

Husnu E Unalan

List of Publications by Year in descending order

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125
papers

6,148
citations

66234

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h-index

74018

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all docs

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docs citations

125
times ranked

9146
citing authors

#	ARTICLE	IF	CITATIONS
1	Multifunctional and Physically Transient Supercapacitors, Triboelectric Nanogenerators, and Capacitive Sensors. <i>Advanced Functional Materials</i> , 2022, 32, 2106066.	7.8	31
2	Silver nanowire loaded poly(μ -caprolactone) nanocomposite fibers as electroactive scaffolds for skeletal muscle regeneration. <i>Materials Science and Engineering C</i> , 2022, 134, 112567.	3.8	4
3	Scalable, microwave-assisted decoration of commercial cotton fabrics with binary nickel cobalt sulfides towards textile-based energy storage. <i>Electrochimica Acta</i> , 2022, 404, 139731.	2.6	10
4	Titanium disulfide decorated hollow carbon spheres towards capacitive deionization. <i>Desalination</i> , 2022, 533, 115766.	4.0	18
5	Silver-based nanomaterials: A critical review on factors affecting water disinfection performance and silver release. <i>Critical Reviews in Environmental Science and Technology</i> , 2021, 51, 2389-2423.	6.6	17
6	Advances in protective layer-coating on metal nanowires with enhanced stability and their applications. <i>Applied Materials Today</i> , 2021, 22, 100909.	2.3	38
7	Highly stable silver-platinum core-shell nanowires for H_2/O_2 detection. <i>Nanoscale</i> , 2021, 13, 13129-13141.	2.8	15
8	Seamless Monolithic Design for Foam Based, Flexible, Parallel Plate Capacitive Sensors. <i>Advanced Materials Technologies</i> , 2021, 6, 2001168.	3.0	26
9	Microwave-assisted decoration of cotton fabrics with Nickel-Cobalt sulfide as a wearable glucose sensing platform. <i>Journal of Electroanalytical Chemistry</i> , 2021, 890, 115244.	1.9	21
10	Thermally Induced Phase Transition and Defect-Assisted Nonlinear Absorption and Optical Limiting in Nanorod Morphology V_2O_5 Thin Films. <i>Advanced Engineering Materials</i> , 2021, 23, 2100468.	1.6	19
11	Fabric based wearable triboelectric nanogenerators for human machine interface. <i>Nano Energy</i> , 2021, 89, 106412.	8.2	40
12	Multichromic Vanadium Pentoxide Thin Films Through Ultrasonic Spray Deposition. <i>Journal of the Electrochemical Society</i> , 2021, 168, 106511.	1.3	12
13	Nanometer-Thick Mn:NiO and Co:NiO Films for High Performance Nonenzymatic Biosensors. <i>ACS Applied Nano Materials</i> , 2021, 4, 13871-13883.	2.4	11
14	Hybrid energy storage device from binder-free zinc-cobalt sulfide decorated biomass-derived carbon microspheres and pyrolyzed polyaniline nanotube-iron oxide. <i>Energy Storage Materials</i> , 2020, 25, 621-635.	9.5	124
15	A Point-of-Use (POU) Water Disinfection: Silver Nanowire Decorated Glass Fiber Filters. <i>Journal of Water Process Engineering</i> , 2020, 38, 101616.	2.6	9
16	Plasmonic Light-Management Interfaces by Polyol-Synthesized Silver Nanoparticles for Industrial Scale Silicon Solar Cells. <i>ACS Applied Nano Materials</i> , 2020, 3, 12231-12239.	2.4	3
17	Facile preparation of nanoparticle based SERS substrates for trace molecule detection. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 21139-21146.	1.3	13
18	All-Solution-Processed, Oxidation-Resistant Copper Nanowire Networks for Optoelectronic Applications with Year-Long Stability. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 45136-45144.	4.0	25

