Translocation, distribution and degradation of prochlor nanoparticles in cucumber plants

Nanoscale

10, 1798-1806

DOI: 10.1039/c7nr08107c

Citation Report

#	Article	IF	Citations
1	Fluorophore-free luminescent double-shelled hollow mesoporous silica nanoparticles as pesticide delivery vehicles. Nanoscale, 2018, 10, 20354-20365.	5.6	74
2	MgONPs Can Boost Plant Growth: Evidence from Increased Seedling Growth, Morpho-Physiological Activities, and Mg Uptake in Tobacco (Nicotiana tabacum L.). Molecules, 2018, 23, 3375.	3.8	55
3	Nanotechnology for Plant Disease Management. Agronomy, 2018, 8, 285.	3.0	256
4	The role of adhesion force in the bouncing height of pesticide nanoparticles on the rice (Oryza sativa) leaf surface. Journal of Molecular Liquids, 2018, 272, 92-96.	4.9	19
5	Uptake and Distribution of Fenoxanil-Loaded Mesoporous Silica Nanoparticles in Rice Plants. International Journal of Molecular Sciences, 2018, 19, 2854.	4.1	35
6	Rational Ligand Design To Improve Agrochemical Delivery Efficiency and Advance Agriculture Sustainability. ACS Sustainable Chemistry and Engineering, 2018, 6, 13599-13610.	6.7	37
7	Effect of adhesion force on the height pesticide droplets bounce on impaction with cabbage leaf surfaces. Soft Matter, 2018, 14, 8030-8035.	2.7	28
8	Influence of the surface limiting elasticity modulus on the impact behavior of droplets of difenoconazole-loaded mesoporous silica nanoparticles with associated SDS. Soft Matter, 2018, 14, 6070-6075.	2.7	4
9	Emulsion-based synchronous pesticide encapsulation and surface modification of mesoporous silica nanoparticles with carboxymethyl chitosan for controlled azoxystrobin release. Chemical Engineering Journal, 2018, 348, 244-254.	12.7	146
10	Synthesis and Structural Characterization of a Ubiquitous Transformation Product (BTS 40348) of Fungicide Prochloraz. Journal of Agricultural and Food Chemistry, 2019, 67, 8641-8648.	5.2	3
11	Fabrication of a hollow mesoporous silica hybrid to improve the targeting of a pesticide. Chemical Engineering Journal, 2019, 364, 361-369.	12.7	122
12	Agrochemicals from nanomaterialsâ€"Synthesis, mechanisms of biochemical activities and applications. Comprehensive Analytical Chemistry, 2019, , 263-312.	1.3	7
13	New approach for mapping and physiological test of silica nanoparticles accumulated in sweet basil (Ocimum basilicum) by LA-ICP-MS. Analytica Chimica Acta, 2019, 1069, 28-35.	5.4	13
14	Polydopamine microcapsules from cellulose nanocrystal stabilized Pickering emulsions for essential oil and pesticide encapsulation. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2019, 570, 403-413.	4.7	68
15	Sulfonate-Functionalized Mesoporous Silica Nanoparticles as Carriers for Controlled Herbicide Diquat Dibromide Release through Electrostatic Interaction. International Journal of Molecular Sciences, 2019, 20, 1330.	4.1	36
16	A novel fluorescence aptasensor based on mesoporous silica nanoparticles for selective and sensitive detection of aflatoxin B1. Analytica Chimica Acta, 2019, 1068, 87-95.	5.4	61
17	Evaluation of biomimetically synthesized mesoporous silica nanoparticles as drug carriers: Structure, wettability, degradation, biocompatibility and brain distribution. Materials Science and Engineering C, 2019, 94, 453-464.	7.3	59
18	A non-classical route of efficient plant uptake verified with fluorescent nanoparticles and root adhesion forces investigated using AFM. Scientific Reports, 2020, 10, 19233.	3.3	12

