Ilona Oja Acik

List of Publications by Year
in descending order

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77 papers	2,317 citations	201674 27 h-index	233421 45 g-index
78 all docs	78 docs citations	78 times ranked	2808 citing authors

#	Article	IF	Citations
1	Implications of the Negative Capacitance Observed at Forward Bias in Nanocomposite and Polycrystalline Solar Cells. Nano Letters, 2006, 6, 640-650.	9.1	217
2	Nanostructured solar cell based on spray pyrolysis deposited ZnO nanorod array. Solar Energy Materials and Solar Cells, 2008, 92, 1016-1019.	6.2	150
3	Structural and electrical characterization of TiO2 films grown by spray pyrolysis. Thin Solid Films, 2006, 515, 674-677.	1.8	111
4	Crystal quality studies of CuInS2 films prepared by spray pyrolysis. Thin Solid Films, 2005, 480-481, 82-86.	1.8	102
5	Spray pyrolysis deposition of zinc oxide nanostructured layers. Thin Solid Films, 2006, 515, 1157-1160.	1.8	86
6	Composition of CuInS2 thin films prepared by spray pyrolysis. Thin Solid Films, 2002, 403-404, 71-75.	1.8	83
7	Zirconium doped TiO2 thin films deposited by chemical spray pyrolysis. Applied Surface Science, 2016, 387, 539-545.	6.1	82
8	Thermal decomposition study of HAuCl4Â·3H2O and AgNO3 as precursors for plasmonic metal nanoparticles. Journal of Thermal Analysis and Calorimetry, 2014, 118, 1065-1072.	3.6	68
9	Extremely thin absorber layer solar cells on zinc oxide nanorods by chemical spray. Solar Energy Materials and Solar Cells, 2010, 94, 1191-1195.	6.2	64
10	Postdeposition Processing of SnS Thin Films and Solar Cells: Prospective Strategy To Obtain Large, Sintered, and Doped SnS Grains by Recrystallization in the Presence of a Metal Halide Flux. ACS Applied Materials & Interfaces, 2019, 11, 17539-17554.	8.0	61
11	Growth of ultra-thin TiO2 films by spray pyrolysis on different substrates. Applied Surface Science, 2009, 256, 1391-1394.	6.1	52
12	Thermoanalytical study of acetylacetonate-modified titanium(IV) isopropoxide as a precursor for TiO2 films. Journal of Thermal Analysis and Calorimetry, 2005, 80, 483-488.	3.6	48
13	A novel deposition method to grow ZnO nanorods: Spray pyrolysis. Superlattices and Microstructures, 2007, 42, 444-450.	3.1	48
14	TiO ₂ thin films by ultrasonic spray pyrolysis as photocatalytic material for air purification. Royal Society Open Science, 2019, 6, 181578.	2.4	43
15	Sprayed CuInS2 films grown under Cu-rich conditions as absorbers for solar cells. Solar Energy Materials and Solar Cells, 2005, 87, 207-214.	6.2	40
16	Thickness Effect on Photocatalytic Activity of TiO2 Thin Films Fabricated by Ultrasonic Spray Pyrolysis. Catalysts, 2020, 10, 1058.	3.5	40
17	Screening and optimization of processing temperature for Sb2Se3 thin film growth protocol: Interrelation between grain structure, interface intermixing and solar cell performance. Solar Energy Materials and Solar Cells, 2021, 225, 111045.	6.2	36
18	Characterization of nanoporous TiO2 films prepared by solâ€“gel method. Comptes Rendus Chimie, 2006, 9, 708-712.	0.5	33

