

# Nanoparticle synthesis assisted by machine learning

Nature Reviews Materials

6, 701-716

DOI: [10.1038/s41578-021-00337-5](https://doi.org/10.1038/s41578-021-00337-5)

Citation Report

#	ARTICLE	IF	CITATIONS
1	Self-Driving Platform for Metal Nanoparticle Synthesis: Combining Microfluidics and Machine Learning. <i>Advanced Functional Materials</i> , 2021, 31, 2106725.	14.9	57
2	New trends in nonconventional carbon dot synthesis. <i>Trends in Chemistry</i> , 2021, 3, 943-953.	8.5	28
3	Rapid synthesis of supported single metal nanoparticles and effective removal of stabilizing ligands. <i>Journal of Materials Chemistry A</i> , 2021, 9, 24283-24289.	10.3	7
4	Automated COVID-19 and Heart Failure Detection Using DNA Pattern Technique with Cough Sounds. <i>Diagnostics</i> , 2021, 11, 1962.	2.6	18
5	Machine learning for next-generation nanotechnology in healthcare. <i>Matter</i> , 2021, 4, 3078-3080.	10.0	5
6	Bright Future of Gold Nanoclusters in Theranostics. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 49581-49588.	8.0	35
7	Machine learning and materials informatics approaches in the analysis of physical properties of carbon nanotubes: A review. <i>Computational Materials Science</i> , 2022, 201, 110939.	3.0	41
8	Machine learning-based analysis and prediction of the interfacial corrosion processes of copper cathode plates during the electrolytic production of copper powders. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2022, 73, 811-825.	1.5	0
9	Graphene Quantum Dots with Improved Fluorescence Activity via Machine Learning: Implications for Fluorescence Monitoring. <i>ACS Applied Nano Materials</i> , 2022, 5, 2728-2737.	5.0	7
10	Computational modelling and microfluidics as emerging approaches to synthesis of silver nanoparticles – A review. <i>Chemical Engineering Journal</i> , 2022, 436, 135178.	12.7	25
11	Regulating the Tip Effect on Single-Atom and Cluster Catalysts: Forming Reversible Oxygen Species with High Efficiency in Chlorine Evolution Reaction. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	13.8	76
12	Regulating the Tip Effect on Single-Atom and Cluster Catalysts: Forming Reversible Oxygen Species with High Efficiency in Chlorine Evolution Reaction. <i>Angewandte Chemie</i> , 2022, 134, .	2.0	25
13	Recent advances in biomaterial-boosted adoptive cell therapy. <i>Chemical Society Reviews</i> , 2022, 51, 1766-1794.	38.1	29
14	Smart materials: rational design in biosystems via artificial intelligence. <i>Trends in Biotechnology</i> , 2022, 40, 987-1003.	9.3	26
15	Autonomous Nanocrystal Doping by Self-Driving Fluidic Micro-Processors. <i>Advanced Intelligent Systems</i> , 2022, 4, .	6.1	16
16	Autonomous high-throughput computations in catalysis. <i>Chem Catalysis</i> , 2022, 2, 940-956.	6.1	14
17	Merging data curation and machine learning to improve nanomedicines. <i>Advanced Drug Delivery Reviews</i> , 2022, 183, 114172.	13.7	34
18	Artificial intelligence to bring nanomedicine to life. <i>Advanced Drug Delivery Reviews</i> , 2022, 184, 114194.	13.7	39