#	Article	IF	Citations
19	Mechanism of zinc oxide nanoparticle entry into wheat seedling leaves. Environmental Science: Nano, 2020, 7, 3901-3913.	4.3	60
20	Nano-enabled agriculture: from nanoparticles to smart nanodelivery systems. Environmental Chemistry, 2020, 17, 413.	1.5	58
21	Indoxacarbâ€loaded fluorescent mesoporous silica nanoparticles for effective control of Plutella xylostella L. with decreased detoxification enzymes activities. Pest Management Science, 2020, 76, 3749-3758.	3.4	29
22	Iron-based porous metalâ€“organic frameworks with crop nutritional function as carriers for controlled fungicide release. Journal of Colloid and Interface Science, 2020, 566, 383-393.	9.4	66
23	Composite pesticide nanocarriers involving functionalized boron nitride nanoplatelets for pH-responsive release and enhanced UV stability. Chemical Engineering Journal, 2020, 396, 125233.	12.7	86
24	Copper ions chelated mesoporous silica nanoparticles via dopamine chemistry for controlled pesticide release regulated by coordination bonding. Chemical Engineering Journal, 2020, 395, 125093.	12.7	128
25	A Bioresponsive System Based on Mesoporous Organosilica Nanoparticles for Smart Delivery of Fungicide in Response to Pathogen Presence. ACS Sustainable Chemistry and Engineering, 2020, 8, 5716-5723.	6.7	86
26	Emerging nanobiotechnology in agriculture for the management of pesticide residues. Journal of Hazardous Materials, 2021, 401, 123369.	12.4	90
27	Pectinase-responsive carriers based on mesoporous silica nanoparticles for improving the translocation and fungicidal activity of prochloraz in rice plants. Chemical Engineering Journal, 2021, 404, 126440.	12.7	108
28	Excellent sustained-release efficacy of herbicide quinclorac with cationic covalent organic frameworks. Chemical Engineering Journal, 2021, 405, 126979.	12.7	50
29	Size Effect of Mesoporous Silica Nanoparticles on Pesticide Loading, Release, and Delivery in Cucumber Plants. Applied Sciences (Switzerland), 2021, 11, 575.	2.5	27
30	Phloem Delivery of Fludioxonil by Plant Amino Acid Transporter-Mediated Polysuccinimide Nanocarriers for Controlling Fusarium Wilt in Banana. Journal of Agricultural and Food Chemistry, 2021, 69, 2668-2678.	5.2	25
31	ROS Homeostasis and Plant Salt Tolerance: Plant Nanobiotechnology Updates. Sustainability, 2021, 13, 3552.	3.2	59
32	Ecoâ€Friendly Nanoplatforms for Crop Quality Control, Protection, and Nutrition. Advanced Science, 2021, 8, 2004525.	11.2	29
33	Facile, Smart, and Degradable Metalâ€“Organic Framework Nanopesticides Gated with Fe^{III}-Tannic Acid Networks in Response to Seven Biological and Environmental Stimuli. ACS Applied Materials & Interfaces, 2021, 13, 19507-19520.	8.0	67
34	A Light-Triggered pH-Responsive Metalâ€“Organic Framework for Smart Delivery of Fungicide to Control Sclerotinia Diseases of Oilseed Rape. ACS Nano, 2021, 15, 6987-6997.	14.6	126
35	Endophytic Nanotechnology: An Approach to Study Scope and Potential Applications. Frontiers in Chemistry, 2021, 9, 613343.	3.6	35
36	Multiple Roles of Mesoporous Silica in Safe Pesticide Application by Nanotechnology: A Review. Journal of Agricultural and Food Chemistry, 2021, 69, 6735-6754.	5.2	87

