

Emre Erdem

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6412673/publications.pdf>

Version: 2024-02-01

100
papers

4,781
citations

94381

37
h-index

102432

66
g-index

105
all docs

105
docs citations

105
times ranked

5061
citing authors

#	ARTICLE	IF	CITATIONS
1	Current progress achieved in novel materials for supercapacitor electrodes: mini review. <i>Nanoscale Advances</i> , 2019, 1, 2817-2827.	2.2	591
2	EPR and photoluminescence spectroscopy studies on the defect structure of ZnO nanocrystals. <i>Physical Review B</i> , 2012, 86, .	1.1	300
3	High-Capacitance Hybrid Supercapacitor Based on Multi-Colored Fluorescent Carbon-Dots. <i>Scientific Reports</i> , 2017, 7, 11222.	1.6	224
4	Synergetic effects of Fe ³⁺ doped spinel Li ₄ Ti ₅ O ₁₂ nanoparticles on reduced graphene oxide for high surface electrode hybrid supercapacitors. <i>Nanoscale</i> , 2018, 10, 1877-1884.	2.8	163
5	Microwave power, temperature, atmospheric and light dependence of intrinsic defects in ZnO nanoparticles: A study of electron paramagnetic resonance (EPR) spectroscopy. <i>Journal of Alloys and Compounds</i> , 2014, 605, 34-44.	2.8	133
6	Synthesis, Characterization, Defect Chemistry, and FET Properties of Microwave-Derived Nanoscaled Zinc Oxide. <i>Chemistry of Materials</i> , 2010, 22, 2203-2212.	3.2	117
7	Finite size effects in ZnO nanoparticles: An electron paramagnetic resonance (EPR) analysis. <i>Physica Status Solidi - Rapid Research Letters</i> , 2011, 5, 56-58.	1.2	117
8	Reorientation of (MnTi ³⁺ VO ²⁺) ⁺ defect dipoles in acceptor-modified BaTiO ₃ single crystals: An electron paramagnetic resonance study. <i>Applied Physics Letters</i> , 2008, 93, .	1.5	111
9	Investigation of intrinsic defects in core-shell structured ZnO nanocrystals. <i>Journal of Applied Physics</i> , 2012, 111, .	1.1	100
10	Tailoring morphology to control defect structures in ZnO electrodes for high-performance supercapacitor devices. <i>Nanoscale</i> , 2020, 12, 16162-16172.	2.8	99
11	Superbat: battery-like supercapacitor utilized by graphene foam and zinc oxide (ZnO) electrodes induced by structural defects. <i>Nanoscale Advances</i> , 2019, 1, 2586-2597.	2.2	97
12	Defect Evolution of Nonstoichiometric ZnO Quantum Dots. <i>Journal of Physical Chemistry C</i> , 2016, 120, 25124-25130.	1.5	96
13	Controlling the exciton energy of zinc oxide (ZnO) quantum dots by changing the confinement conditions. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2016, 152, 637-644.	2.0	96
14	Comparative electron paramagnetic resonance investigation of reduced graphene oxide and carbon nanotubes with different chemical functionalities for quantum dot attachment. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	80
15	Defect structure and materials "hardening" in Fe ₂ O ₃ -doped [Bi _{0.5} Na _{0.5}]TiO ₃ ferroelectrics. <i>Applied Physics Letters</i> , 2010, 97, .	1.5	79
16	Position of defects with respect to domain walls in Fe ³⁺ -doped Pb[Zr _{0.52} Ti _{0.48}]O ₃ piezoelectric ceramics. <i>Applied Physics Letters</i> , 2011, 98, .	1.5	77
17	Effect of Nb-donor and Fe-acceptor dopants in (Bi _{1/2} Na _{1/2})TiO ₃ "BaTiO ₃ "(K _{0.5} Na _{0.5})NbO ₃ lead-free piezoceramics. <i>Journal of Applied Physics</i> , 2010, 108, .	1.1	75
18	Mn-substituted spinel Li ₄ Ti ₅ O ₁₂ materials studied by multifrequency EPR spectroscopy. <i>Journal of Materials Chemistry A</i> , 2013, 1, 9973.	5.2	74

