

Antonio Tricoli

List of Publications by Year in descending order

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119
papers

6,146
citations

66343

42
h-index

74163

75
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126
all docs

126
docs citations

126
times ranked

7802
citing authors

#	ARTICLE	IF	CITATIONS
1	Si:WO ₃ Sensors for Highly Selective Detection of Acetone for Easy Diagnosis of Diabetes by Breath Analysis. <i>Analytical Chemistry</i> , 2010, 82, 3581-3587.	6.5	556
2	Semiconductor Gas Sensors: Dry Synthesis and Application. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 7632-7659.	13.8	474
3	Breath acetone monitoring by portable Si:WO ₃ gas sensors. <i>Analytica Chimica Acta</i> , 2012, 738, 69-75.	5.4	256
4	Wearable and Miniaturized Sensor Technologies for Personalized and Preventive Medicine. <i>Advanced Functional Materials</i> , 2017, 27, 1605271.	14.9	247
5	Ultraporous Electron-Depleted ZnO Nanoparticle Networks for Highly Sensitive Portable Visible-Blind UV Photodetectors. <i>Advanced Materials</i> , 2015, 27, 4336-4343.	21.0	222
6	Ultra-Durable and Transparent Self-Cleaning Surfaces by Large-Scale Self-Assembly of Hierarchical Interpenetrated Polymer Networks. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 13615-13623.	8.0	179
7	Nitrate reduction to ammonium: from CuO defect engineering to waste NO _x -to-NH ₃ economic feasibility. <i>Energy and Environmental Science</i> , 2021, 14, 3588-3598.	30.8	161
8	Anti-Fogging Nanofibrous SiO ₂ and Nanostructured SiO ₂ -TiO ₂ Films Made by Rapid Flame Deposition and In Situ Annealing. <i>Langmuir</i> , 2009, 25, 12578-12584.	3.5	146
9	Stability of ZIF-8 nanopowders in bacterial culture media and its implication for antibacterial properties. <i>Chemical Engineering Journal</i> , 2021, 413, 127511.	12.7	137
10	Toward portable breath acetone analysis for diabetes detection. <i>Journal of Breath Research</i> , 2011, 5, 037109.	3.0	116
11	Metal-Organic Frameworks/Conducting Polymer Hydrogel Integrated Three-Dimensional Free-Standing Monoliths as Ultrahigh Loading Li-S Battery Electrodes. <i>Nano Letters</i> , 2019, 19, 4391-4399.	9.1	115
12	Mimosa Origami: A nanostructure-enabled directional self-organization regime of materials. <i>Science Advances</i> , 2016, 2, e1600417.	10.3	108
13	Engineering the Activity and Stability of MOF-Nanocomposites for Efficient Water Oxidation. <i>Advanced Energy Materials</i> , 2021, 11, 2003759.	19.5	108
14	Dispersed nanoelectrode devices. <i>Nature Nanotechnology</i> , 2010, 5, 54-60.	31.5	107
15	Minimal cross-sensitivity to humidity during ethanol detection by SnO ₂ -TiO ₂ solid solutions. <i>Nanotechnology</i> , 2009, 20, 315502.	2.6	106
16	Omnidirectional Self-Assembly of Transparent Superoleophobic Nanotextures. <i>ACS Nano</i> , 2017, 11, 587-596.	14.6	104
17	Nanostructured Bi ₂ O ₃ Fractals on Carbon Fibers for Highly Selective CO ₂ Electroreduction to Formate. <i>Advanced Functional Materials</i> , 2020, 30, 1906478.	14.9	104
18	Hybrid Organic-Inorganic Materials and Composites for Photoelectrochemical Water Splitting. <i>ACS Energy Letters</i> , 2020, 5, 1487-1497.	17.4	104