#	Article	IF	Citations
37	Bioâ€based clothianidinâ€loaded solid dispersion using composite carriers to improve efficacy and reduce environmental toxicity. Pest Management Science, 2021, 77, 5246-5254.	3.4	4
38	User-safe and efficient chitosan-gated porous carbon nanopesticides and nanoherbicides. Journal of Colloid and Interface Science, 2021, 594, 20-34.	9.4	29
39	Preparation and Size Control of Efficient and Safe Nanopesticides by Anodic Aluminum Oxide Templates-Assisted Method. International Journal of Molecular Sciences, 2021, 22, 8348.	4.1	6
40	Porous nanomaterials: Main vein of agricultural nanotechnology. Progress in Materials Science, 2021, 121, 100812.	32.8	52
41	Trends in Nanotechnology and Its Potentialities to Control Plant Pathogenic Fungi: A Review. Biology, 2021, 10, 881.	2.8	40
42	Cross-examination of engineered nanomaterials in crop production: Application and related implications. Journal of Hazardous Materials, 2022, 424, 127374.	12.4	13
43	Enhanced Fungicidal Efficacy by Co-Delivery of Azoxystrobin and Diniconazole with Cauliflower-Like Metalâ€“Organic Frameworks NH2-Al-MIL-101. International Journal of Molecular Sciences, 2021, 22, 10412.	4.1	17
44	Combination of modified biochar and polyurea microcapsules to coâ€encapsulate a fumigant via interface polymerization for controlled release and enhanced bioactivity. Pest Management Science, 2022, 78, 73-85.	3.4	6
45	Cyclodextrin polymer-valved MoS2-embedded mesoporous silica nanopesticides toward hierarchical targets via multidimensional stimuli of biological and natural environments. Journal of Hazardous Materials, 2021, 419, 126404.	12.4	42
46	Fluorinated sodium carboxymethyl cellulose nanoparticles as carrier for improving adhesion and sustaining release of AVM. Journal of Macromolecular Science - Pure and Applied Chemistry, 2021, 58, 219-231.	2.2	5
47	Advances in Controlled-Release Pesticide Formulations with Improved Efficacy and Targetability. Journal of Agricultural and Food Chemistry, 2021, 69, 12579-12597.	5.2	70
48	Fungicide-loaded mesoporous silica nanoparticles promote rice seedling growth by regulating amino acid metabolic pathways. Journal of Hazardous Materials, 2022, 425, 127892.	12.4	22
49	Prochloraz alone or in combination with nano-CuO promotes the conjugative transfer of antibiotic resistance genes between Escherichia coli in pure water. Journal of Hazardous Materials, 2022, 424, 127761.	12.4	19
50	Development of an LC-MS-based method to study the fate of nanoencapsulated pesticides in soils and strawberry plant. Talanta, 2022, 239, 123093.	5.5	8
51	Nanoparticle-based solutions for diagnosis and management of fungal plant pathogens. , 2022, , 393-406.		0
52	A pH Dual-Responsive Multifunctional Nanoparticle Based on Mesoporous Silica with Metal-Polymethacrylic Acid Gatekeeper for Improving Plant Protection and Nutrition. Nanomaterials, 2022, 12, 687.	4.1	12
53	Non-transgenic Gene Modulation via Spray Delivery of Nucleic Acid/Peptide Complexes into Plant Nuclei and Chloroplasts. ACS Nano, 2022, 16, 3506-3521.	14.6	27
54	pH and Redox Dual-Responsive Mesoporous Silica Nanoparticle as Nanovehicle for Improving Fungicidal Efficiency. Materials, 2022, 15, 2207.	2.9	14