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19	Wearable supercapacitors based on nickel tungstate decorated commercial cotton fabrics. <i>International Journal of Energy Research</i> , 2020, 44, 7603-7616.	2.2	22
20	Biomass-derived wearable energy storage systems based on poplar tree-cotton fibers coupled with binary nickel-cobalt nanostructures. <i>Sustainable Energy and Fuels</i> , 2020, 4, 643-654.	2.5	29
21	Stretchable/flexible silver nanowire electrodes for energy device applications. <i>Nanoscale</i> , 2019, 11, 20356-20378.	2.8	90
22	3D printed antibacterial silver nanowire/polylactide nanocomposites. <i>Composites Part B: Engineering</i> , 2019, 172, 671-678.	5.9	61
23	Core/shell copper nanowire networks for transparent thin film heaters. <i>Nanotechnology</i> , 2019, 30, 325202.	1.3	19
24	Silver-nanowire-modified fabrics for wide-spectrum antimicrobial applications. <i>Journal of Materials Research</i> , 2019, 34, 500-509.	1.2	12
25	Paper Based, Expanded Graphite/Polypyrrole Nanocomposite Supercapacitors Free from Binders and Current Collectors. <i>Journal of the Electrochemical Society</i> , 2018, 165, A283-A290.	1.3	17
26	Opto-thermoelectric nanotweezers. <i>Nature Photonics</i> , 2018, 12, 195-201.	15.6	216
27	Coaxial silver nanowire/polypyrrole nanocomposite supercapacitors. <i>Organic Electronics</i> , 2018, 52, 272-280.	1.4	59
28	Heat transfer enhancement by silver nanowire suspensions in microchannel heat sinks. <i>International Journal of Thermal Sciences</i> , 2018, 123, 1-13.	2.6	29
29	A Novel Blue to Transparent Polymer for Electrochromic Supercapacitor Electrodes. <i>Electroanalysis</i> , 2018, 30, 266-273.	1.5	26
30	All-carbon hybrids for high performance supercapacitors. <i>International Journal of Energy Research</i> , 2018, 42, 3575-3587.	2.2	43
31	Vertically aligned carbon nanotube-Polyaniline nanocomposite supercapacitor electrodes. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 18617-18625.	3.8	55
32	Genotoxicity study of high aspect ratio silver nanowires. <i>Toxicological and Environmental Chemistry</i> , 2017, 99, 837-847.	0.6	5
33	Manganese dioxide nanowires on carbon nanofiber frameworks for efficient electrochemical device electrodes. <i>RSC Advances</i> , 2017, 7, 12351-12358.	1.7	21
34	A new high-performance blue to transmissive electrochromic material and use of silver nanowire network electrodes as substrates. <i>Journal of Polymer Science Part A</i> , 2017, 55, 1680-1686.	2.5	24
35	Silver Nanowire/Conducting Polymer Nanocomposite Electrochromic Supercapacitor Electrodes. <i>Journal of the Electrochemical Society</i> , 2017, 164, A721-A727.	1.3	39
36	Paper Based Glucose Biosensor Using Graphene Modified with a Conducting Polymer and Gold Nanoparticles. <i>Journal of the Electrochemical Society</i> , 2017, 164, G59-G64.	1.3	32

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37	Metal oxide surfaces for enhanced colorimetric response in bioassays. <i>Colloids and Surfaces B: Biointerfaces</i> , 2017, 154, 331-340.	2.5	1
38	Enhancing capacitive deionization technology as an effective method for water treatment using commercially available graphene. <i>Water Science and Technology</i> , 2017, 75, 643-649.	1.2	6
39	Nanowire decorated, ultra-thin, single crystalline silicon for photovoltaic devices. <i>Nanotechnology</i> , 2017, 28, 405205.	1.3	14
40	A novel approach for the fabrication of a flexible glucose biosensor: The combination of vertically aligned CNTs and a conjugated polymer. <i>Food Chemistry</i> , 2017, 220, 299-305.	4.2	59
41	Silver nanowire networks as transparent top electrodes for silicon solar cells. <i>Solar Energy</i> , 2017, 141, 110-117.	2.9	15
42	Sequential Deposition of Electrochromic MoO ₃ Thin Films with High Coloration Efficiency and Stability. <i>Journal of the Electrochemical Society</i> , 2017, 164, E565-E571.	1.3	16
43	All Solution-Based Fabrication of Copper Oxide Thin Film/Cobalt-Doped Zinc Oxide Nanowire Heterojunctions. <i>Journal of the American Ceramic Society</i> , 2016, 99, 2497-2503.	1.9	11
44	Silver nanowire decorated heatable textiles. <i>Nanotechnology</i> , 2016, 27, 435201.	1.3	57
45	Flexible, silver nanowire network nickel hydroxide core-shell electrodes for supercapacitors. <i>Journal of Power Sources</i> , 2016, 328, 167-173.	4.0	83
46	Cobalt Oxide Nanoflakes on Single Walled Carbon Nanotube Thin Films for Supercapacitor Electrodes. <i>Electrochimica Acta</i> , 2016, 222, 1475-1482.	2.6	28
47	High-performance, bare silver nanowire network transparent heaters. <i>Nanotechnology</i> , 2016, 27, 445708.	1.3	34
48	Suppressed Hysteretic Field Emission from Polymer Encapsulated Silver Nanowires. <i>IEEE Nanotechnology Magazine</i> , 2016, , 1-1.	1.1	0
49	Flexible supercapacitor electrodes with vertically aligned carbon nanotubes grown on aluminum foils. <i>Progress in Natural Science: Materials International</i> , 2016, 26, 232-236.	1.8	48
50	Electrical, mechanical and thermal properties of aligned silver nanowire/poly lactide nanocomposite films. <i>Composites Part B: Engineering</i> , 2016, 99, 288-296.	5.9	78
51	An effective surface design based on a conjugated polymer and silver nanowires for the detection of paraoxon in tap water and milk. <i>Sensors and Actuators B: Chemical</i> , 2016, 228, 278-286.	4.0	42
52	Photovoltaic performance of Gallium-doped ZnO thin film/Si nanowires heterojunction diodes. <i>Philosophical Magazine</i> , 2016, 96, 1093-1109.	0.7	20
53	Coaxial silver nanowire network core molybdenum oxide shell supercapacitor electrodes. <i>Electrochimica Acta</i> , 2016, 193, 39-44.	2.6	59
54	Ternary nanocomposite SWNT/WO ₃ /PANI thin film electrodes for supercapacitors. <i>Journal of Alloys and Compounds</i> , 2016, 658, 183-189.	2.8	63