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19	Covalent Coupling-Stabilized Transition-Metal Sulfide/Carbon Nanotube Composites for Lithium/Sodium-Ion Batteries. <i>ACS Nano</i> , 2021, 15, 6735-6746.	14.6	95
20	Near-Infrared Active Lead Chalcogenide Quantum Dots: Preparation, Post-Synthesis Ligand Exchange, and Applications in Solar Cells. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 5202-5224.	13.8	86
21	Three-dimensional nano-heterojunction networks: a highly performing structure for fast visible-blind UV photodetectors. <i>Nanoscale</i> , 2017, 9, 2059-2067.	5.6	82
22	Superior Self-Powered Room-Temperature Chemical Sensing with Light-Activated Inorganic Halides Perovskites. <i>Small</i> , 2018, 14, 1702571.	10.0	82
23	Janus Conductive/Insulating Microporous Ion-Sieving Membranes for Stable Li-S Batteries. <i>ACS Nano</i> , 2020, 14, 13852-13864.	14.6	74
24	Engineering of SnO ₂ -Graphene Oxide Nanoheterojunctions for Selective Room-Temperature Chemical Sensing and Optoelectronic Devices. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 39549-39560.	8.0	72
25	Highly porous TiO ₂ films for dye sensitized solar cells. <i>Journal of Materials Chemistry</i> , 2012, 22, 14254.	6.7	63
26	Low-Voltage High-Performance UV Photodetectors: An Interplay between Grain Boundaries and Debye Length. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 2606-2615.	8.0	62
27	Nanoarchitectonics of Visible-Blind Ultraviolet Photodetector Materials: Critical Features and Nano-Microfabrication. <i>Advanced Optical Materials</i> , 2019, 7, 1800580.	7.3	57
28	Understanding the activity and stability of flame-made Co ₃ O ₄ spinels: A route towards the scalable production of highly performing OER electrocatalysts. <i>Chemical Engineering Journal</i> , 2022, 429, 132180.	12.7	56
29	NiO-ZnO Nanoheterojunction Networks for Room-Temperature Volatile Organic Compounds Sensing. <i>Advanced Optical Materials</i> , 2018, 6, 1800677.	7.3	54
30	Understanding the Role of Vanadium Vacancies in BiVO ₄ for Efficient Photoelectrochemical Water Oxidation. <i>Chemistry of Materials</i> , 2021, 33, 3553-3565.	6.7	54
31	Room-temperature photodetectors and VOC sensors based on graphene oxide-ZnO nano-heterojunctions. <i>Nanoscale</i> , 2019, 11, 22932-22945.	5.6	51
32	Tunable Band-Selective UV-Photodetectors by 3D Self-Assembly of Heterogeneous Nanoparticle Networks. <i>Advanced Functional Materials</i> , 2016, 26, 7359-7366.	14.9	50
33	Efficient ceria nanostructures for enhanced solar fuel production via high-temperature thermochemical redox cycles. <i>Journal of Materials Chemistry A</i> , 2016, 4, 9614-9624.	10.3	49
34	Miniaturized Bio-and Chemical-Sensors for Point-of-Care Monitoring of Chronic Kidney Diseases. <i>Sensors</i> , 2018, 18, 942.	3.8	49
35	An Outlook of Recent Advances in Chemiresistive Sensor-Based Electronic Nose Systems for Food Quality and Environmental Monitoring. <i>Sensors</i> , 2021, 21, 2271.	3.8	48
36	Flame spray pyrolysis synthesis and aerosol deposition of nanoparticle films. <i>AIChE Journal</i> , 2012, 58, 3578-3588.	3.6	47

