Junchao Duan

List of Publications by Year
in descending order

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115	4,506	94269	123241
papers	citations	37 h-index	61 g-index

119	119	119	5645
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Silica nanoparticles induce oxidative stress, inflammation, and endothelial dysfunction in vitro via activation of the MAPK/Nrf2 pathway and nuclear factor-κB signaling. International Journal of Nanomedicine, 2015, 10, 1463.	3.3	197
2	Cardiovascular toxicity evaluation of silica nanoparticles in endothelial cells and zebrafish model. Biomaterials, 2013, 34, 5853-5862.	5.7	178
3	Amorphous silica nanoparticles trigger vascular endothelial cell injury through apoptosis and autophagy via reactive oxygen species-mediated MAPK/Bcl-2 and PI3K/Akt/mTOR signaling. International Journal of Nanomedicine, 2016, Volume 11, 5257-5276.	3.3	176
4	Toxic Effect of Silica Nanoparticles on Endothelial Cells through DNA Damage Response via Chk1-Dependent G2/M Checkpoint. PLoS ONE, 2013, 8, e62087.	1.1	174
5	Toxic Effects of Silica Nanoparticles on Zebrafish Embryos and Larvae. PLoS ONE, 2013, 8, e74606.	1.1	166
6	Silica nanoparticles induce autophagy and autophagic cell death in HepG2 cells triggered by reactive oxygen species. Journal of Hazardous Materials, 2014, 270, 176-186.	6.5	148
7	Silica nanoparticles induce autophagy and endothelial dysfunction via the PI3K/Akt/mTOR signaling pathway. International Journal of Nanomedicine, 2014, 9, 5131.	3.3	145
8	Low-dose exposure of silica nanoparticles induces cardiac dysfunction via neutrophil-mediated inflammation and cardiac contraction in zebrafish embryos. Nanotoxicology, 2016, 10, 575-585.	1.6	112
9	Mitochondrial dysfunction, perturbations of mitochondrial dynamics and biogenesis involved in endothelial injury induced by silica nanoparticles. Environmental Pollution, 2018, 236, 926-936.	3.7	107
10	1 H NMR-based metabolomics study on repeat dose toxicity of fine particulate matter in rats after intratracheal instillation. Science of the Total Environment, 2017, 589, 212-221.	3.9	99
11	PM2.5 induces male reproductive toxicity via mitochondrial dysfunction, DNA damage and RIPK1 mediated apoptotic signaling pathway. Science of the Total Environment, 2018, 634, 1435-1444.	3.9	95
12	Cytotoxicity induced by fine particulate matter (PM2.5) via mitochondria-mediated apoptosis pathway in human cardiomyocytes. Ecotoxicology and Environmental Safety, 2018, 161, 198-207.	2.9	74
13	The critical role of endothelial function in fine particulate matter-induced atherosclerosis. Particle and Fibre Toxicology, 2020, 17, 61.	2.8	72
14	Short-term PM2.5 exposure induces sustained pulmonary fibrosis development during post-exposure period in rats. Journal of Hazardous Materials, 2020, 385, 121566.	6.5	70
15	PM2.5-induced alteration of DNA methylation and RNA-transcription are associated with inflammatory response and lung injury. Science of the Total Environment, 2019, 650, 908-921.	3.9	69
16	Silica nanoparticles induce liver fibrosis via TGF-β₁/Smad3 pathway in ICR mice. International Journal of Nanomedicine, 2017, Volume 12, 6045-6057.	3.3	67
17	Silica nanoparticles promote oxLDL-induced macrophage lipid accumulation and apoptosis via endoplasmic reticulum stress signaling. Science of the Total Environment, 2018, 631-632, 570-579.	3.9	67
18	PM2.5-induced ADRB2 hypermethylation contributed to cardiac dysfunction through cardiomyocytes apoptosis via PI3K/Akt pathway. Environment International, 2019, 127, 601-614.	4.8	67