#	ARTICLE	IF	CITATIONS
19	Nanochemistry advancing photon conversion in rare-earth nanostructures for theranostics. Coordination Chemistry Reviews, 2022, 460, 214486.	18.8	39
20	Controlling Nucleation Pathways in Zeolite Crystallization: Seeding Conceptual Methodologies for Advanced Materials Design. Journal of the American Chemical Society, 2021, 143, 21446-21460.	13.7	56
21	Size-Controllable Eu-MOFs through Machine Learning Technology: Application for High Sensitive Ions and Small-Molecular Identification. Small Methods, 2022, , 2200208.	8.6	5
22	Materials Data toward Machine Learning: Advances and Challenges. Journal of Physical Chemistry Letters, 2022, 13, 3965-3977.	4.6	12
23	Prediction and Design of Nanozymes using Explainable Machine Learning. Advanced Materials, 2022, 34, e2201736.	21.0	42
24	Trends in Droplet Microfluidics: From Droplet Generation to Biomedical Applications. Langmuir, 2022, 38, 6233-6248.	3.5	30
25	Roadmap to next-generation cancer vaccines. Journal of Controlled Release, 2022, 347, 308-313.	9.9	7
26	Multivariate analysis of peptide-driven nucleation and growth of Au nanoparticles. , 2022, 1, 427-439.		5
27	High-Throughput Computational Discovery and Intelligent Design of Two-Dimensional Functional Materials for Various Applications. Accounts of Materials Research, 2022, 3, 572-583.	11.7	21
28	Engineered 2D materials for optical bioimaging and path toward therapy and tissue engineering. Journal of Materials Research, 2022, 37, 1689-1713.	2.6	12
29	Emerging Chemical Sensing Technologies: Recent Advances and Future Trends. Surfaces, 2022, 5, 318-320.	2.3	0
30	Materiomically Designed Polymeric Vehicles for Nucleic Acids: Quo Vadis?. ACS Applied Bio Materials, 2022, 5, 2507-2535.	4.6	4
31	Enhanced Aggregation-Induced Emission Activity of Metal-Organic Frameworks by Using Machine Learning Technology. ACS Sustainable Chemistry and Engineering, 0, , .	6.7	0
32	Electron-phonon coupling strength from <i>ab initio</i> frozen-phonon approach. Physical Review Materials, 2022, 6, .	2.4	10
33	Machine Learning for Electrocatalyst and Photocatalyst Design and Discovery. Chemical Reviews, 2022, 122, 13478-13515.	47.7	120
34	The application of principal components analysis for the comparison of chemical and physical properties among activated carbon models. Materials Letters, 2022, 325, 132864.	2.6	9
35	Microwave synthesis of upconverting nanoparticles with bis(2-ethylhexyl) adipate. RSC Advances, 2022, 12, 23026-23038.	3.6	2
36	Cascade integration of nonlinear phenomena exhibited by monometallic nanoparticles. Journal of Physics: Conference Series, 2022, 2313, 012016.	0.4	0

#	ARTICLE	IF	CITATIONS
37	Understanding Synthesisâ€“Structureâ€“Performance Correlations of Nanoarchitected Activated Carbons for Electrochemical Applications and Carbon Capture. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	32
38	Intelligent control of nanoparticle synthesis on microfluidic chips with machine learning. <i>NPG Asia Materials</i> , 2022, 14, .	7.9	24
39	Slotted metallic nanospheres with both electric and magnetic resonances for solar thermal conversion. <i>Renewable Energy</i> , 2022, 197, 79-88.	8.9	9
40	Nanocomposites based on doped ZnO nanoparticles for antibacterial applications. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2022, 652, 129871.	4.7	10
41	Factors affecting the growth formation of nanostructures and their impact on electrode materials: A systematic review. <i>Materials Today Physics</i> , 2022, 27, 100844.	6.0	28
42	Accelerating colloidal quantum dot innovation with algorithms and automation. <i>Materials Advances</i> , 2022, 3, 6950-6967.	5.4	7
43	Emerging nanosensor platforms and machine learning strategies toward rapid, point-of-need small-molecule metabolite detection and monitoring. <i>Chemical Science</i> , 2022, 13, 11009-11029.	7.4	8
45	Exploiting nano-iron binding with aptamers for the specific sensing of cancer biomarkers in the terahertz frequencies. , 2022, , .		1
46	GÃ¶kkuÅŸaÅŸÄ± alabalÄ±ÅŸÄ± gonad hÃ¼cre hattÄ±-2 (RTG-2) ÅŸerinde Eruca vesicaria'dan elde edilen gÃ¼mÅŸÃ¼ nanoparÅŸacÄ±klarÄ±n sitotoksitesisi. GÃ¼mÅŸÃ¼hane Åœeniversitesi Fen Bilimleri EnstitÃ¼sÃ¼ Dergisi, 0, , .	0.0	0
47	Biogenic Synthesis of Copper-Based Nanomaterials Using Plant Extracts and Their Applications: Current and Future Directions. <i>Nanomaterials</i> , 2022, 12, 3312.	4.1	14
48	Where Nanosensors Meet Machine Learning: Prospects and Challenges in Detecting Disease X. <i>ACS Nano</i> , 2022, 16, 13279-13293.	14.6	16
49	Machine Learning Assisted Graphdiyne-Based Nanozyme Discovery. , 2022, 4, 2134-2142.		12
50	An artificial intelligence enabled chemical synthesis robot for exploration and optimization of nanomaterials. <i>Science Advances</i> , 2022, 8, .	10.3	41
51	Machine Learning-Aided Design of Gold Coreâ€“Shell Nanocatalysts toward Enhanced and Selective Photooxygenation. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 46471-46480.	8.0	4
52	The optical properties of dumbbell-type nanorods for solar photothermal conversion. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 27949-27956.	2.8	6
53	Creating ground truth for nanocrystal morphology: a fully automated pipeline for unbiased transmission electron microscopy analysis. <i>Nanoscale</i> , 2022, 14, 15327-15339.	5.6	1
54	Machine learning-driven advanced development of carbon-based luminescent nanomaterials. <i>Journal of Materials Chemistry C</i> , 2022, 10, 17431-17450.	5.5	6
55	Machine Learning Guided Discovery of Superoxide Dismutase Nanozymes for Androgenetic Alopecia. <i>Nano Letters</i> , 2022, 22, 8592-8600.	9.1	21

