Ashutosh Kumar

List of Publications by Year
in descending order

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121 papers	9,402 citations	50276 46 h-index	38395 95 g-index
123 all docs	123 docs citations	123 times ranked	12025 citing authors

#	Article	IF	Citations
1	Zinc oxide nanoparticles induce oxidative DNA damage and ROS-triggered mitochondria mediated apoptosis in human liver cells (HepG2). Apoptosis: an International Journal on Programmed Cell Death, 2012, 17, 852-870.	4.9	626
2	DNA damaging potential of zinc oxide nanoparticles in human epidermal cells. Toxicology Letters, 2009, 185, 211-218.	0.8	526
3	Mechanisms of genotoxicity. A review ofin vitroandin vivostudies with engineered nanoparticles. Nanotoxicology, 2014, 8, 233-278.	3.0	523
4	ROS-mediated genotoxicity induced by titanium dioxide nanoparticles in human epidermal cells. Toxicology in Vitro, 2011, 25, 231-241.	2.4	461
5	Engineered ZnO and TiO2 nanoparticles induce oxidative stress and DNA damage leading to reduced viability of Escherichia coli. Free Radical Biology and Medicine, 2011, 51, 1872-1881.	2.9	410
6	Toxicity assessment of nanomaterials: methods and challenges. Analytical and Bioanalytical Chemistry, 2010, 398, 589-605.	3.7	405
7	Induction of oxidative stress, DNA damage and apoptosis in mouse liver after sub-acute oral exposure to zinc oxide nanoparticles. Mutation Research - Genetic Toxicology and Environmental Mutagenesis, 2012, 745, 84-91.	1.7	383
8	Nanotechnology in agro-food: From field to plate. Food Research International, 2015, 69, 381-400.	6.2	325
9	Comet assay: a reliable tool for the assessment of DNA damage in different models. Cell Biology and Toxicology, 2009, 25, 5-32.	5.3	318
10	Stable Colloidal Dispersions of C60 Fullerenes in Water: Evidence for Genotoxicity. Environmental Science & Technology, 2006, 40, 7394-7401.	10.0	264
11	Nanoscience and nanotechnologies in food industries: opportunities and research trends. Journal of Nanoparticle Research, 2014, 16, 1.	1.9	231
12	TiO₂nanoparticles induce oxidative DNA damage and apoptosis in human liver cells. Nanotoxicology, 2013, 7, 48-60.	3.0	220
13	Cellular uptake and mutagenic potential of metal oxide nanoparticles in bacterial cells. Chemosphere, 2011, 83, 1124-1132.	8.2	210
14	Chitosan: An undisputed bio-fabrication material for tissue engineering and bio-sensing applications. International Journal of Biological Macromolecules, 2018, 110, 110-123.	7.5	149
15	Zinc Oxide Nanoparticle Induced Genotoxicity in Primary Human Epidermal Keratinocytes. Journal of Nanoscience and Nanotechnology, 2011, 11, 3782-3788.	0.9	145
16	Nanomaterials: A challenge for toxicologists. Nanotoxicology, 2009, 3, 1-9.	3.0	143
17	Toxicity of Graphene in Normal Human Lung Cells (BEAS-2B). Journal of Biomedical Nanotechnology, 2011, 7, 106-107.	1.1	141
18	Fabrication of Food Grade Vitamin E Nanoemulsion by Low Energy Approach, Characterization and Its Application. International Journal of Food Properties, 2016, 19, 700-708.	3.0	138