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19	Cardiovascular toxicity assessment of polyethylene nanoplastics on developing zebrafish embryos. Chemosphere, 2021, 282, 131124.	4.2	65
20	Silica nanoparticles induce autophagosome accumulation via activation of the EIF2AK3 and ATF6 UPR pathways in hepatocytes. Autophagy, 2018, 14, 1185-1200.	4.3	64
21	PM2.5 aggravates the lipid accumulation, mitochondrial damage and apoptosis in macrophage foam cells. Environmental Pollution, 2019, 249, 482-490.	3.7	58
22	Combined toxicity of amorphous silica nanoparticles and methylmercury to human lung epithelial cells. Ecotoxicology and Environmental Safety, 2015, 112, 144-152.	2.9	54
23	Fine particle matter disrupts the bloodâ€“testis barrier by activating TGFâ€Î²3/p38 MAPK pathway and decreasing testosterone secretion in rat. Environmental Toxicology, 2018, 33, 711-719.	2.1	54
24	The Size-dependent Cytotoxicity of Amorphous Silica Nanoparticles: A Systematic Review of in vitro Studies . International Journal of Nanomedicine, 2020, Volume 15, 9089-9113.	3.3	52
25	Multi-organ toxicity induced by fine particulate matter PM 2.5 in zebrafish (Danio rerio) model. Chemosphere, 2017, 180, 24-32.	4.2	51
26	Low-Dose Exposure of Silica Nanoparticles Induces Neurotoxicity via Neuroactive Ligandâ€“Receptor Interaction Signaling Pathway in Zebrafish Embryos . International Journal of Nanomedicine, 2020, Volume 15, 4407-4415.	3.3	49
27	Repeat dose exposure of PM2.5 triggers the disseminated intravascular coagulation (DIC) in SD rats. Science of the Total Environment, 2019, 663, 245-253.	3.9	48
28	PM2.5-induced inflammation and lipidome alteration associated with the development of atherosclerosis based on a targeted lipidomic analysis. Environment International, 2020, 136, 105444.	4.8	47
29	Fine particulate matters induce apoptosis via the ATM/P53/CDK2 and mitochondria apoptosis pathway triggered by oxidative stress in rat and GC-2spd cell. Ecotoxicology and Environmental Safety, 2019, 180, 280-287.	2.9	45
30	Melatonin ameliorates PM‹sub›2.5‹/sub›â€induced cardiac perivascular fibrosis through regulating mitochondrial redox homeostasis. Journal of Pineal Research, 2021, 70, e12686.	3.4	44
31	Oxidative Damage and Energy Metabolism Disorder Contribute to the Hemolytic Effect of Amorphous Silica Nanoparticles. Nanoscale Research Letters, 2016, 11, 57.	3.1	43
32	Silica nanoparticles trigger hepatic lipid-metabolism disorder in vivo and in vitro. International Journal of Nanomedicine, 2018, Volume 13, 7303-7318.	3.3	42
33	Silica nanoparticles trigger the vascular endothelial dysfunction and prethrombotic state via miR-451 directly regulating the IL6R signaling pathway. Particle and Fibre Toxicology, 2019, 16, 16.	2.8	42
34	Fine particulate matter induces vascular endothelial activation via IL-6 dependent JAK1/STAT3 signaling pathway. Toxicology Research, 2016, 5, 946-953.	0.9	41
35	Metabolic impact induced by total, water soluble and insoluble components of PM2.5 acute exposure in mice. Chemosphere, 2018, 207, 337-346.	4.2	41
36	Oxidative stress- and mitochondrial dysfunction-mediated cytotoxicity by silica nanoparticle in lung epithelial cells from metabolomic perspective. Chemosphere, 2021, 275, 129969.	4.2	41

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37	Inflammationâ€“coagulation response and thrombotic effects induced by silica nanoparticles in zebrafish embryos. Nanotoxicology, 2018, 12, 470-484.	1.6	39