#	ARTICLE	IF	CITATIONS
19	Charge transfer and surface defect healing within ZnO nanoparticle decorated graphene hybrid materials. <i>Nanoscale</i> , 2016, 8, 9682-9687.	2.8	74
20	Zinc oxide derived from single source precursor chemistry under chimie douce conditions: formation pathway, defect chemistry and possible applications in thin film printing. <i>Journal of Materials Chemistry</i> , 2009, 19, 1449.	6.7	73
21	About defect phenomena in ZnO nanocrystals. <i>Nanoscale</i> , 2021, 13, 9160-9171.	2.8	73
22	CuO as a sintering additive for $(\text{Bi}_{1/2}\text{Na}_{1/2})\text{TiO}_3\text{-BaTiO}_3\text{-}(K_{0.5}\text{Na}_{0.5})\text{NbO}_3$ lead-free piezoceramics. <i>Journal of the European Ceramic Society</i> , 2011, 31, 2107-2117.	2.8	72
23	Processing of Manganese-Doped $[\text{Bi}_{0.5}\text{Na}_{0.5}]\text{TiO}_3$ Ferroelectrics: Reduction and Oxidation Reactions During Calcination and Sintering. <i>Journal of the American Ceramic Society</i> , 2011, 94, 1363-1367.	1.9	70
24	ZnO and reduced graphene oxide electrodes for all-in-one supercapacitor devices. <i>Nanoscale</i> , 2022, 14, 3269-3278.	2.8	70
25	Feeling the power: robust supercapacitors from nanostructured conductive polymers fostered with Mn^{2+} and carbon dots. <i>Nanoscale</i> , 2019, 11, 12804-12816.	2.8	67
26	Synergy of nano-ZnO and 3D-graphene foam electrodes for asymmetric supercapacitor devices. <i>Nanoscale</i> , 2020, 12, 12790-12800.	2.8	65
27	Aging in the relaxor and ferroelectric state of Fe-doped $(1-x)(\text{Bi}_{1/2}\text{Na}_{1/2})\text{TiO}_3\text{-xBaTiO}_3$ piezoelectric ceramics. <i>Journal of Applied Physics</i> , 2014, 116, .	1.1	58
28	Study of the tetragonal-to-cubic phase transition in PbTiO_3 nanopowders. <i>Journal of Physics Condensed Matter</i> , 2006, 18, 3861-3874.	0.7	55
29	Competing effects between intrinsic and extrinsic defects in pure and Mn-doped ZnO nanocrystals. <i>Journal of Nanoparticle Research</i> , 2016, 18, 1.	0.8	47
30	Luminescence of heat-treated silicon-based polymers: promising materials for LED applications. <i>Journal of Materials Science</i> , 2008, 43, 5790-5796.	1.7	46
31	ZnO and MXenes as electrode materials for supercapacitor devices. <i>Beilstein Journal of Nanotechnology</i> , 2021, 12, 49-57.	1.5	46
32	Improved efficiency of bulk heterojunction hybrid solar cells by utilizing CdSe quantum dot-graphene nanocomposites. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 12251-12260.	1.3	45
33	Size effects in Fe^{3+} -doped PbTiO_3 nanocrystals-Formation and orientation of defect-dipoles. <i>Journal of the European Ceramic Society</i> , 2010, 30, 289-293.	2.8	42
34	Hardening behavior and highly enhanced mechanical quality factor in $(K_{0.5}\text{Na}_{0.5})\text{NbO}_3$ -based ceramics. <i>Journal of the European Ceramic Society</i> , 2017, 37, 2083-2089.	2.8	42
35	Formation of magnetic grains in ferroelectric $\text{Pb}[\text{Zr}_{0.6}\text{Ti}_{0.4}]\text{O}_3$ ceramics doped with Fe^{3+} above the solubility limit. <i>Applied Physics Letters</i> , 2009, 94, 142901.	1.5	41
36	Capacitive behaviour of nanocrystalline octacalcium phosphate (OCP) $(\text{Ca}_{10}(\text{OH})_2(\text{PO}_4)_6 \cdot 5\text{H}_2\text{O})$ as an electrode material for supercapacitors: biosupercaps. <i>Nanoscale</i> , 2019, 11, 18375-18381.	2.8	41