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37	Strain Engineering of Wave-like Nanofibers for Dynamically Switchable Adhesive/Repulsive Surfaces. <i>Advanced Functional Materials</i> , 2016, 26, 399-407.	14.9	47
38	Nanostructured Dielectric Fractals on Resonant Plasmonic Metasurfaces for Selective and Sensitive Optical Sensing of Volatile Compounds. <i>Advanced Materials</i> , 2018, 30, e1800931.	21.0	47
39	Self-assembly of Au nano-islands with tuneable organized disorder for highly sensitive SERS. <i>Journal of Materials Chemistry C</i> , 2019, 7, 6308-6316.	5.5	47
40	Self-assembly dynamics and accumulation mechanisms of ultra-fine nanoparticles. <i>Nanoscale</i> , 2015, 7, 9859-9867.	5.6	45
41	Robust Sub-monolayers of Co_3O_4 Nano-islands: A Highly Transparent Morphology for Efficient Water Oxidation Catalysis. <i>Advanced Energy Materials</i> , 2016, 6, 1600697.	19.5	44
42	A Review of Metal and Metal Oxide Based Heterogeneous Catalysts for Electroreduction of Carbon Dioxide. <i>Advanced Sustainable Systems</i> , 2018, 2, 1800028.	5.3	44
43	Unconventional direct synthesis of Ni_3N with N-vacancies for efficient and stable hydrogen evolution. <i>Energy and Environmental Science</i> , 2022, 15, 185-195.	30.8	44
44	Integrating Low-Cost Earth-Abundant Co Catalysts with Encapsulated Perovskite Solar Cells for Efficient and Stable Overall Solar Water Splitting. <i>Advanced Functional Materials</i> , 2021, 31, 2008245.	14.9	43
45	Ultra-rapid synthesis of highly porous and robust hierarchical ZnO films for dye sensitized solar cells. <i>Solar Energy</i> , 2016, 136, 553-559.	6.1	42
46	Structural Engineering of Nano-Grain Boundaries for Low-Voltage UV-Photodetectors with Gigantic Photo-to Dark-Current Ratios. <i>Advanced Optical Materials</i> , 2016, 4, 1787-1795.	7.3	42
47	One-Step Synthesis of Porous Transparent Conductive Oxides by Hierarchical Self-Assembly of Aluminum-Doped ZnO Nanoparticles. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 9589-9599.	8.0	41
48	Earth-abundant transition metal oxides with extraordinary reversible oxygen exchange capacity for efficient thermochemical synthesis of solar fuels. <i>Nano Energy</i> , 2018, 50, 347-358.	16.0	40
49	P-type Charge Transport and Selective Gas Sensing of All-Inorganic Perovskite Nanocrystals. , 2020, 2, 1368-1374.		40
50	Size-selected agglomerates of SnO ₂ nanoparticles as gas sensors. <i>Journal of Applied Physics</i> , 2009, 106, 084316.	2.5	39
51	Engineering of Chitosan-Hydroxyapatite-Magnetite Hierarchical Scaffolds for Guided Bone Growth. <i>Materials</i> , 2019, 12, 2321.	2.9	37
52	Highly efficient and durable solar thermal energy harvesting <i>via</i> scalable hierarchical coatings inspired by stony corals. <i>Energy and Environmental Science</i> , 2022, 15, 1893-1906.	30.8	37
53	Hierarchical amorphous nanofibers for transparent inherently super-hydrophilic coatings. <i>Journal of Materials Chemistry A</i> , 2014, 2, 15575-15581.	10.3	36
54	Superamphiphobic Bionic Proboscis for Contamination-Free Manipulation of Nano and Core-Shell Droplets. <i>Small</i> , 2017, 13, 1603688.	10.0	34