38	The correlation between PM2.5 exposure and hypertensive disorders in pregnancy: A Meta-analysis. Science of the Total Environment, 2020, 703, 134985.	3.9	39
39	Comprehensive understanding of PM2.5 on gene and microRNA expression patterns in zebrafish (Danio) Tj ETQq1 1 0.784314 rgBT /Ov	3.9	38
40	Silica nanoparticle exposure inducing granulosa cell apoptosis and follicular atresia in female Balb/c mice. Environmental Science and Pollution Research, 2018, 25, 3423-3434.	2.7	38
41	DNA methylation: A critical epigenetic mechanism underlying the detrimental effects of airborne particulate matter. Ecotoxicology and Environmental Safety, 2018, 161, 173-183.	2.9	37
42	Urine metabolites associated with cardiovascular effects from exposure of size-fractioned particulate matter in a subway environment: A randomized crossover study. Environment International, 2019, 130, 104920.	4.8	37
43	DNA Hypermethylation of CREB3L1 and Bcl-2 Associated with the Mitochondrial-Mediated Apoptosis via PI3K/Akt Pathway in Human BEAS-2B Cells Exposure to Silica Nanoparticles. PLoS ONE, 2016, 11, e0158475.	1.1	37
44	Silica nanoparticles induce pyroptosis and cardiac hypertrophy via ROS/NLRP3/Caspase-1 pathway. Free Radical Biology and Medicine, 2022, 182, 171-181.	1.3	37
45	Inflammatory response and blood hypercoagulable state induced by low level co-exposure with silica nanoparticles and benzo[a]pyrene in zebrafish (Danio rerio) embryos. Chemosphere, 2016, 151, 152-162.	4.2	36
46	Fine particle matters induce DNA damage and G2/M cell cycle arrest in human bronchial epithelial BEAS-2B cells. Environmental Science and Pollution Research, 2017, 24, 25071-25081.	2.7	36
47	Combined exposure of fine particulate matter and high-fat diet aggravate the cardiac fibrosis in C57BL/6J mice. Journal of Hazardous Materials, 2020, 391, 122203.	6.5	35
48	Silica nanoparticles induce JNK-mediated inflammation and myocardial contractile dysfunction. Journal of Hazardous Materials, 2020, 391, 122206.	6.5	33
49	The mitochondria-targeted antioxidant MitoQ attenuated PM2.5-induced vascular fibrosis via regulating mitophagy. Redox Biology, 2021, 46, 102113.	3.9	33
50	Silica nanoparticles exacerbates reproductive toxicity development in high-fat diet-treated Wistar rats. Journal of Hazardous Materials, 2020, 384, 121361.	6.5	32
51	Combined toxicity of silica nanoparticles and methylmercury on cardiovascular system in zebrafish (Danio rerio) embryos. Environmental Toxicology and Pharmacology, 2016, 44, 120-127.	2.0	31
52	Transcriptomic analyses of human bronchial epithelial cells BEAS-2B exposed to atmospheric fine particulate matter PM2.5. Toxicology in Vitro, 2017, 42, 171-181.	1.1	31
53	Combined Effect of Silica Nanoparticles and Benzo[a]pyrene on Cell Cycle Arrest Induction and Apoptosis in Human Umbilical Vein Endothelial Cells. International Journal of Environmental Research and Public Health, 2017, 14, 289.	1.2	31
54	Co-exposure subacute toxicity of silica nanoparticles and lead acetate on cardiovascular system. International Journal of Nanomedicine, 2018, Volume 13, 7819-7834.	3.3	31

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55	Cytotoxicity and autophagy dysfunction induced by different sizes of silica particles in human bronchial epithelial BEAS-2B cells. Toxicology Research, 2016, 5, 1216-1228.	0.9	30
56	Cellular pathways involved in silica nanoparticles induced apoptosis: A systematic review of in vitro studies. Environmental Toxicology and Pharmacology, 2017, 56, 191-197.	2.0	29