#	ARTICLE	IF	CITATIONS
56	Nanomaterial and Interface Advances in Immunoassay Biosensors. <i>Journal of Physical Chemistry C</i> , 2022, 126, 17804-17815.	3.1	6
57	Hierarchical Materials from High Information Content Macromolecular Building Blocks: Construction, Dynamic Interventions, and Prediction. <i>Chemical Reviews</i> , 2022, 122, 17397-17478.	47.7	23
58	A Nanomedicine Structure-Activity Framework for Research, Development, and Regulation of Future Cancer Therapies. <i>ACS Nano</i> , 2022, 16, 17497-17551.	14.6	10
59	Text-based representations with interpretable machine learning reveal structure-property relationships of polybenzenoid hydrocarbons. <i>Journal of Physical Organic Chemistry</i> , 2023, 36, .	1.9	6
60	Machine learning methods for aerosol synthesis of single-walled carbon nanotubes. <i>Carbon</i> , 2023, 202, 76-82.	10.3	6
61	Biomass-based materials for solar-powered seawater evaporation. <i>Science of the Total Environment</i> , 2023, 858, 160003.	8.0	13
62	Fluorescent Multifunctional Organic Nanoparticles for Drug Delivery and Bioimaging: A Tutorial Review. <i>Pharmaceutics</i> , 2022, 14, 2498.	4.5	7
63	Development of coarse-grained models of liquid water by deep neural networks for simulating acoustic vibrations of nanostructures in aqueous environment. <i>International Journal for Multiscale Computational Engineering</i> , 2022, , .	1.2	0
64	Machine learning utilized for the development of proton exchange membrane electrolyzers. <i>Journal of Power Sources</i> , 2023, 556, 232389.	7.8	6
65	The Application of Artificial Intelligence in Magnetic Hyperthermia Based Research. <i>Future Internet</i> , 2022, 14, 356.	3.8	4
66	Photonic Crystal-Integrated Optoelectronic Devices with Naked-Eye Visualization and Digital Readout for High-Resolution Detection of Ultratrace Analytes. <i>Advanced Materials</i> , 2023, 35, .	21.0	4
67	Toward Quantitative Surface-Enhanced Raman Scattering with Plasmonic Nanoparticles: Multiscale View on Heterogeneities in Particle Morphology, Surface Modification, Interface, and Analytical Protocols. <i>Journal of the American Chemical Society</i> , 2022, 144, 22337-22351.	13.7	26
68	Recent Development of Fluorescent Nanodiamonds for Optical Biosensing and Disease Diagnosis. <i>Biosensors</i> , 2022, 12, 1181.	4.7	19
69	Experimental and Computational Approaches to Sulfonated Poly(arylene ether sulfone) Synthesis Using Different Halogen Atoms at the Reactive Site. <i>Membranes</i> , 2022, 12, 1286.	3.0	0
70	Re-envisioning the design of nanomedicines: harnessing automation and artificial intelligence. <i>Expert Opinion on Drug Delivery</i> , 2023, 20, 241-257.	5.0	6
71	Oriented Assembled Prussian Blue Analogue Framework for Confined Catalytic Decomposition of Ammonium Perchlorate. <i>Small</i> , 2023, 19, .	10.0	8
72	Machine Learning Analysis of Reaction Parameters in UV-Mediated Synthesis of Gold Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2023, 127, 1097-1108.	3.1	6
73	Machine and quantum learning for diamond-based quantum applications. <i>Materials for Quantum Technology</i> , 2023, 3, 012001.	3.1	2