#	Article	IF	Citations
55	An Alkali-Triggered Polydopamine Modified Mesoporous Silica Nanopesticide for Smart Delivery of Chlorpyrifos with Low Loss. ACS Agricultural Science and Technology, 2022, 2, 501-511.	2.3	7
56	Current status and future directions for examining nanoparticles in plants. , 2022, , 373-398.		1
57	Smart pH responsive system based on hybrid mesoporous silica nanoparticles for delivery of fungicide to control Fusarium crown and root rot in tomato. , 2022, 104, 979-992.		8
58	Acetalated dextran microparticles for the smart delivery of pyraclostrobin to control Sclerotinia diseases. Carbohydrate Polymers, 2022, 291, 119576.	10.2	15
59	Site-Specific Controlled-Release Imidazolate Framework-8 for Dazomet Smart Delivery to Improve the Effective Utilization Rate and Reduce Biotoxicity. Journal of Agricultural and Food Chemistry, 2022, 70, 5993-6005.	5.2	18
61	Synthesis, antifungal evaluation, and safety assessment of mesoporous silica nanoparticles loaded with prothioconazole against crop pathogens. Environmental Science: Nano, 2022, 9, 2548-2558.	4.3	7
62	Facile synthesis of NiO-SnO2 nanocomposite for enhanced photocatalytic degradation of bismarck brown. Inorganic Chemistry Communication, 2022, 143, 109721.	3.9	19
63	A review on functionalized silica nanoparticle amendment on plant growth and development under stress. Plant Growth Regulation, 2022, 98, 421-437.	3.4	10
64	A comparative study on the modulatory role of mesoporous silica nanoparticles MCM 41 and MCM 48 on growth and metabolism of dicot Vigna radiata. Plant Physiology and Biochemistry, 2022, 187, 25-36.	5.8	8
65	Self-assembled degradable iron-doped mesoporous silica nanoparticles for the smart delivery of prochloraz to improve plant protection and reduce environmental impact. Environmental Technology and Innovation, 2022, 28, 102890.	6.1	14
66	Development of spirotetramat nanoparticles based on mesoporous silica: improving the uptake and translocation of spirotetramat in plants. Environmental Science and Pollution Research, 2023, 30, 12618-12627.	5.3	3
67	Metolachlor metalâ€“organic framework nanoparticles for reducing leaching, ecotoxicity and improving bioactivity. Pest Management Science, 2022, 78, 5366-5378.	3.4	3
68	Interaction of the Nanoparticles and Plants in Selective Growth Stagesâ€”Usual Effects and Resulting Impact on Usage Perspectives. Plants, 2022, 11, 2405.	3.5	12
69	Metallic Nanoparticles and Nano-Based Bioactive Formulations as Nano-Fungicides for Sustainable Disease Management in Cereals. , 2022, , 315-343.		0
70	Nanobiopesticides in sustainable agriculture: developments, challenges, and perspectives. Environmental Science: Nano, 2023, 10, 41-61.	4.3	16
71	Stimuli-responsive pesticide carriers based on porous nanomaterials: A review. Chemical Engineering Journal, 2023, 455, 140167.	12.7	28
72	Degradable Self-Destructive Redox-Responsive System Based on Mesoporous Organosilica Nano-Vehicles for Smart Delivery of Fungicide. Nanomaterials, 2022, 12, 4249.	4.1	2
73	Temperature-Dependent Nanogel for Pesticide Smart Delivery with Improved Foliar Dispersion and Bioactivity for Efficient Control of Multiple Pests. ACS Nano, 2022, 16, 20622-20632.	14.6	22