57	Low-dose combined exposure of nanoparticles and heavy metal compared with PM2.5 in human myocardial AC16 cells. Environmental Science and Pollution Research, 2017, 24, 27767-27777.	2.7	29
58	Silica nanoparticles inhibit macrophage activity and angiogenesis via VEGFR2-mediated MAPK signaling pathway in zebrafish embryos. Chemosphere, 2017, 183, 483-490.	4.2	27
59	Effect of particulate matter exposure on the prevalence of allergic rhinitis in children: A systematic review and meta-analysis. Chemosphere, 2021, 268, 128841.	4.2	27
60	Developmental toxicity of CdTe QDs in zebrafish embryos and larvae. Journal of Nanoparticle Research, 2013, 15, 1.	0.8	26
61	Repeated intravenous administration of silica nanoparticles induces pulmonary inflammation and collagen accumulation via JAK2/STAT3 and TGF-Î²/Smad3 pathways in vivo . International Journal of Nanomedicine, 2019, Volume 14, 7237-7247.	3.3	26
62	Genome-wide transcriptional analysis of cardiovascular-related genes and pathways induced by PM2.5 in human myocardial cells. Environmental Science and Pollution Research, 2017, 24, 11683-11693.	2.7	25
63	Metabolomic characteristics of hepatotoxicity in rats induced by silica nanoparticles. Ecotoxicology and Environmental Safety, 2021, 208, 111496.	2.9	25
64	Co-exposure to amorphous silica nanoparticles and benzo[a]pyrene at low level in human bronchial epithelial BEAS-2B cells. Environmental Science and Pollution Research, 2016, 23, 23134-23144.	2.7	24
65	Genome-wide transcriptional analysis of silica nanoparticle-induced toxicity in zebrafish embryos. Toxicology Research, 2016, 5, 609-620.	0.9	24
66	Adverse outcome pathway of fine particulate matter leading to increased cardiovascular morbidity and mortality: An integrated perspective from toxicology and epidemiology. Journal of Hazardous Materials, 2022, 430, 128368.	6.5	24
67	Silica nanoparticles induce abnormal mitosis and apoptosis via PKC-Î´Âmediated negative signaling pathway in GC-2â€cells of mice. Chemosphere, 2018, 208, 942-950.	4.2	22
68	miR-205/IRAK2 signaling pathway is associated with urban airborne PM_{2.5}-induced myocardial toxicity. Nanotoxicology, 2020, 14, 1198-1212.	1.6	22
69	Mitochondrial dysfunction drives persistent vascular fibrosis in rats after short-term exposure of PM2.5. Science of the Total Environment, 2020, 733, 139135.	3.9	22
70	Co-exposure of silica nanoparticles and methylmercury induced cardiac toxicity in vitro and in vivo. Science of the Total Environment, 2018, 631-632, 811-821.	3.9	21
71	Global association between atmospheric particulate matter and obesity: A systematic review and meta-analysis. Environmental Research, 2022, 209, 112785.	3.7	21
72	Autophagy and autophagy dysfunction contribute to apoptosis in HepG2 cells exposed to nanosilica. Toxicology Research, 2016, 5, 871-882.	0.9	19

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73	Gene expression profiles and bioinformatics analysis of human umbilical vein endothelial cells exposed to PM 2.5. Chemosphere, 2017, 183, 589-598.	4.2	19
74	Silica nanoparticles induce spermatocyte cell apoptosis through microRNA-2861 targeting death receptor pathway. Chemosphere, 2019, 228, 709-720.	4.2	18
75	Microarray-assisted size-effect study of amorphous silica nanoparticles on human bronchial epithelial cells. Nanoscale, 2019, 11, 22907-22923.	2.8	18
76	The relationship between exposure to PM2.5 and heart rate variability in older adults: A systematic review and meta-analysis. Chemosphere, 2020, 261, 127635.	4.2	18