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55	Textile supercapacitors-based on MnO ₂ /SWNT/conducting polymer ternary composites. International Journal of Energy Research, 2015, 39, 2042-2052.	2.2	46
56	Enhanced second harmonic generation from coupled asymmetric plasmonic metal nanostructures. Journal of Optics (United Kingdom), 2015, 17, 125005.	1.0	11
57	Enhanced diode performance in cadmium telluride-silicon nanowire heterostructures. Journal of Alloys and Compounds, 2015, 644, 131-139.	2.8	16
58	Improved diode properties in zinc telluride thin film-silicon nanowire heterojunctions. Philosophical Magazine, 2015, 95, 1164-1183.	0.7	12
59	All-Organic Electrochromic Supercapacitor Electrodes. Journal of the Electrochemical Society, 2015, 162, A2805-A2810.	1.3	39
60	Growth of branched gold nanoparticles on solid surfaces and their use as surface-enhanced Raman scattering substrates. RSC Advances, 2015, 5, 101656-101663.	1.7	10
61	Metal-Enhanced Fluorescence from Silver Nanowires with High Aspect Ratio on Glass Slides for Biosensing Applications. Journal of Physical Chemistry C, 2015, 119, 675-684.	1.5	29
62	Zinc Oxide Nanowire Decorated Single-Crystalline Electrodes for Electrochemical DNA Detection. Journal of the American Ceramic Society, 2015, 98, 663-668.	1.9	9
63	Periodic Nanopillar N-I-P Amorphous Si Photovoltaic Cells Using Carbon Nanotube Scaffolds. IEEE Nanotechnology Magazine, 2014, 13, 997-1004.	1.1	3
64	Germanium nanowire synthesis using solid precursors. Journal of Crystal Growth, 2014, 392, 20-29.	0.7	9
65	Fabrication and characterization of copper oxide-silicon nanowire heterojunction photodiodes. Journal Physics D: Applied Physics, 2014, 47, 065106.	1.3	33
66	Nanowire-based multifunctional antireflection coatings for solar cells. Nanoscale, 2014, 6, 14555-14562.	2.8	42
67	Transparent and Flexible Supercapacitors with Single Walled Carbon Nanotube Thin Film Electrodes. ACS Applied Materials & Interfaces, 2014, 6, 15434-15439.	4.0	131
68	Influence of thermal annealing on microstructural, morphological, optical properties and surface electronic structure of copper oxide thin films. Materials Chemistry and Physics, 2014, 147, 987-995.	2.0	289
69	Indium rich InGaN solar cells grown by MOCVD. Journal of Materials Science: Materials in Electronics, 2014, 25, 3652-3658.	1.1	12
70	Silicon nanowire-silver indium selenide heterojunction photodiodes. Nanotechnology, 2013, 24, 375203.	1.3	20
71	All solution processed, nanowire enhanced ultraviolet photodetectors. Applied Physics Letters, 2013, 102, .	1.5	41
72	ZnO Nanorods as Antireflective Coatings for Industrial-Scale Single-Crystalline Silicon Solar Cells. Journal of the American Ceramic Society, 2013, 96, 1253-1257.	1.9	43

