	Ferromagnetic nanotubes by atomic layer deposition in anodic alumina membranes. Journal of Applied Physics, 2007, 101, 09J111.	1.1	161
118	Influence of Surface Diffusion on the Formation of Hollow Nanostructures Induced by the Kirkendall Effect:Â The Basic Concept. Nano Letters, 2007, 7, 993-997.	4.5	363
119	Ferromagnetic Nanostructures by Atomic Layer Deposition: From Thin Films Towards Core-Shell Nanotubes. ECS Transactions, 2007, 11, 139-148.	0.3	21
120	Barrier layer downscaling of InAlN/GaN HEMTs. Device Research Conference, IEEE Annual, 2007, , .	0.0	8
121	Ordered Iron Oxide Nanotube Arrays of Controlled Geometry and Tunable Magnetism by Atomic Layer Deposition. Journal of the American Chemical Society, 2007, 129, 9554-9555.	6.6	232
122	Formation of Titania/Silica Hybrid Nanowires Containing Linear Mesocage Arrays by Evaporationâ€Induced Blockâ€Copolymer Selfâ€Assembly and Atomic Layer Deposition. Angewandte Chemie - International Edition, 2007, 46, 6829-6832.	7.2	26
123	Synthesis and Surface Engineering of Complex Nanostructures by Atomic Layer Deposition. Advanced Materials, 2007, 19, 3425-3438.	11.1	812
124	Characteristics of Al2O3/AlInN/GaN MOSHEMT. Electronics Letters, 2007, 43, 691.	0.5	57
125	Atomic Layer Deposition on Biological Macromolecules:Â Metal Oxide Coating of Tobacco Mosaic Virus and Ferritin. Nano Letters, 2006, 6, 1172-1177.	4.5	200
126	Monocrystalline spinel nanotube fabrication based on the Kirkendall effect. Nature Materials, 2006, 5, 627-631.	13.3	699

#	Article	IF	Citations
127	Viruses show their good side. Nature Nanotechnology, 2006, 1, 22-23.	15.6	9
128	Copper nanowires within the central channel of tobacco mosaic virus particles. Electrochimica Acta, 2006, 51, 6251-6257.	2.6	123
129	Single-crystalline MgAl2O4spinel nanotubes using a reactive and removable MgO nanowire template. Nanotechnology, 2006, 17, 5157-5162.	1.3	69
130	Bottom-Up Synthesis and Top-Down Organisation of Semiconductor and Metal Clusters on Surfaces. European Journal of Inorganic Chemistry, 2005, 2005, 3717-3728.	1.0	10
131	Boomerang-shaped VO X belts: Twinning within isolated nanocrystals. Applied Physics A: Materials Science and Processing, 2004, 78, 527-529.	1.1	11
132	Spatially Selective Nucleation of Metal Clusters on the Tobacco Mosaic Virus. Advanced Functional Materials, 2004, 14, 116-124.	7.8	235
133	Binding the Tobacco Mosaic Virus to Inorganic Surfaces. Langmuir, 2004, 20, 441-447.	1.6	103
134	Biotemplate Synthesis of 3-nm Nickel and Cobalt Nanowires. Nano Letters, 2003, 3, 1079-1082.	4.5	397
135	Electrochemical modification of individual nano-objects. Journal of Electroanalytical Chemistry, 2002, 522, 70-74.	1.9	105
136	Entropyâ€driven Selfâ€healing of Metal Oxides Assisted By Polymerâ€inorganic Hybrid Materials. Advanced Materials, 0, , 2202989.	11.1	5