77	Endosulfan activates the extrinsic coagulation pathway by inducing endothelial cell injury in rats. Environmental Science and Pollution Research, 2015, 22, 15722-15730.	2.7	17
78	Comprehensive gene and microRNA expression profiling on cardiovascular system in zebrafish co-exposured of SiNPs and MeHg. Science of the Total Environment, 2017, 607-608, 795-805.	3.9	17
79	Integrative analysis of methylome and transcriptome variation of identified cardiac disease-specific genes in human cardiomyocytes after PM2.5 exposure. Chemosphere, 2018, 212, 915-926.	4.2	17
80	Dynamic recovery after acute single fine particulate matter exposure in male mice: Effect on lipid deregulation and cardiovascular alterations. Journal of Hazardous Materials, 2021, 414, 125504.	6.5	17
81	Silica nanoparticles induced the pre-thrombotic state in rats via activation of coagulation factor XII and the JNK-NF-Î²B/AP-1 pathway. Toxicology Research, 2015, 4, 1453-1464.	0.9	16
82	Melatonin alleviates PM2.5-triggered macrophage M1 polarization and atherosclerosis via regulating NOX2-mediated oxidative stress homeostasis. Free Radical Biology and Medicine, 2022, 181, 166-179.	1.3	16
83	Endosulfan inhibits proliferation through the Notch signaling pathway in human umbilical vein endothelial cells. Environmental Pollution, 2017, 221, 26-36.	3.7	15
84	Short-term PM2.5 exposure and circulating von Willebrand factor level: a meta-analysis. Science of the Total Environment, 2020, 737, 140180.	3.9	15
85	The critical role of epigenetic mechanism in PM2.5-induced cardiovascular diseases. Genes and Environment, 2021, 43, 47.	0.9	15
86	MiR-939-5p suppresses PM_{2.5}-induced endothelial injury via targeting HIF-1Î± in HAECs. Nanotoxicology, 2021, 15, 706-720.	1.6	14
87	Sodium-glucose cotransporter 2 inhibitors and fracture risk in patients with type 2 diabetes mellitus: a meta-analysis of randomized controlled trials. Therapeutic Advances in Chronic Disease, 2020, 11, 204062232096159.	1.1	13
88	Evaluation of fine particulate matter on vascular endothelial function in vivo and in vitro. Ecotoxicology and Environmental Safety, 2021, 222, 112485.	2.9	13
89	Endosulfan induces cell dysfunction through cycle arrest resulting from DNA damage and DNA damage response signaling pathways. Science of the Total Environment, 2017, 589, 97-106.	3.9	12
90	Gene profiles to characterize the combined toxicity induced by low level co-exposure of silica nanoparticles and benzo[a]pyrene using whole genome microarrays in zebrafish embryos. Ecotoxicology and Environmental Safety, 2018, 163, 47-55.	2.9	12

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91	Acute exposure to PM2.5 triggers lung inflammatory response and apoptosis in rat. Ecotoxicology and Environmental Safety, 2021, 222, 112526.	2.9	12
92	Cytoskeleton and Chromosome Damage Leading to Abnormal Mitosis Were Involved in Multinucleated Cells Induced by Silicon Nanoparticles. Particle and Particle Systems Characterization, 2015, 32, 636-645.	1.2	11
93	The Internalization, Distribution, and Ultrastructure Damage of Silica Nanoparticles in Human Hepatic L-02 Cells. Particle and Particle Systems Characterization, 2016, 33, 664-674.	1.2	11
94	The chronic effect of amorphous silica nanoparticles and benzo[a]pyrene co-exposure at low dose in human bronchial epithelial BEAS-2B cells. Toxicology Research, 2019, 8, 731-740.	0.9	11
95	RhB-encapsulating silica nanoparticles modified with PEG impact the vascular endothelial function in endothelial cells and zebrafish model. Science of the Total Environment, 2020, 711, 134493.	3.9	11