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55	“It struck at the heart of who I thought I was”™: A meta-synthesis of the qualitative literature examining the experiences of people with multiple sclerosis. <i>Health Expectations</i> , 2020, 23, 1007-1027.	2.6	34
56	Flexible Transparent Hierarchical Nanomesh for Rose Petal-Like Droplet Manipulation and Lossless Transfer. <i>Advanced Materials Interfaces</i> , 2015, 2, 1500071.	3.7	31
57	One-Step Rapid and Scalable Flame Synthesis of Efficient WO ₃ Photoanodes for Water Splitting. <i>ChemPlusChem</i> , 2018, 83, 569-576.	2.8	31
58	Scalable Synthesis of Efficient Water Oxidation Catalysts: Insights into the Activity of Flame-Made Manganese Oxide Nanocrystals. <i>ChemSusChem</i> , 2015, 8, 4162-4171.	6.8	30
59	Non-Periodic Epsilon-Near-Zero Metamaterials at Visible Wavelengths for Efficient Non-Resonant Optical Sensing. <i>Nano Letters</i> , 2020, 20, 3970-3977.	9.1	30
60	Ultraporous superhydrophobic gas-permeable nano-layers by scalable solvent-free one-step self-assembly. <i>Nanoscale</i> , 2016, 8, 6085-6093.	5.6	29
61	Lattice Expansion in Optimally Doped Manganese Oxide: An Effective Structural Parameter for Enhanced Thermochemical Water Splitting. <i>ACS Catalysis</i> , 2019, 9, 9880-9890.	11.2	29
62	Peptide Programmed Hydrogels as Safe Sanctuary Microenvironments for Cell Transplantation. <i>Advanced Functional Materials</i> , 2020, 30, 1900390.	14.9	29
63	Surface Functionalization and Texturing of Optical Metasurfaces for Sensing Applications. <i>Chemical Reviews</i> , 2022, 122, 14990-15030.	47.7	29
64	Photoactivity and Stability Co-Enhancement: When Localized Plasmons Meet Oxygen Vacancies in MgO. <i>Small</i> , 2018, 14, e1803233.	10.0	28
65	Photonic Fractal Metamaterials: A Metal-Semiconductor Platform with Enhanced Volatile Compound Sensing Performance. <i>Advanced Materials</i> , 2020, 32, e2002471.	21.0	27
66	Superior Self-Charged and -Powered Chemical Sensing with High Performance for NO ₂ Detection at Room Temperature. <i>Advanced Optical Materials</i> , 2020, 8, 1901863.	7.3	27
67	Flame aerosol deposition of Y ₂ O ₃ :Eu nanophosphor screens and their photoluminescent performance. <i>Nanotechnology</i> , 2010, 21, 225603.	2.6	26
68	Fabrication and cyto-compatibility of Fe ₃ O ₄ /SiO ₂ /graphene-CdTe QDs/CS nanocomposites for drug delivery. <i>Colloids and Surfaces B: Biointerfaces</i> , 2014, 117, 466-472.	5.0	26
69	Multifunctional nanostructures of Au-Bi ₂ O ₃ fractals for CO ₂ reduction and optical sensing. <i>Journal of Materials Chemistry A</i> , 2020, 8, 11233-11245.	10.3	25
70	Scalable flame synthesis of SiO ₂ nanowires: dynamics of growth. <i>Nanotechnology</i> , 2010, 21, 465604.	2.6	24
71	Structural Stability and Performance of Noble Metal-Free SnO ₂ -Based Gas Sensors. <i>Biosensors</i> , 2012, 2, 221-233.	4.7	23
72	Ultra-Porous Nanoparticle Networks: A Biomimetic Coating Morphology for Enhanced Cellular Response and Infiltration. <i>Scientific Reports</i> , 2016, 6, 24305.	3.3	23