#	ARTICLE	IF	CITATIONS
37	Characterization of $(\text{Fe}_{1-x}\text{Zr}_x\text{Ti}_{1-x})\text{O}_3$ defect dipoles in (La,Fe)-codoped PZT 52.5/47.5 piezoelectric ceramics by multifrequency electron paramagnetic resonance spectroscopy. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2008, 55, 1061-1068.	1.1	39
38	Defect structure and formation of defect complexes in Cu^{2+} -modified metal oxides derived from a spin-Hamiltonian parameter analysis. Molecular Physics, 2009, 107, 1981-1986.	0.8	37
39	Defect structure in lithium-doped polymer-derived SiCN ceramics characterized by Raman and electron paramagnetic resonance spectroscopy. Physical Chemistry Chemical Physics, 2009, 11, 5628.	1.3	37
40	Electron paramagnetic resonance study of ZnO varistor material. Journal of Physics Condensed Matter, 2014, 26, 115801.	0.7	36
41	Defect structure of the mixed ionic-electronic conducting $\text{Sr}[\text{Ti},\text{Fe}]\text{O}_x$ solid-solution system Change in iron oxidation states and defect complexation. Solid State Ionics, 2011, 184, 47-51.	1.3	35
42	Electron paramagnetic resonance and Raman spectroscopy studies on carbon-doped MgB_2 superconductor nanomaterials. Journal of Applied Physics, 2015, 117, .	1.1	35
43	Molecular precursor derived and solution processed indium-zinc oxide as a semiconductor in a field-effect transistor device. Towards an improved understanding of semiconductor film composition. Journal of Materials Chemistry C, 2013, 1, 2577.	2.7	34
44	Layer-by-Layer Grown Electrodes Composed of Cationic Fe_3O_4 Nanoparticles and Graphene Oxide Nanosheets for Electrochemical Energy Storage Devices. Journal of Physical Chemistry C, 2019, 123, 3393-3401.	1.5	34
45	Toward an Understanding of Thin-Film Transistor Performance in Solution-Processed Amorphous Zinc Tin Oxide (ZTO) Thin Films. ACS Applied Materials & Interfaces, 2017, 9, 21328-21337.	4.0	33
46	Defect structure in aliovalently-doped and isovalently-substituted PbTiO_3 nano-powders. Journal of Physics Condensed Matter, 2010, 22, 345901.	0.7	32
47	Preparation of lead titanate ultrafine powders from combined polymerisation and pyrolysis route. Journal of Materials Science, 2003, 38, 3211-3217.	1.7	31
48	Local symmetry-reduction in tetragonal (La,Fe)-codoped $\text{Pb}[\text{Zr}_{0.4}\text{Ti}_{0.6}]\text{O}_3$ piezoelectric ceramics. Physica Scripta, 2007, T129, 12-16.	1.2	30
49	FORMATION OF $(\text{Ti}' - \text{V}_\text{O})^{\bullet}$ DEFECT DIPOLES IN BaTiO_3 CERAMICS HEAT-TREATED UNDER REDUCED OXYGEN PARTIAL-PRESSURE. Functional Materials Letters, 2010, 03, 65-68.	0.7	30
50	Preparation of Nanocrystalline BaTiO_3 Characterized by in Situ X-ray Absorption Spectroscopy. Journal of Physical Chemistry B, 2001, 105, 3415-3421.	1.2	28
51	Photo-supercapacitors based on nanoscaled ZnO. Scientific Reports, 2022, 12, .	1.6	28
52	Defect structure of ultrafine MgB_2 nanoparticles. Applied Physics Letters, 2014, 105, .	1.5	27
53	Developing intercalation based anode materials for fluoride-ion batteries: topochemical reduction of $\text{Sr}_2\text{TiO}_3\text{F}_2$ via a hydride based defluorination process. Journal of Materials Chemistry A, 2018, 6, 22013-22026.	5.2	27