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19	Photoelectrical properties of In(OH)xSy/PbS(O) structures deposited by SILAR on TiO2. Semiconductor Science and Technology, 2006, 21, 520-526.	2.0	32
20	Growth and electrical properties of ZnO nanorod arrays prepared by chemical spray pyrolysis. Physica B: Condensed Matter, 2009, 404, 4422-4425.	2.7	32
21	Analysis of grain orientation and defects in Sb2Se3 solar cells fabricated by close-spaced sublimation. Solar Energy, 2021, 225, 494-500.	6.1	31
22	Semitransparent Sb₂S₃ thin film solar cells by ultrasonic spray pyrolysis for use in solar windows. Beilstein Journal of Nanotechnology, 2019, 10, 2396-2409.	2.8	30
23	ZnS thin films deposited by spray pyrolysis technique. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 1161-1166.	0.8	29
24	Nanostructured solar cell by spray pyrolysis: Effect of titania barrier layer on the cell performance. Thin Solid Films, 2009, 517, 2443-2447.	1.8	29
25	Effect of substrate morphology on the nucleation and growth of ZnO nanorods prepared by spray pyrolysis. Thin Solid Films, 2012, 520, 4650-4653.	1.8	29
26	Surface properties of sprayed and electrodeposited ZnO rod layers. Applied Surface Science, 2017, 405, 521-528.	6.1	29
27	Uniform Sb₂S₃optical coatings by chemical spray method. Beilstein Journal of Nanotechnology, 2019, 10, 198-210.	2.8	29
28	Sb₂S₃ grown by ultrasonic spray pyrolysis and its application in a hybrid solar cell. Beilstein Journal of Nanotechnology, 2016, 7, 1662-1673.	2.8	28
29	Effect of the Titanium Isopropoxide:Acetylacetone Molar Ratio on the Photocatalytic Activity of TiO2 Thin Films. Molecules, 2019, 24, 4326.	3.8	27
30	Spray Pyrolysis Deposition of SnxSy Thin Films. Energy Procedia, 2014, 60, 156-165.	1.8	26
31	Study on photocatalytic activity of ZnO nanoneedles, nanorods, pyramids and hierarchical structures obtained by spray pyrolysis method. Materials Science in Semiconductor Processing, 2015, 31, 315-324.	4.0	25
32	Post-deposition thermal treatment of sprayed SnS films. Thin Solid Films, 2017, 633, 179-184.	1.8	25
33	Nickel oxide films by chemical spray: Effect of deposition temperature and solvent type on structural, optical, and surface properties. Applied Surface Science, 2021, 548, 149118.	6.1	25
34	Structure and evolved gas analyses (TG/DTA-MS and TG-FTIR) of mer-trichlorotris(thiourea)-indium(III), a precursor for indium sulfide thin films. Journal of Thermal Analysis and Calorimetry, 2011, 105, 83-91.	3.6	24
35	The effect of tartaric acid in the deposition of Sb2S3 films by chemical spray pyrolysis. Materials Science in Semiconductor Processing, 2015, 40, 867-872.	4.0	24
36	Effect of solution composition on anatase to rutile transformation of sprayed TiO2 thin films. Thin Solid Films, 2015, 594, 287-292.	1.8	24

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37	Characterisation of samarium and nitrogen co-doped TiO2 films prepared by chemical spray pyrolysis. Applied Surface Science, 2012, 261, 735-741.	6.1	23
38	Thermoanalytical study of precursors for In2S3 thin films deposited by spray pyrolysis. Journal of Thermal Analysis and Calorimetry, 2011, 105, 615-623.	3.6	22
39	Chemical solution deposition of thin TiO₂-anatase films for dielectric applications. Journal of Materials Science: Materials in Electronics, 2004, 15, 341-344.	2.2	21
40	Titanium(IV) acetylacetonate xerogels for processing titania films. Journal of Thermal Analysis and Calorimetry, 2009, 97, 39-45.	3.6	21
41	Hierarchical nanostructures of ZnO obtained by spray pyrolysis. Materials Chemistry and Physics, 2013, 141, 69-75.	4.0	21
42	Application of ultrasonic sprayed zirconium oxide dielectric in zinc tin oxide-based thin film transistor. Journal of Materials Chemistry C, 2020, 8, 3730-3739.	5.5	20
43	ZnO/NiO heterostructures with enhanced photocatalytic activity obtained by ultrasonic spraying of a NiO shell onto ZnO nanorods. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 648, 129366.	4.7	18
44	Photoluminescence and Raman spectroscopy of polycrystalline AgInTe2. Thin Solid Films, 2005, 480-481, 246-249.	1.8	17
45	Structural and electrical characterisation of high-k ZrO2 thin films deposited by chemical spray pyrolysis method. Thin Solid Films, 2018, 662, 129-136.	1.8	17
46	Thermoanalytical studies of titanium(IV) acetylacetonate xerogels with emphasis on evolved gas analysis. Journal of Thermal Analysis and Calorimetry, 2007, 88, 557-563.	3.6	16
47	Sb2S3 thin films by ultrasonic spray pyrolysis of antimony ethyl xanthate. Materials Science in Semiconductor Processing, 2022, 137, 106209.	4.0	15
48	Luminescent materials based on thin metal oxide films doped with rare earth ions. Physics of the Solid State, 2008, 50, 1727-1730.	0.6	14
49	Tin sulfide films by spray pyrolysis technique using L-cysteine as a novel sulfur source. Physica Status Solidi C: Current Topics in Solid State Physics, 2016, 13, 18-23.	0.8	14
50	Charge selective contact on ultra-thin In(OH)xSy/Pb(OH)xSyheterostructure prepared by SILAR. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 1024-1029.	1.8	13
51	Research in solar cell technologies at Tallinn University of Technology. Thin Solid Films, 2008, 516, 7125-7134.	1.8	13
52	Photocatalytic Degradation of Different VOCs in the Gas-Phase over TiO2 Thin Films Prepared by Ultrasonic Spray Pyrolysis. Catalysts, 2019, 9, 915.	3.5	13
53	Sb₂S₃ solar cells with a cost-effective and dopant-free fluorene-based enamine as a hole transport material. Sustainable Energy and Fuels, 2022, 6, 3220-3229.	4.9	12
54	Influence of Post-UV/Ozone Treatment of Ultrasonic-Sprayed Zirconium Oxide Dielectric Films for a Low-Temperature Oxide Thin Film Transistor. Materials, 2020, 13, 6.	2.9	11