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19	miR-497 and miR-302b Regulate Ethanol-induced Neuronal Cell Death through BCL2 Protein and Cyclin D2. Journal of Biological Chemistry, 2011, 286, 37347-37357.	3.4	133
20	Genotoxic and carcinogenic potential of engineered nanoparticles: an update. Archives of Toxicology, 2013, 87, 1883-1900.	4.2	132
21	Titanium dioxide nanoparticle-induced oxidative stress triggers DNA damage and hepatic injury in mice. Nanomedicine, 2014, 9, 1423-1434.	3.3	132
22	Zinc Oxide Nanoparticles Induce Oxidative Stress and Genotoxicity in Human Liver Cells (HepG2). Journal of Biomedical Nanotechnology, 2011, 7, 98-99.	1.1	120
23	Shifting paradigm of cancer diagnoses in clinically relevant samples based on miniaturized electrochemical nanobiosensors and microfluidic devices. Biosensors and Bioelectronics, 2018, 100, 411-428.	10.1	108
24	TiO₂ nanoparticles induce <scp>DNA</scp> double strand breaks and cell cycle arrest in human alveolar cells. Environmental and Molecular Mutagenesis, 2015, 56, 204-217.	2.2	105
25	Engineered Nanomaterial Assisted Signalâ€amplification Strategies for Enhancing Analytical Performance of Electrochemical Biosensors. Electroanalysis, 2019, 31, 1615-1629.	2.9	102
26	Cypermethrin-induced DNA damage in organs and tissues of the mouse: Evidence from the comet assay. Mutation Research - Genetic Toxicology and Environmental Mutagenesis, 2006, 607, 176-183.	1.7	100
27	Cytotoxic and genotoxic assessment of glycolipid-reduced and -capped gold and silver nanoparticles. New Journal of Chemistry, 2010, 34, 294-301.	2.8	87
28	ZnO nanoparticles induced inflammatory response and genotoxicity in human blood cells: A mechanistic approach. Food and Chemical Toxicology, 2015, 85, 61-70.	3.6	85
29	Titanium Dioxide Nanoparticles Induce Oxidative Stress-Mediated Apoptosis in Human Keratinocyte Cells. Journal of Biomedical Nanotechnology, 2011, 7, 100-101.	1.1	80
30	DNA damage and mutagenicity induced by endosulfan and its metabolites. Environmental and Molecular Mutagenesis, 2006, 47, 682-692.	2.2	75
31	Thermal co-reduction approach to vary size of silver nanoparticle: its microbial and cellular toxicology. Environmental Science and Pollution Research, 2016, 23, 4149-4163.	5.3	73
32	Effect of graphene oxide on the conformational transitions of amyloid beta peptide: A molecular dynamics simulation study. Journal of Molecular Graphics and Modelling, 2015, 61, 175-185.	2.4	72
33	In vitro induction of cytotoxicity and DNA strand breaks in CHO cells exposed to cypermethrin, pendimethalin and dichlorvos. Toxicology in Vitro, 2007, 21, 1409-1418.	2.4	71
34	Effects of titanium dioxide nanoparticles in human gastric epithelial cells in vitro. Biomedicine and Pharmacotherapy, 2014, 68, 59-64.	5.6	70
35	Clinically comparable impedimetric immunosensor for serum alkaline phosphatase detection based on electrochemically engineered Au-nano-Dendroids and graphene oxide nanocomposite. Biosensors and Bioelectronics, 2020, 148, 111815.	10.1	70
36	Comet assay responses in human lymphocytes are not influenced by the menstrual cycle: a study in healthy Indian females. Mutation Research - Genetic Toxicology and Environmental Mutagenesis, 2005, 565, 163-172.	1.7	69

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37	Cell cycle dependent cellular uptake of zinc oxide nanoparticles in human epidermal cells. Mutagenesis, 2016, 31, 481-490.	2.6	67
38	A flow cytometric method to assess nanoparticle uptake in bacteria. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2011, 79A, 707-712.	1.5	65
39	Bovine serum albumin interacts with silver nanoparticles with a â€œside-onâ€•or â€œend onâ€•conformation. Chemico-Biological Interactions, 2016, 253, 100-111.	4.0	63
40	Growth morphologies, phase formation, optical & biological responses of nanostructures of CuO and their application as cooling fluid in high energy density devices. RSC Advances, 2012, 2, 1387-1403.	3.6	61
41	DNA damage induced in human peripheral blood lymphocytes by industrial solid waste and municipal sludge leachates. Environmental and Molecular Mutagenesis, 2007, 48, 30-37.	2.2	58
42	Bacterial synthesis of silicon/silica nanocomposites. Journal of Materials Chemistry, 2008, 18, 2601.	6.7	57
43	In vivo DNA damaging potential of sanguinarine alkaloid, isolated from argemone oil, using alkaline Comet assay in mice. Food and Chemical Toxicology, 2005, 43, 147-153.	3.6	53
44	Polycyclic aromatic hydrocarbons and their quinones modulate the metabolic profile and induce DNA damage in human alveolar and bronchiolar cells. International Journal of Hygiene and Environmental Health, 2013, 216, 553-565.	4.3	53
45	Formulation of vitamin D encapsulated cinnamon oil nanoemulsion: Its potential anti-cancerous activity in human alveolar carcinoma cells. Colloids and Surfaces B: Biointerfaces, 2018, 166, 349-357.	5.0	51
46	Correlation of DNA damage in epidemic dropsy patients to carcinogenic potential of argemone oil and isolated sanguinarine alkaloid in mice. International Journal of Cancer, 2005, 117, 709-717.	5.1	49
47	Sputtering enhanced peroxidase like activity of a dendritic nanochip for amperometric determination of hydrogen peroxide in blood samples. Mikrochimica Acta, 2019, 186, 658.	5.0	45
48	Nanotechnology in Disease Diagnostic Techniques. Current Drug Metabolism, 2015, 16, 645-661.	1.2	45
49	Microwave-irradiation-assisted hybrid chemical approach for titanium dioxide nanoparticle synthesis: microbial and cytotoxicological evaluation. Environmental Science and Pollution Research, 2016, 23, 12287-12302.	5.3	44
50	Red blood cells as an efficient in vitro model for evaluating the efficacy of metallic nanoparticles. 3 Biotech, 2019, 9, 279.	2.2	42
51	Unequivocal evidence of genotoxic potential of argemone oil in mice. International Journal of Cancer, 2004, 112, 890-895.	5.1	41
52	Guidance for Safe Handling of Nanomaterials. Journal of Biomedical Nanotechnology, 2011, 7, 218-224.	1.1	41
53	Expression of constitutive and inducible cytochrome P450 2E1 in rat brain. Molecular and Cellular Biochemistry, 2006, 286, 171-180.	3.1	39
54	Zinc oxide nanoparticles affect the expression of p53, Ras p21 and JNKs: an ex vivo/in vitro exposure study in respiratory disease patients. Mutagenesis, 2015, 30, 237-245.	2.6	39