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73	Zinc Titanate Nanoarrays with Superior Optoelectrochemical Properties for Chemical Sensing. ACS Applied Materials & Interfaces, 2019, 11, 29255-29267.	8.0	23
74	Light-activated inorganic CsPbBr ₂ I perovskite for room-temperature self-powered chemical sensing. Physical Chemistry Chemical Physics, 2019, 21, 24187-24193.	2.8	23
75	High-Temperature One-Step Synthesis of Efficient Nanostructured Bismuth Vanadate Photoanodes for Water Oxidation. Energy Technology, 2019, 7, 1801052.	3.8	23
76	Stable Acidic Water Oxidation with a Cobalt-Iron-Lead Oxide Catalyst Operating via a Cobalt-Selective Self-Healing Mechanism. Angewandte Chemie - International Edition, 2021, 60, 15821-15826.	13.8	23
77	Optimally Hierarchical Nanostructured Hydroxyapatite Coatings for Superior Prosthesis Biointegration. ACS Applied Materials & Interfaces, 2018, 10, 24840-24849.	8.0	20
78	Direct Observation of Oxygen Evolution and Surface Restructuring on Mn ₂ O ₃ Nanocatalysts Using <i>In Situ</i> and <i>Ex Situ</i> Transmission Electron Microscopy. Nano Letters, 2021, 21, 7012-7020.	9.1	19
79	Continuous Growth Synthesis of Zinc Oxide Nanocrystals with Tunable Size and Doping. Chemistry of Materials, 2019, 31, 9604-9613.	6.7	18
80	Tuning the selectivity of highly sensitive chemiresistive nanoparticle networks by encapsulation with metal-organic frameworks. Journal of Materials Chemistry C, 2021, 9, 17331-17340.	5.5	17
81	High-Temperature Large-Scale Self-Assembly of Highly Faceted Monocrystalline Au Metasurfaces. Advanced Functional Materials, 2019, 29, 1806387.	14.9	16
82	Semiconductor Nanowire Arrays for High-Performance Miniaturized Chemical Sensing. Advanced Functional Materials, 2022, 32, 2107596.	14.9	16
83	Cassie-Levitated Droplets for Distortion-Free Low-Energy Solid-Liquid Interactions. ACS Applied Materials & Interfaces, 2018, 10, 13999-14007.	8.0	14
84	Dual-Ion Flux Management for Stable High Areal Capacity Lithium-Sulfur Batteries. Advanced Energy Materials, 2022, 12, .	19.5	14
85	Nanoscale TiO ₂ Coatings Improve the Stability of an Earth-Abundant Cobalt Oxide Catalyst during Acidic Water Oxidation. ACS Applied Materials & Interfaces, 2022, 14, 33130-33140.	8.0	13
86	Dynamically Gas-Phase Switchable Super(de)wetting States by Reversible Amphiphilic Functionalization: A Powerful Approach for Smart Fluid Gating Membranes. Advanced Functional Materials, 2018, 28, 1704423.	14.9	12
87	Nanomaterials-based UV photodetectors. , 2019, , 123-149.		12
88	Self-assembly of noble metal-free graphene-copper plasmonic metasurfaces. Journal of Materials Chemistry C, 2020, 8, 11896-11905.	5.5	12
89	From Stochastic Self-Assembly of Nanoparticles to Nanostructured (Photo)Electrocatalysts for Renewable Power Applications via Scalable Flame Synthesis. Advanced Functional Materials, 2022, 32, .	14.9	12
90	Flame-made ultra-porous TiO ₂ layers for perovskite solar cells. Nanotechnology, 2016, 27, 505403.	2.6	11