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55	Plasmonic TiO2:Au composite layers deposited in situ by chemical spray pyrolysis. Surface and Coatings Technology, 2015, 271, 27-31.	4.8	10
56	Thermoanalytical study of precursors for tin sulfide thin films deposited by chemical spray pyrolysis. Journal of Thermal Analysis and Calorimetry, 2015, 121, 177-185.	3.6	10
57	Enhanced photocatalytic activity of ZnO nanorods by surface treatment with HAuCl4: Synergic effects through an electron scavenging, plasmon resonance and surface hydroxylation. Materials Chemistry and Physics, 2020, 245, 122767.	4.0	10
58	Effect of H2S treatment on properties of CuInS2 thin films deposited by chemical spray pyrolysis at low temperature. Thin Solid Films, 2011, 519, 7180-7183.	1.8	9
59	Thermal behaviour of precursors for CuInS2 thin films deposited by spray pyrolysis. Journal of Thermal Analysis and Calorimetry, 2013, 113, 1455-1465.	3.6	9
60	Low-cost plasmonic solar cells prepared by chemical spray pyrolysis. Beilstein Journal of Nanotechnology, 2014, 5, 2398-2402.	2.8	9
61	Modification of light absorption in thin CuInS2 films by sprayed Au nanoparticles. Nanoscale Research Letters, 2014, 9, 2469.	5.7	9
62	Surface plasmon resonance caused by gold nanoparticles formed on sprayed TiO2 films. Thin Solid Films, 2014, 553, 144-147.	1.8	9
63	Plasmon resonance effect caused by gold nanoparticles formed on titanium oxide films. Thin Solid Films, 2016, 616, 449-455.	1.8	9
64	Effect of Zr doping on the structural and electrical properties of spray deposited TiO₂ thin films. Proceedings of the Estonian Academy of Sciences, 2018, 67, 147.	1.5	9
65	Copperâ€“zinc oxide heterojunction catalysts exhibiting enhanced photocatalytic activity prepared by a hybrid deposition method. RSC Advances, 2021, 11, 10224-10234.	3.6	9
66	Thermal decomposition of tris(O-ethyldithiocarbonato)-antimony(III)â€”a single-source precursor for antimony sulfide thin films. Journal of Thermal Analysis and Calorimetry, 2022, 147, 4899-4913.	3.6	8
67	Enhanced Visible and Ultraviolet Light-Induced Gas-Phase Photocatalytic Activity of TiO2 Thin Films Modified by Increased Amount of Acetylacetone in Precursor Solution for Spray Pyrolysis. Catalysts, 2020, 10, 1011.	3.5	7
68	A post-deposition annealing approach for organic residue control in TiO₂ and its impact on Sb₂Se₃/TiO₂ device performance. Faraday Discussions, 0, 239, 273-286.	3.2	7
69	Interaction of Chrysosporium merdarium with titanium oxide surface. Synthetic Metals, 2010, 160, 906-910.	3.9	6
70	Influence of solution composition on sprayed ZnO nanorods properties and formation process: Thermoanalytical study of the precursors. Ceramics International, 2019, 45, 2887-2892.	4.8	6
71	Dielectric relaxation and conduction mechanisms in sprayed TiO2 thin films as a function of the annealing temperature. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	2.3	4
72	Optimization of the Sb2S3 Shell Thickness in ZnO Nanowire-Based Extremely Thin Absorber Solar Cells. Nanomaterials, 2022, 12, 198.	4.1	4

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73	CuInS2 solar cell absorber plasmonically modified by gold nanoparticles. Applied Physics A: Materials Science and Processing, 2014, 117, 455-458.	2.3	3
74	Surface plasmon resonance in ZnO nanorod arrays caused by gold nanoparticles for solar cell application. Physica Status Solidi C: Current Topics in Solid State Physics, 2015, 12, 1338-1343.	0.8	3
75	ZnO Nanorods Grown Electrochemically on Different Metal Oxide Underlays. IOP Conference Series: Materials Science and Engineering, 2015, 77, 012012.	0.6	2
76	In-situ deposition of gold nanoparticles onto different substrates by chemical spray pyrolysis. IOP Conference Series: Materials Science and Engineering, 2015, 77, 012009.	0.6	2
77	<title>Structural and optical characterization of sprayed ZnS thin films</title>. , 2005, 5946, 34.		0