#	Article	IF	Citations
74	Engineered silica nanomaterials in pesticide delivery: Challenges and perspectives. Environmental Pollution, 2023, 320, 121045.	7.5	14
75	Interactions of Nanomaterials with Plant Pigments. , 2023, , 93-131.		0
76	Mesoporous Silica Nanoparticles Induce Intracellular Peroxidation Damage of Phytophthora infestans: A New Type of Green Fungicide for Late Blight Control. Environmental Science & Technology, 2023, 57, 3980-3989.	10.0	11
77	Effective control of the tomato wilt pathogen using TiO₂ nanoparticles as a green nanopesticide. Environmental Science: Nano, 2023, 10, 1441-1452.	4.3	4
78	Pesticides Residues in Food Safety and Security. , 2024, , 633-649.		1
79	An eco-friendly synthetic polyethylene glycol-coated copper nanoclusters for efficiently suppress Alternaria alternata in tobacco and safety evaluation. Industrial Crops and Products, 2023, 201, 116955.	5.2	2
80	Silica modified copper-based alginate/chitosan hybrid hydrogel to control soil fumigant release, reduce emission and enhance bioactivity. International Journal of Biological Macromolecules, 2023, 244, 125132.	7.5	2
81	Preparation of Thifluzamide Polylactic Acid Glycolic Acid Copolymer Microspheres and Its Effect on the Growth of Cucumber Seedlings. International Journal of Molecular Sciences, 2023, 24, 10121.	4.1	0
82	Use of Nanoformulations and Nano-Enabled Products in Mitigating the Risk Associated with the Current Use of Agrochemicals. , 2023, , 83-102.		0
83	Enhanced fungicidal activity and mechanism of pyraclostrobin nanoparticle with reactive oxygen species responsiveness against Rhizoctonia solani. Journal of Cleaner Production, 2023, 421, 138494.	9.3	1
84	Tannic Acid Interfacial Modification of Prochloraz Ethyl Cellulose Nanoparticles for Enhancing the Antimicrobial Effect and Biosafety of Fungicides. ACS Applied Materials & Interfaces, 2023, 15, 41324-41336.	8.0	4
85	A <scp>pH</scp>â€responsive <scp>MOF</scp>â€functionalized hollow mesoporous silica controlled herbicide delivery system exhibits enhanced activity against <scp>ACCase</scp>â€herbicideâ€resistant weeds. Pest Management Science, 2023, 79, 5237-5249.	3.4	1
86	Smart, degradable, and eco-friendly carboxymethyl cellulose-CaII hydrogel-like networks gated MIL-101(FeIII) nanoherbicides for paraquat delivery. Science of the Total Environment, 2023, 903, 166424.	8.0	2
87	Silicon nanoparticles (SiNPs): Challenges and perspectives for sustainable agriculture. Physiological and Molecular Plant Pathology, 2023, 128, 102161.	2.5	3
89	Rotenone nanoparticles based on mesoporous silica to improve the stability, translocation and insecticidal activity of rotenone. Environmental Science and Pollution Research, 2023, 30, 106047-106058.	5.3	1
90	Smart Nanodelivery Systems for Transporting Chemicals and DNA into Plants. , 2023, , 63-82.		0
92	Photosensitive Nanopesticides for Environmentally Friendly and Sustainable Agriculture. Advances in Environmental Engineering and Green Technologies Book Series, 2023, , 188-211.	0.4	0
93	Temperature and pH-dependent nanogel for smart pesticide delivery with enhanced foliar dispersion and washout resistance can effectively control multiple plant diseases. Journal of Cleaner Production, 2023, 429, 139536.	9.3	3

#	Article	IF	Citations
94	pH-responsive ZIF-8 film-coated mesoporous silica nanoparticles for clean, targeted delivery of fungicide and environmental hazard reduction. Journal of Environmental Chemical Engineering, 2023, 11, 111513.	6.7	1
95	Enhancing the salt stress resistance of seeds and seedlings via a brassinolide sustained release agent system. Chemical and Biological Technologies in Agriculture, 2023, 10, .	4.6	0
96	Application of ZnO Nanoparticles Encapsulated in Mesoporous Silica on the Abaxial Side of a Solanum lycopersicum Leaf Enhances Zn Uptake and Translocation via the Phloem. Environmental Science & Technology, 2023, 57, 21704-21714.	10.0	1
97	Foliar application of glycineâ€functionalized nanopesticides for effective prevention and control of rootâ€knot nematodes via a targeted delivery strategy. Pest Management Science, 2024, 80, 2120-2130.	3.4	0
98	Non-transgenic, PAMAM co-delivery DNA of interactive proteins NbCRVP and NbCalB endows Nicotiana benthamiana with a stronger antiviral effect to RNA viruses. Journal of Nanobiotechnology, 2024, 22, .	9.1	0
99	Porous Silica Nanocarriers: Advances in Structural Orientation and Modification to Develop Sustainable Pesticide Delivery Systems. ACS Agricultural Science and Technology, 2024, 4, 144-172.	2.3	0
100	Multidimensional response of dopamine nano-system for on-demand fungicides delivery: Reduced toxicity and synergistic antibacterial effects. Chemical Engineering Journal, 2024, 482, 148990.	12.7	0
101	Toxicity and Behavior-Altering Effects of Three Nanomaterials on Red Imported Fire Ants and Their Effectiveness in Combination with Indoxacarb. Insects, 2024, 15, 96.	2.2	0
102	Elucidating the prospects of paddy straw as a potential source of nanosilica: A road map towards sustainable agriculture, bioeconomy and entrepreneurship. Journal of Cleaner Production, 2024, 449, 141607.	9.3	0
103	pH-Responsive Pesticide-Loaded Hollow Mesoporous Silica Nanoparticles with ZnO Quantum Dots as a Gatekeeper for Control of Rice Blast Disease. Materials, 2024, 17, 1344.	2.9	0