#	ARTICLE	IF	CITATIONS
74	Validating and Utilizing Machine Learning Methods to Investigate the Impacts of Synthesis Parameters in Gold Nanoparticle Synthesis. <i>Journal of Physical Chemistry C</i> , 2023, 127, 1117-1125.	3.1	5
75	Machine Learning-Assisted Nanozyme Design: Lessons from Materials and Engineered Enzymes. <i>Advanced Materials</i> , 2024, 36, .	21.0	14
76	Lattice Oxygen Activation for Enhanced Electrochemical Oxygen Evolution. <i>Journal of Physical Chemistry C</i> , 2023, 127, 2147-2159.	3.1	6
77	The rise of self-driving labs in chemical and materials sciences. , 2023, 2, 483-492.		63
78	Machine learning for nanoplasmonics. <i>Nature Nanotechnology</i> , 2023, 18, 111-123.	31.5	15
79	Out-of-oven rapid synthesis of entropy stabilized oxides using radio frequency heating. <i>Journal of Materials Research and Technology</i> , 2023, 24, 1150-1161.	5.8	0
80	AlphaFlow: autonomous discovery and optimization of multi-step chemistry using a self-driven fluidic lab guided by reinforcement learning. <i>Nature Communications</i> , 2023, 14, .	12.8	32
81	Ytterbium-Doped Lead-Halide Perovskite Nanocrystals: Synthesis, Near-Infrared Emission, and Open-Source Machine Learning Model for Prediction of Optical Properties. <i>Nanomaterials</i> , 2023, 13, 744.	4.1	7
82	A review on microfluidic-assisted nanoparticle synthesis, and their applications using multiscale simulation methods. , 2023, 18, .		16
83	Closed-loop optimization of nanoparticle synthesis enabled by robotics and machine learning. <i>Matter</i> , 2023, 6, 677-690.	10.0	4
84	Review of roll-to-roll fabrication techniques for colloidal quantum dot solar cells. <i>Journal of Electronic Science and Technology</i> , 2023, 21, 100189.	3.6	2
85	In silico approaches for polymeric nanocomposites. , 2023, , 503-531.		0
86	Retrosynthesis from transforms to predictive sustainable chemistry and nanotechnology: a brief tutorial review. <i>Green Chemistry</i> , 2023, 25, 2971-2991.	9.0	3
87	Carbon Dots for Electroluminescent Light-Emitting Diodes: Recent Progress and Future Prospects. <i>Advanced Materials</i> , 2023, 35, .	21.0	26
88	Combinatorial synthesis for AI-driven materials discovery. , 2023, 2, 493-504.		11
89	Machine Learning Enhanced Optical Microscopy for the Rapid Morphology Characterization of Silver Nanoparticles. <i>ACS Applied Materials &amp; Interfaces</i> , 2023, 15, 18244-18251.	8.0	3
90	Knowledge-Based Design of Multifunctional Polymeric Nanoparticles. <i>Handbook of Experimental Pharmacology</i> , 2023, , .	1.8	0
91	Artificial Scanning Electron Microscopy Images Created by Generative Adversarial Networks from Simulated Particle Assemblies. <i>Advanced Intelligent Systems</i> , 2023, 5, .	6.1	1