96	The relationship between long-term exposure to PM2.5 and hypertension in womenï¼šA meta-analysis. Ecotoxicology and Environmental Safety, 2021, 208, 111492.	2.9	11
97	Silica nanoparticles induce pulmonary autophagy dysfunction and epithelial-to-mesenchymal transition via p62/NF-Î²B signaling pathway. Ecotoxicology and Environmental Safety, 2022, 232, 113303.	2.9	11
98	NcRNAs: Multiâ€‘angle participation in the regulation of glioma chemotherapy resistance (Review). International Journal of Oncology, 2022, 60, .	1.4	11
99	Particulate matter exposure and biomarkers associated with blood coagulation: A meta-analysis. Ecotoxicology and Environmental Safety, 2020, 206, 111417.	2.9	10
100	Subacute exposure of PM2.5 induces airway inflammation through inflammatory cell infiltration and cytokine expression in rats. Chemosphere, 2020, 251, 126423.	4.2	10
101	The relationship between exposure to PM2.5 and atrial fibrillation in older adults: A systematic review and meta-analysis. Science of the Total Environment, 2021, 784, 147106.	3.9	10
102	Comprehensive Analysis of SiNPs on the Genome-Wide Transcriptional Changes in Caenorhabditis elegans . International Journal of Nanomedicine, 2020, Volume 15, 5227-5237.	3.3	8
103	Microarray-based bioinformatics analysis of the combined effects of SiNPs and PbAc on cardiovascular system in zebrafish. Chemosphere, 2017, 184, 1298-1309.	4.2	7
104	Identification and validation of metformin protects against PM2.5-induced macrophages cytotoxicity by targeting toll like receptor pathway. Chemosphere, 2020, 251, 126526.	4.2	6
105	Exposure to polydopamine nanoparticles induces neurotoxicity in the developing zebrafish. NanoImpact, 2021, 24, 100353.	2.4	6
106	PM_{2.5} induce the defective efferocytosis and promote atherosclerosis via HIF-1Î± activation in macrophage. Nanotoxicology, 2022, 16, 290-309.	1.6	6
107	Silica nanoparticles induce multinucleation through activation of PI3K/Akt/GSK-3Î² pathway and downregulation of chromosomal passenger proteins in L-02 cells. Journal of Nanoparticle Research, 2016, 18, 1.	0.8	5
108	PM2.5 exposure exaggerates the risk of adverse birth outcomes in pregnant women with pre-existing hyperlipidemia: Modulation role of adipokines and lipidome. Science of the Total Environment, 2021, 787, 147604.	3.9	5

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109	Effects of ambient air pollution on glycosylated hemoglobin: a systematic review and meta-analysis. Environmental Science and Pollution Research, 2022, 29, 53954-53966.	2.7	5
110	Nanosilica induced dose-dependent cytotoxicity and cell type-dependent multinucleation in HepG2 and L-02 cells. Journal of Nanoparticle Research, 2016, 18, 1.	0.8	4
111	Endosulfan induces apoptosis by activating the negative regulation pathway of cell cycle and death receptor pathway in spermatogenic cells. Toxicology Research, 2017, 6, 223-231.	0.9	4
112	Melatonin Alleviates PM2.5-Induced Hepatic Steatosis and Metabolic-Associated Fatty Liver Disease in ApoE-/- Mice. Oxidative Medicine and Cellular Longevity, 2022, 2022, 1-24.	1.9	4
113	Silica nanoparticles induce hepatocyte ferroptosis and liver injury via ferritinophagy. Environmental Science: Nano, 2022, 9, 3014-3029.	2.2	3
114	Accumulated oxidative stress risk in HUVECs by chronic exposure to non-observable acute effect levels of PM2.5. Toxicology in Vitro, 2022, , 105376.	1.1	2
115	The critical role of epigenetic mechanisms involved in nanotoxicology. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2022, , e1789.	3.3	1