#	ARTICLE	IF	CITATIONS
55	Site of incorporation and solubility for Fe ions in acceptor-doped PZT ceramics. Journal of Applied Physics, 2010, 107, .	1.1	26
56	Multi-frequency EPR study of Cr ³⁺ doped lead titanate (PbTiO ₃) nanopowders. Physica Status Solidi (B): Basic Research, 2003, 239, R7-R9.	0.7	25
57	Al-doped MgB ₂ materials studied using electron paramagnetic resonance and Raman spectroscopy. Applied Physics Letters, 2016, 108, .	1.5	23
58	The effect of growing time and Mn concentration on the defect structure of ZnO nanocrystals: X-ray diffraction, infrared and EPR spectroscopy. RSC Advances, 2016, 6, 39511-39521.	1.7	23
59	Defect induced p-type conductivity in zinc oxide at high temperature: electron paramagnetic resonance spectroscopy. Nanoscale, 2017, 9, 10983-10986.	2.8	23
60	Size effects in chromium-doped PbTiO ₃ nanopowders observed by multi-frequency EPR. Magnetic Resonance in Chemistry, 2005, 43, S174-S182.	1.1	22
61	Incorporation of chromium into hexagonal barium titanate: an electron paramagnetic resonance study. Journal of Physics Condensed Matter, 2005, 17, 2763-2774.	0.7	19
62	EPR investigation of point defects in HfB ₂ and their roles in supercapacitor device performances. Applied Physics Letters, 2022, 120, .	1.5	19
63	Microstructural Characterization of the Manganese Functional Center Site in PbTiO ₃ Ferroelectricsâ€™ Multi-Frequency Electron Paramagnetic Resonance and Newman Superposition Model Analysis. Ferroelectrics, 2008, 363, 39-49.	0.3	18
64	Local coordination of Fe ³⁺ in Li[Co _{0.98} Fe _{0.02}]O ₂ as cathode material for lithium ion batteriesâ€™ multi-frequency EPR and Monte-Carlo Newman-superposition model analysis. Physical Chemistry Chemical Physics, 2011, 13, 9344.	1.3	18
65	Solar-assisted all-solid supercapacitors using composite nanostructures of ZnO nanowires with GO and rGO. Journal of Materials Chemistry C, 2022, 10, 10748-10758.	2.7	18
66	High-Frequency EPR Analysis of MnO ₂ -Doped [Bi _{0.5} Na _{0.5}]TiO ₃ -BaTiO ₃ Piezoelectric Ceramics â€™ Manganese Oxidation States and Materials â€™ Hardeningâ€™. Ferroelectrics, 2012, 428, 116-121.	0.3	17
67	Zinc diketonates as single source precursors for ZnO nanoparticles: microwave-assisted synthesis, electrophoretic deposition and field-effect transistor device properties. Journal of Materials Chemistry C, 2016, 4, 7345-7352.	2.7	17
68	Size Effects in Ferroelectric PbTiO ₃ Nanomaterials Observed by Multi-Frequency Electron Paramagnetic Resonance Spectroscopy. Journal of Nanoscience and Nanotechnology, 2008, 8, 702-716.	0.9	16
69	Coreâ€™crown Quantum Nanoplatelets with Favorable Typeâ€™ Heterojunctions Boost Charge Separation and Photocatalytic NO Oxidation on TiO ₂ . ChemCatChem, 2020, 12, 6329-6343.	1.8	16
70	DEFECT STRUCTURE IN "SOFT" (Gd, Fe)-CODOPED PZT 52.5/47.5 PIEZOELECTRIC CERAMICS. Functional Materials Letters, 2008, 01, 7-11.	0.7	15
71	Defect-induced B ₄ C electrodes for high energy density supercapacitor devices. Scientific Reports, 2021, 11, 11627.	1.6	15
72	Effects of MnO doping on the electronic properties of zinc oxide: 406â€™GHz electron paramagnetic resonance spectroscopy and Newman superposition model analysis. Journal of Applied Physics, 2015, 118, .	1.1	14