#	ARTICLE	IF	CITATIONS
92	Artificial Intelligence in Material Engineering: A Review on Applications of Artificial Intelligence in Material Engineering. <i>Advanced Engineering Materials</i> , 2023, 25, .	3.5	5
93	Nanomaterial-based contrast agents. <i>Nature Reviews Methods Primers</i> , 2023, 3, .	21.2	9
94	Lithium-ion battery thermal management via advanced cooling parameters: State-of-the-art review on application of machine learning with exergy, economic and environmental analysis. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2023, 148, 104854.	5.3	3
95	Demonstration of graphene-assisted tunable surface plasmonic resonance sensor using machine learning model. <i>Applied Physics A: Materials Science and Processing</i> , 2023, 129, .	2.3	2
96	The role of machine learning in carbon neutrality: Catalyst property prediction, design, and synthesis for carbon dioxide reduction. <i>EScience</i> , 2023, 3, 100136.	41.6	5
97	Machine Learning-Assisted Clustering of Nanoparticle-Binding Peptides and Prediction of Their Properties. <i>Advanced Theory and Simulations</i> , 0, , .	2.8	1
98	Recent advances in atomically precise metal nanoclusters for electrocatalytic applications. <i>Inorganic Chemistry Frontiers</i> , 2023, 10, 3995-4007.	6.0	5
99	Achieving Digital Catalysis: Strategies for Data Acquisition, Storage and Use. <i>Angewandte Chemie</i> , 2023, 135, .	2.0	1
100	Achieving Digital Catalysis: Strategies for Data Acquisition, Storage and Use. <i>Angewandte Chemie - International Edition</i> , 2023, 62, .	13.8	3
101	AI for Nanomaterials Development in Clean Energy and Carbon Capture, Utilization and Storage (CCUS). <i>ACS Nano</i> , 2023, 17, 9763-9792.	14.6	5
102	Silicon nanoparticles: Comprehensive review on biogenic synthesis and applications in agriculture. <i>Environmental Research</i> , 2023, 232, 116292.	7.5	11
103	Comparison of Derivative-Free Optimization: Energy Optimization of Steam Methane Reforming Process. <i>International Journal of Energy Research</i> , 2023, 2023, 1-20.	4.5	1
104	Equivariant Graph-Representation-Based Actor-Critic Reinforcement Learning for Nanoparticle Design. <i>Journal of Chemical Information and Modeling</i> , 2023, 63, 3731-3741.	5.4	1
105	Synthesis of nanoparticles via microfluidic devices and integrated applications. <i>Mikrochimica Acta</i> , 2023, 190, .	5.0	3
106	Recent Advances and Clinical Potential of Near Infrared Photothermal Conversion Materials for Photothermal Hepatocellular Carcinoma Therapy. <i>Advanced Functional Materials</i> , 2023, 33, .	14.9	8
107	Machine Learning-Directed Predictive Models: Deciphering Complex Energy Transfer in Mn-Doped CsPb(Cl <sub>1-x</sub> Br <sub>x</sub> ) <sub>3</sub> Perovskite Nanocrystals. <i>Chemistry of Materials</i> , 2023, 35, 5401-5411.	6.7	3
108	Synthesis of pure MgFe <sub>2</sub> O <sub>4</sub> nanoparticles: an intelligent prediction approach and experimental validation. <i>Journal of Sol-Gel Science and Technology</i> , 2023, 107, 620-628.	2.4	1
109	Tailoring the Inherent Properties of Biobased Nanoparticles for Nanomedicine. <i>ACS Biomaterials Science and Engineering</i> , 2023, 9, 3972-3986.	5.2	1