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91	Surface-Structured Cocatalyst Foils Unraveling a Pathway to High-Performance Solar Water Splitting. <i>Advanced Energy Materials</i> , 2022, 12, 2102752.	19.5	11
92	When Less Gold is More: Selective Attomolar Biosensing at the Nanoscale. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	11
93	Revealing Atomic Structure and Oxidation States of Dopants in Charge-Ordered Nanoparticles for Migration-Promoted Oxygen-Exchange Capacity. <i>Chemistry of Materials</i> , 2019, 31, 5769-5777.	6.7	10
94	Durable Electrooxidation of Acidic Water Catalysed by a Cobalt-Bismuth-based Oxide Composite: An Unexpected Role of the F-doped SnO ₂ Substrate. <i>ChemCatChem</i> , 2022, 14, .	3.7	9
95	Resonant Dielectric Metagratings for Response Intensified Optical Sensing. <i>Advanced Functional Materials</i> , 2022, 32, 2103143.	14.9	8
96	Using UV-Responsive Nanoparticles to Provide <i>In Situ</i> Control of Growth Factor Delivery and a More Constant Release Profile from a Hydrogel Environment. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 12068-12076.	8.0	7
97	Nanoparticle-based biomedical sensors. <i>Frontiers of Nanoscience</i> , 2020, 15, 247-269.	0.6	6
98	Engineering Fractal Photonic Metamaterials by Stochastic Self-Assembly of Nanoparticles. <i>Advanced Photonics Research</i> , 2021, 2, 2100020.	3.6	6
99	Intrinsic Catalytic Activity for the Alkaline Hydrogen Evolution of Layer-Expanded MoS ₂ Functionalized with Nanoscale Ni and Co Sulfides. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 7117-7133.	6.7	6
100	High Performance Flame-Made Ultraporous ZnO-Based QCM Sensor For Acetaldehyde. , 2019, , .		5
101	Paper-Like Writable Nanoparticle Network Sheets for Maskless MOF Patterning. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	5
102	Nahinfrarotaktive Bleichalkogenid-Quantenpunkte: Herstellung, postsynthetischer Ligandenaustausch und Anwendungen in Solarzellen. <i>Angewandte Chemie</i> , 2019, 131, 5256-5279.	2.0	4
103	Personalizing Medicine and Technologies to Address the Experiences and Needs of People with Multiple Sclerosis. <i>Journal of Personalized Medicine</i> , 2021, 11, 791.	2.5	4
104	Shielding Surfaces from Viruses and Bacteria with a Multiscale Coating. <i>Advanced Science</i> , 2022, 9, .	11.2	4
105	Si:WO ₃ , 2010, , .		3
106	Oxygen Evolution Reaction: Engineering the Activity and Stability of MOF-Nanocomposites for Efficient Water Oxidation (<i>Adv. Energy Mater.</i> 16/2021). <i>Advanced Energy Materials</i> , 2021, 11, 2170063.	19.5	3
107	Stable Acidic Water Oxidation with a Cobalt-Iron-Lead Oxide Catalyst Operating via a Cobalt-Selective Self-Healing Mechanism. <i>Angewandte Chemie</i> , 2021, 133, 15955-15960.	2.0	3
108	Self-adhesive flexible patches of oxide heterojunctions with tailored band alignments for electrocatalytic H ₂ O ₂ generation. <i>Journal of Materials Chemistry A</i> , 2021, 9, 26727-26740.	10.3	3

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109	Photonic Metamaterials: Photonic Fractal Metamaterials: A Metal-Semiconductor Platform with Enhanced Volatile Compound Sensing Performance (Adv. Mater. 50/2020). Advanced Materials, 2020, 32, 2070376.	21.0	2
110	Advances in Wearable Sensing Technologies and Their Impact for Personalized and Preventive Medicine. , 0, , .		2
111	Optoelectronics properties of tungsten oxide nanoparticle networks deposited by flame spray pyrolysis. MRS Advances, 2018, 3, 3391-3396.	0.9	1
112	Effect of specific surface area on syngas production performance of pure ceria in high-temperature thermochemical redox cycling coupled to methane partial oxidation. RSC Advances, 2020, 10, 36617-36626.	3.6	1
113	Disclosing the Sensitivity and Selectivity of Metal Oxide/Graphene Oxide-Based Chemoresistors towards VOCs. Engineering Proceedings, 2021, 6, .	0.4	1
114	Aerosol synthesis of chemoresistive gas sensors: Materials, structures and performances. , 2010, , .		0
115	Dispersed Nanoelectrodes for High Performance Gas Sensors. Materials Research Society Symposia Proceedings, 2011, 1292, 93.	0.1	0
116	FITC-Functionalized TiO ₂ Nanoparticles for Simultaneous Neuron Imaging and in Cell Photocatalysis. Materials Research Society Symposia Proceedings, 2014, 1694, 13.	0.1	0
117	Disposable micro stir bars by photodegradable organic encapsulation of hematite-magnetite nanoparticles. RSC Advances, 2016, 6, 33843-33850.	3.6	0
118	Ultrasensitive room-temperature chemical sensors by Ag-decorated ultraporous ZnO nanoparticle networks. , 2019, , .		0
119	Flame assisted synthesis of nanostructures for device applications. Advances in Physics: X, 2022, 7, .	4.1	0