#	ARTICLE	IF	CITATIONS
73	Spectroscopic Probing Of Mn-Doped ZnO Nanowires Synthesized via a Microwave-Assisted Route. Journal of Physical Chemistry C, 2022, 126, 4229-4240.	1.5	14
74	SPACE-CHARGE LAYER, INTRINSIC "BULK" AND SURFACE COMPLEX DEFECTS IN ZnO NANOPARTICLES – A HIGH-FIELD ELECTRON PARAMAGNETIC RESONANCE ANALYSIS. Functional Materials Letters, 2013, 06, 1330004.	0.7	13
75	Oxidative Fluorination of Cu/ZnO Methanol Catalysts. Angewandte Chemie - International Edition, 2019, 58, 12935-12939.	7.2	13
76	Size Effects in BaTiO ₃ Nanopowders Studied by EPR and NMR. Ferroelectrics, 2005, 316, 43-49.	0.3	11
77	Local coordination of Fe ³⁺ in ZnO nanoparticles: multi-frequency electron paramagnetic resonance (EPR) and Newman superposition model analysis. Journal of Physics Condensed Matter, 2014, 26, 155803.	0.7	11
78	Why P ₂ X must be the part of the energy solution?. Environmental Progress and Sustainable Energy, 2021, 40, e13545.	1.3	11
79	Defect Structure of Doped Lead-Free 0.9(Bi _{0.5} Na _{0.5})TiO ₃ ~0.1(Bi _{0.5} K _{0.5})TiO ₃ Piezoceramics. Journal of the American Ceramic Society, 2016, 99, 543-550.		10
80	Electrical properties, EPR analyses and defect chemistry of Mn-doped 0.675PMN-0.325PT piezoceramics. Ceramics International, 2020, 46, 28980-28986.	2.3	10
81	Unveiling the presence of mixed oxidation states of Europium in Li ₇ Eu _x La ₃ Zr ₂ O ₁₂ garnet and its impact on the Li-ion conductivity. Journal of the American Ceramic Society, 2021, 104, 4257-4271.	1.9	10
82	A microwave molecular solution based approach towards high- ϵ^{\prime} -tantalum(ν)oxide nanoparticles: synthesis, dielectric properties and electron paramagnetic resonance spectroscopic studies of their defect chemistry. Physical Chemistry Chemical Physics, 2015, 17, 31801-31809.	1.3	9
83	High-quality MgB ₂ nanocrystals synthesized by using modified amorphous nano-boron powders: Study of defect structures and superconductivity properties. AIP Advances, 2019, 9, .	0.6	9
84	Building an Iron Chromophore Incorporating Prussian Blue Analogue for Photoelectrochemical Water Oxidation. Chemistry - A European Journal, 2021, 27, 8966-8976.	1.7	9
85	Discovery of an Exceptionally Strong Luminescence of Polyethyleneimine- ϵ -Superparamagnetic Iron Oxide Nanoparticles. Macromolecular Chemistry and Physics, 2018, 219, 1700563.	1.1	8
86	Microwave-Assisted Synthesis, Characterisation and Dielectric Properties of Nanocrystalline Zirconia. European Journal of Inorganic Chemistry, 2014, 2014, 5554-5560.	1.0	7
87	Low-Temperature Surface Phase Transitions in Multiferroic BiFeO ₃ Nanocrystals Probed via Electron Paramagnetic Resonance. Journal of Physical Chemistry C, 2021, 125, 24596-24604.	1.5	7
88	Dielectric investigations and theoretical calculations of size effect in lead titanate nanocrystals. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2006, 53, 2270-2274.	1.7	5
89	Upcycling process of transforming waste coffee into spherical graphene by flash pyrolysis for sustainable supercapacitor manufacturing with virgin graphene electrodes and its comparative life cycle assessment. Biomass Conversion and Biorefinery, 2024, 14, 1073-1088.	2.9	5
90	Efficiency enhancement in photoelectrochemical water splitting: Defect passivation and boosted charge transfer kinetics of zinc oxide nanostructures via chalcopyrite/chalcogenide mix sensitization. Physical Review Materials, 2021, 5, .	0.9	5

#	ARTICLE	IF	CITATIONS
91	Oxidative Fluorination of Cu/ZnO Methanol Catalysts. <i>Angewandte Chemie</i> , 2019, 131, 13069-13073.	1.6	4
92	Dielectric Investigations and Theoretical Calculations of Size Effect in Lead Titanate Nanocrystals. <i>Materials Science Forum</i> , 2006, 514-516, 235-239.	0.3	3
93	The effects of passive leg raising and ultrafiltration stopping on blood pressure in hemodialysis patients. <i>International Urology and Nephrology</i> , 2016, 48, 877-882.	0.6	3
94	Influence of reducing atmosphere on the defect chemistry of lead lanthanum zirconate titanate (8/65/35). <i>Solid State Ionics</i> , 2012, 228, 56-63.	1.3	2
95	Impact of Defect Structure on Bulk and Nano-Scale Ferroelectrics. , 2011, , .		1
96	Synthesis and Assembly of Zinc Oxide Microcrystals by a Low-Temperature Dissolution-Reprecipitation Process: Lessons Learned About Twin Formation in Heterogeneous Reactions. <i>Chemistry - A European Journal</i> , 2020, 26, 9319-9329.	1.7	1
97	Comment on the article: "Preparation and characterisation of nanocrystalline ZnO particles from a hydrothermal process" by Yi Hu and Hung-Jiun Chen, DOI 10.1007/s11051-007-9264-0. <i>Journal of Nanoparticle Research</i> , 2008, 10, 1369-1369.	0.8	0
98	Building an Iron Chromophore Incorporating Prussian Blue Analogue for Photoelectrochemical Water Oxidation. <i>Chemistry - A European Journal</i> , 2021, 27, 8890-8890.	1.7	0
99	Applications of Supercapacitors in Space Vehicles and Interplanetary Devices. , 2020, , .		0
100	Size Effects in Ba(Pb)TiO ₃ Nanopowders by EPR and NMR. , 0, , 351-361.		0