#	ARTICLE	IF	CITATIONS
110	Robotic platform for accelerating the high-throughput study of silver nanocrystals in sensitive/selective Hg <sub>2</sub> <sup>+</sup> detection. <i>Chemical Engineering Journal</i> , 2023, 466, 143225.	12.7	5
111	Prediction and analysis of preparation of cellulose nanocrystals with machine learning. <i>Cellulose</i> , 2023, 30, 6273-6287.	4.9	2
112	Converting Nanotoxicity Data to Information Using Artificial Intelligence and Simulation. <i>Chemical Reviews</i> , 2023, 123, 8575-8637.	47.7	10
113	Prospects of Using Machine Learning and Diamond Nanosensing for High Sensitivity SARS-CoV-2 Diagnosis. <i>Magnetochemistry</i> , 2023, 9, 171.	2.4	1
114	SLI-GNN: A Self-Learning-Input Graph Neural Network for Predicting Crystal and Molecular Properties. <i>Journal of Physical Chemistry A</i> , 2023, 127, 5921-5929.	2.5	2
115	Synthesis of CsPbBr <sub>3</sub> in Micro Total Reaction System: Fast Operation Space Mapping and Subsecond Growth Process Monitoring. <i>Small Methods</i> , 2023, 7, .	8.6	0
116	Hydrogel-Based Electrodeposition of Copper Nanoparticles for Selective Detection for Hydrogen Peroxide. <i>Chemosensors</i> , 2023, 11, 384.	3.6	4
117	Structural Transformation of Unconventional-Phase Materials. <i>ACS Nano</i> , 2023, 17, 12935-12954.	14.6	5
118	Artificial Intelligence and Evolutionary Approaches in Particle Technology. <i>KONA Powder and Particle Journal</i> , 2024, 41, 3-25.	1.7	1
119	Design, characterization and applications of nanocolloidal hydrogels. <i>Chemical Society Reviews</i> , 2023, 52, 5317-5339.	38.1	8
120	Applications of machine learning in supercritical fluids research. <i>Journal of Supercritical Fluids</i> , 2023, 202, 106051.	3.2	4
121	Evaluation of the effects of chitosan nanoparticles on polyhydroxy butyrate electrospun scaffolds for cartilage tissue engineering applications. <i>International Journal of Biological Macromolecules</i> , 2023, 249, 126064.	7.5	3
122	Carbon-Based Electrochemical-Free Chlorine Sensors. <i>Advanced Materials Technologies</i> , 2023, 8, .	5.8	0
123	3D-printed microfluidic system for the in situ diagnostics and screening of nanoparticles synthesis parameters. <i>Micro and Nano Engineering</i> , 2023, 20, 100224.	2.9	2
124	Nanomedicine in cancer therapy. <i>Signal Transduction and Targeted Therapy</i> , 2023, 8, .	17.1	30
125	CO <sub>2</sub> Hydrogenation to Gasoline and Aromatics: Mechanistic and Predictive Insights from DFT, DRIFTS and Machine Learning. <i>ChemPlusChem</i> , 0, , .	2.8	0
126	Explainable Machine-Learning Approach for Revealing Complex Synthesis Path-Property Relationships of Nanomaterials. <i>Nanoscale</i> , 0, , .	5.6	0
127	Application of Machine Learning in Material Synthesis and Property Prediction. <i>Materials</i> , 2023, 16, 5977.	2.9	3