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73	Silicon nanowire network metal-semiconductor-metal photodetectors. Applied Physics Letters, 2013, 103, .	1.5	65
74	Performance of nanowire decorated mono- and multi-crystalline Si solarcells. Physica E: Low-Dimensional Systems and Nanostructures, 2013, 51, 71-74.	1.3	9
75	Optimization of silver nanowire networks for polymer light emitting diode electrodes. Nanotechnology, 2013, 24, 125202.	1.3	145
76	Hierarchically structured nanocarbon electrodes for flexible solid lithium batteries. Nano Energy, 2013, 2, 1054-1062.	8.2	14
77	Highly Efficient Room Temperature Synthesis of Silver-Doped Zinc Oxide (<sc>ZnO</sc>:<sc>Ag</sc>) Nanoparticles: Structural, Optical, and Photocatalytic Properties. Journal of the American Ceramic Society, 2013, 96, 766-773.	1.9	173
78	Application of Si Nanowires Fabricated by Metal-Assisted Etching to Crystalline Si Solar Cells. IEEE Journal of Photovoltaics, 2013, 3, 548-553.	1.5	40
79	Enhanced localized surface plasmon resonance obtained in two step etched silicon nanowires decorated with silver nanoparticles. Applied Physics Letters, 2013, 103, .	1.5	18
80	Hydrothermal zinc oxide nanowire growth with different zinc salts. Journal of Materials Research, 2012, 27, 2401-2407.	1.2	7
81	Transparent, highly flexible, all nanowire network germanium photodetectors. Nanotechnology, 2012, 23, 325202.	1.3	28
82	Light management on industrial size c-Si solar cells by Si nanowires fabricated by metal-assisted etching. , 2012, , .		0
83	Hydrothermal zinc oxide nanowire growth using zinc acetate dihydrate salt. Journal of Materials Research, 2012, 27, 1445-1451.	1.2	69
84	Deposition of Carbon Nanotubes on CMOS. IEEE Nanotechnology Magazine, 2012, 11, 215-219.	1.1	3
85	Nanowires for energy generation. Nanotechnology, 2012, 23, 194002.	1.3	41
86	Zinc Oxide Nanowire Photodetectors with Single-Walled Carbon Nanotube Thin-Film Electrodes. ACS Applied Materials & Interfaces, 2012, 4, 5142-5146.	4.0	65
87	Zinc oxide nanowire enhanced multifunctional coatings for cotton fabrics. Thin Solid Films, 2012, 520, 4658-4661.	0.8	85
88	Enhanced supercapacitors from hierarchical carbon nanotube and nanohorn architectures. Journal of Materials Chemistry, 2011, 21, 17810.	6.7	57
89	Silicon nanowire - poly(3,4-ethylenedioxythiophene)-poly(styrenesulfonate) heterojunction solar cells. Applied Physics Letters, 2011, 99, .	1.5	51
90	Effect of electroless etching parameters on the growth and reflection properties of silicon nanowires. Nanotechnology, 2011, 22, 155606.	1.3	90

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91	Polyol Synthesis of Silver Nanowires: An Extensive Parametric Study. <i>Crystal Growth and Design</i> , 2011, 11, 4963-4969.	1.4	346
92	The mechanism of the sudden termination of carbon nanotube supergrowth. <i>Carbon</i> , 2011, 49, 214-221.	5.4	16
93	Thin-film transistors based on poly(3,3'-dialkyl-quarterthiophene) and zinc oxide nanowires with improved ambient stability. <i>Applied Physics Letters</i> , 2011, 98, 102106.	1.5	3
94	Optimisation of CNTs and ZnO nanostructures for electron sources. , 2010, , .		2
95	ZnO nanowires grown on SOI CMOS substrate for ethanol sensing. <i>Sensors and Actuators B: Chemical</i> , 2010, 146, 559-565.	4.0	101
96	Stable, self-ballasting field emission from zinc oxide nanowires grown on an array of vertically aligned carbon nanofibers. <i>Applied Physics Letters</i> , 2010, 96, .	1.5	37
97	Nanomaterial-Enhanced All-Solid Flexible Zinc-Carbon Batteries. <i>ACS Nano</i> , 2010, 4, 2730-2734.	7.3	148
98	CMOS Alcohol Sensor Employing ZnO Nanowire Sensing Films. , 2009, , .		4
99	Corrections to "Zinc Oxide Nanostructures and High Electron Mobility Nanocomposite Thin Film Transistors" [Nov 08 3001-3011. <i>IEEE Transactions on Electron Devices</i> , 2009, 56, 156-156.	1.6	3
100	The Use of Terahertz Spectroscopy as a Sensitive Probe in Discriminating the Electronic Properties of Structurally Similar Multi-Walled Carbon Nanotubes. <i>Advanced Materials</i> , 2009, 21, 3953-3957.	11.1	32
101	Zinc oxide nanowire networks for macroelectronic devices. <i>Applied Physics Letters</i> , 2009, 94, .	1.5	49
102	Understanding the Dielectric Properties of Heat-Treated Carbon Nanofibers at Terahertz Frequencies: a New Perspective on the Catalytic Activity of Structured Carbonaceous Materials. <i>Journal of Physical Chemistry C</i> , 2009, 113, 10554-10559.	1.5	33
103	Direct measurement of charge transport through helical poly(ethyl propiolate) nanorods wired into gaps in single walled carbon nanotubes. <i>Nanotechnology</i> , 2009, 20, 105201.	1.3	12
104	Phototransistors Utilizing Individual WS ₂ Nanotubes. , 2008, , .		2
105	ZnO Nanowire and WS ₂ Nanotube Electronics. <i>IEEE Transactions on Electron Devices</i> , 2008, 55, 2988-3000.	1.6	35
106	Zinc Oxide Nanostructures and High Electron Mobility Nanocomposite Thin Film Transistors. <i>IEEE Transactions on Electron Devices</i> , 2008, 55, 3001-3011.	1.6	46
107	Field emission from graphene based composite thin films. <i>Applied Physics Letters</i> , 2008, 93, .	1.5	258
108	Zinc Oxide Nanowire Networks for Macroelectronic Devices. , 2008, , .		1