#	ARTICLE	IF	CITATIONS
128	The ScholarNet and Artificial Intelligence (AI) Supervisor in Material Science Research. Journal of Physical Chemistry Letters, 0, , 7981-7991.	4.6	1
129	STING agonist-boosted mRNA immunization via intelligent design of nanovaccines for enhancing cancer immunotherapy. National Science Review, 2023, 10, .	9.5	1
130	Machine learning assisted phase and size-controlled synthesis of iron oxide particles. Chemical Engineering Journal, 2023, 473, 145216.	12.7	1
131	Averaging Strategy for Interpretable Machine Learning on Small Datasets to Understand Element Uptake after Seed Nanotreatment. Environmental Science & Technology, 2023, 57, 12760-12770.	10.0	0
132	Communicating Supraparticles to Enable Perceptual, Informationâ€Providing Matter. Advanced Materials, 2023, 35, .	21.0	1
133	Bâ€Site Doping of Metal Halide Perovskite Nanoplatelets Influences Their Optical Properties. Advanced Optical Materials, 0, , .	7.3	2
134	A narrative review of the synthesis, characterization, and applications of iron oxide nanoparticles. , 2023, 18, .		4
135	Incorporation of carbon quantum dots with PEDOT:PSS for high-performance inverted organic solar cells. Synthetic Metals, 2023, 298, 117430.	3.9	3
136	Intelligent nanomaterials for cancer therapy: recent progresses and future possibilities. Medical Review, 2023, .	1.2	0
137	Determination of Thallium in Tea with Preconcentration by Microwave-Assisted Synthesized Molybdenum Disulfide Nanoparticles and Flame Atomic Absorption Spectrometry (FAAS) Analysis. Analytical Letters, 0, , 1-12.	1.8	0
138	How Amorphous Nanomaterials Enhanced Electrocatalytic, SERS, and Mechanical Properties. Jacs Au, 2023, 3, 2660-2676.	7.9	3
139	Glucosylated Hybrid TiO <sub>2</sub> /Polymer Nanomaterials for Actively Targeted Sonodynamic Therapy of Cancer. Small, 2024, 20, .	10.0	0
140	Accelerated room temperature synthesis of desired cesium lead halide perovskite nanocrystals via automated microfluidic meta learner. Chemical Engineering Science, 2023, 282, 119318.	3.8	1
141	Artificial neural network modelling hydrodenticity for optimal design by microfluidics of polymer nanoparticles to apply in magnetic resonance imaging. Acta Biomaterialia, 2023, 171, 440-450.	8.3	0
142	Evaluating metal oxide nanoparticle (MeOx NP) toxicity with different types of nano descriptors mainly focusing on simple periodic table-based descriptors: a mini-review. Environmental Science: Nano, 2023, 10, 2989-3011.	4.3	2
143	Mechanistic Insights into Copper(I) and Copper(II) Cation Exchange Reactions in CdSe Nanoplatelets. Chemistry of Materials, 0, , .	6.7	0
144	Artificial Intelligence for Surfaceâ€Enhanced Raman Spectroscopy. Small Methods, 2024, 8, .	8.6	1
145	Synthesis Strategy Guided by Decision Tree for Morphology Control of Metal Phosphonates. Inorganic Chemistry, 2023, 62, 18758-18766.	4.0	0

#	ARTICLE	IF	CITATIONS
146	Advanced optical imaging for the rational design of nanomedicines. <i>Advanced Drug Delivery Reviews</i> , 2024, 204, 115138.	13.7	1
147	Exploring and Analyzing the Systemic Delivery Barriers for Nanoparticles. <i>Advanced Functional Materials</i> , 2024, 34, .	14.9	0
148	Highly sensitive detection of circulating tumour cells based on an ASV/CV dual-signal electrochemical strategy. <i>RSC Advances</i> , 2023, 13, 33038-33046.	3.6	0
149	Navigating the Expansive Landscapes of Soft Materials: A User Guide for High-Throughput Workflows. <i>ACS Polymers Au</i> , 2023, 3, 406-427.	4.1	1
150	Harnessing data augmentation to quantify uncertainty in the early estimation of single-photon source quality. <i>Machine Learning: Science and Technology</i> , 2023, 4, 045042.	5.0	0
151	Virtually Possible: Enhancing Quality Control of 3D-Printed Medicines with Machine Vision Trained on Photorealistic Images. <i>Pharmaceutics</i> , 2023, 15, 2630.	4.5	0
152	Accelerated Chemical Science with AI. , 0, , .		0
153	Modeling Biodegradable Free Chlorine Sensor Performance Using Artificial Neural Networks. <i>Advanced Materials Technologies</i> , 2024, 9, .	5.8	0
154	Machine learning-driven approaches for synthesizing carbon dots and their applications in photoelectrochemical sensors. <i>Inorganic Chemistry Communication</i> , 2024, 159, 111859.	3.9	0
155	Accelerating the Design of Multishell Upconverting Nanoparticles through Bayesian Optimization. <i>Nano Letters</i> , 2023, 23, 11129-11136.	9.1	0
156	Machine learning-based prediction and generation model for creep rupture time of Nickel-based alloys. <i>Computational Materials Science</i> , 2024, 233, 112736.	3.0	0
157	Artificial intelligence-powered electronic skin. <i>Nature Machine Intelligence</i> , 2023, 5, 1344-1355.	16.0	4
159	Machine learning aided design of Bi <sub>2</sub> WO <sub>6</sub> /MIL-53(Al) nanocomposites. <i>Computational Materials Science</i> , 2024, 233, 112737.	3.0	0
160	Metal oxide -based electrical/electrochemical sensors for health monitoring systems. <i>TrAC - Trends in Analytical Chemistry</i> , 2024, 171, 117509.	11.4	1
161	Simulation-based approaches for drug delivery systems: Navigating advancements, opportunities, and challenges. <i>Journal of Molecular Liquids</i> , 2024, 395, 123888.	4.9	2
162	The application of nanomaterials in designing promising diagnostic, preservation, and therapeutic strategies in combating male infertility: A review. <i>Journal of Drug Delivery Science and Technology</i> , 2024, 92, 105356.	3.0	0
163	Exploring the emerging trends in the synthesis and theranostic paradigms of cerium oxide nanoparticles (CeONPs): A comprehensive review. <i>Materials Today Chemistry</i> , 2024, 35, 101894.	3.5	0
164	AI-enhanced biomedical micro/nanorobots in microfluidics. <i>Lab on A Chip</i> , 2024, 24, 1419-1440.	6.0	0