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109	A solid-state dye-sensitized solar cell based on a novel ionic liquid gel and ZnO nanoparticles on a flexible polymer substrate. <i>Nanotechnology</i> , 2008, 19, 424006.	1.3	68
110	Flexible organic photovoltaics from zinc oxide nanowires grown on transparent and conducting single walled carbon nanotube thin films. <i>Journal of Materials Chemistry</i> , 2008, 18, 5909.	6.7	94
111	Growth and process conditions of aligned and patternable films of iron(III) oxide nanowires by thermal oxidation of iron. <i>Nanotechnology</i> , 2008, 19, 455608.	1.3	49
112	Rapid synthesis of aligned zinc oxide nanowires. <i>Nanotechnology</i> , 2008, 19, 255608.	1.3	127
113	Heterojunction photovoltaic devices utilizing single wall carbon nanotube thin films and silicon substrates. <i>Conference Record of the IEEE Photovoltaic Specialists Conference</i> , 2008, , .	0.0	1
114	Photoelectrochemical cell using dye sensitized zinc oxide nanowires grown on carbon fibers. <i>Applied Physics Letters</i> , 2008, 93, .	1.5	76
115	Understanding the catalytic activity of heat treated carbon nanofibres: Investigation of their dielectric properties at THz frequencies. , 2008, , .		1
116	Synthesis of ZnO nanowires for thin film network transistors. <i>Proceedings of SPIE</i> , 2008, , .	0.8	8
117	Modification of transparent and conducting single wall carbon nanotube thin films via bromine functionalization. <i>Applied Physics Letters</i> , 2007, 90, 092114.	1.5	42
118	Voltage-Induced Dependence of Raman-Active Modes in Single-Wall Carbon Nanotube Thin Films. <i>Nano Letters</i> , 2007, 7, 1129-1133.	4.5	6
119	Optoelectronic properties of transparent and conducting single-wall carbon nanotube thin films. <i>Applied Physics Letters</i> , 2006, 88, 191919.	1.5	47
120	Design Criteria for Transparent Single-Wall Carbon Nanotube Thin-Film Transistors. <i>Nano Letters</i> , 2006, 6, 677-682.	4.5	164
121	Thin films of hard cubic Zr ₃ N ₄ stabilized by stress. <i>Nature Materials</i> , 2005, 4, 317-322.	13.3	146
122	Investigation of single-walled carbon nanotube growth parameters using alcohol catalytic chemical vapour deposition. <i>Nanotechnology</i> , 2005, 16, 2153-2163.	1.3	58
123	Irreversible blocking of ion channels using functionalized single-walled carbon nanotubes. <i>Nanotechnology</i> , 2005, 16, 2982-2986.	1.3	29
124	Conducting and transparent single-wall carbon nanotube electrodes for polymer-fullerene solar cells. <i>Applied Physics Letters</i> , 2005, 87, 203511.	1.5	480
125	Parametric Study of Single-Walled Carbon Nanotubes Using Alcohol Catalytic Chemical Vapor Deposition. <i>Materials Research Society Symposia Proceedings</i> , 2004, 858, 14.	0.1	0