#	ARTICLE	IF	CITATIONS
165	Recent advancement of hybrid nanoparticles synthesis and applications in lung cancer management. , 2024, , 179-212.		0
166	Expanding the Horizons of Machine Learning in Nanomaterials to Chiral Nanostructures. Advanced Materials, 2024, 36, .	21.0	1
167	Artificial intelligence generates novel 3D printing formulations. Applied Materials Today, 2024, 36, 102061.	4.3	1
168	Decoding Nanomaterialâ€Biosystem Interactions through Machine Learning. Angewandte Chemie - International Edition, 2024, 63, .	13.8	0
169	Decoding Nanomaterialâ€Biosystem Interactions through Machine Learning. Angewandte Chemie, 2024, 136, .	2.0	0
170	Experimental Study of a Prototype of a Superconducting Sigma Neuron for Adiabatic Neural Networks. Journal of Experimental and Theoretical Physics, 2023, 137, 888-898.	0.9	0
171	Novel trends in mixed oxide electrodes for photoelectrocatalytic wastewater treatment. Current Opinion in Electrochemistry, 2024, 44, 101448.	4.8	0
172	Facilitating excited-state plasmonics and photochemical reaction dynamics. Chemical Physics Reviews, 2024, 5, .	5.7	0
173	Perspectives on Development of Optoelectronic Materials in Artificial Intelligence Age. Chemistry - an Asian Journal, 2024, 19, .	3.3	0
174	Machine Learning Techniques for Improving Nanosensors in Agroenvironmental Applications. Agronomy, 2024, 14, 341.	3.0	1
175	Microbial lipid synthesis based on visible light-driven oxygen doped-graphitic carbon nitride /oleaginous yeast hybrid system. Bioresource Technology, 2024, 397, 130476.	9.6	0
176	Transferring hydroformylation reaction into high-pressure gasâ€Bliquid microfluidic systems: Key achievements and perspectives. Journal of Industrial and Engineering Chemistry, 2024, , .	5.8	0
177	Turmeric extract-mediated biogenic synthesis of Ag@SeO <sub>2</sub> magnetic nanoparticles: characterization, optimization, antibacterial and antioxidant activities. RSC Advances, 2024, 14, 7088-7111.	3.6	0
178	Bespoke Metal Nanoparticle Synthesis at Room Temperature and Discovery of Chemical Knowledge on Nanoparticle Growth via Autonomous Experimentations. Advanced Functional Materials, 0, , .	14.9	0
179	Nitrogen-based nanofertilizers: raw materials, nitrogen assimilation by the plant, and physicochemical variables that affect their release. , 2024, , 161-178.		0