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55	A Novel Approach to Evaluate Titanium Dioxide Nanoparticleâ€“Protein Interaction Through Docking: An Insight into Mechanism of Action. Proceedings of the National Academy of Sciences India Section B - Biological Sciences, 2017, 87, 937-943.	1.0	38
56	Design and Development of Ultrafast Sinapic Acid Sensor Based on Electrochemically Nanotuned Gold Nanoparticles and Solvothermally Reduced Graphene Oxide. Electroanalysis, 2020, 32, 59-69.	2.9	38
57	In silico studies with human DNA topoisomerase-II alpha to unravel the mechanism of in vitro genotoxicity of benzene and its metabolites. Mutation Research - Fundamental and Molecular Mechanisms of Mutagenesis, 2009, 661, 57-70.	1.0	37
58	Laboratory Scale Microbial Food Chain To Study Bioaccumulation, Biomagnification, and Ecotoxicity of Cadmium Telluride Quantum Dots. Environmental Science & Technology, 2017, 51, 1695-1706.	10.0	37
59	Nanomaterials: Exposure, Effects and Toxicity Assessment. Proceedings of the National Academy of Sciences India Section B - Biological Sciences, 2012, 82, 3-11.	1.0	36
60	Heteroagglomeration of zinc oxide nanoparticles with clay mineral modulates the bioavailability and toxicity of nanoparticle in Tetrahymena pyriformis. Journal of Colloid and Interface Science, 2017, 495, 9-18.	9.4	36
61	The Comet Assay: Assessment of In Vitro and In Vivo DNA Damage. Methods in Molecular Biology, 2013, 1044, 325-345.	0.9	35
62	Multipronged evaluation of genotoxicity in Indian petrolâ€pump workers. Environmental and Molecular Mutagenesis, 2008, 49, 695-707.	2.2	34
63	Synthesis of biocompatible iron oxide nanoparticles as a drug delivery vehicle. International Journal of Nanomedicine, 2018, Volume 13, 79-82.	6.7	34
64	Design of commercially comparable nanotherapeutic agent against human disease-causing parasite, Leishmania. Scientific Reports, 2018, 8, 8814.	3.3	34
65	Goldâ€Iron Bimetallic Nanoparticles Impregnated Reduced Graphene Oxide Based Nanosensor for Labelâ€free Detection of Biomarker Related to Nonâ€alcoholic Fatty Liver Disease. Electroanalysis, 2019, 31, 2417-2428.	2.9	34
66	Novel Sensing Assembly Comprising Engineered Gold Dendrites and MWCNTâ€AuNPs Nanohybrid for Acetaminophen Detection in Human Urine. Electroanalysis, 2020, 32, 561-570.	2.9	34
67	Mechanism of Inhibition of the ATPase Domain of Human Topoisomerase IIÎ± by 1,4-Benzoquinone, 1,2-Naphthoquinone, 1,4-Naphthoquinone, and 9,10-Phenanthroquinone. Toxicological Sciences, 2012, 126, 372-390.	3.1	33
68	Montmorillonite clay and humic acid modulate the behavior of copper oxide nanoparticles in aqueous environment and induces developmental defects in zebrafish embryo. Environmental Pollution, 2019, 255, 113313.	7.5	33
69	Current Status of Short-Term Tests for Evaluation of Genotoxicity, Mutagenicity, and Carcinogenicity of Environmental Chemicals and NCEs. Toxicology Mechanisms and Methods, 2005, 15, 155-180.	2.7	31
70	C₆₀-Fullerene Binds with the ATP Binding Domain of Human DNA Topoiosmerase II Alpha. Journal of Biomedical Nanotechnology, 2011, 7, 177-178.	1.1	29
71	Cellular internalization and antioxidant activity of cerium oxide nanoparticles in human monocytic leukemia cells. International Journal of Nanomedicine, 2018, Volume 13, 39-41.	6.7	29
72	Natural water as the test medium for Ag and CuO nanoparticle hazard evaluation: An interlaboratory case study. Environmental Pollution, 2016, 216, 689-699.	7.5	27

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73	ZnO nanoparticles dissolution, penetration and toxicity in human epidermal cells. Influence of pH. Environmental Chemistry Letters, 2018, 16, 1129-1135.	16.2	27
74	DNA and oxidative damage induced in somatic organs and tissues of mouse by municipal sludge leachate. Toxicology and Industrial Health, 2012, 28, 614-623.	1.4	26
75	Montmorillonite clay alters toxicity of silver nanoparticles in zebrafish (Danio rerio) eleutheroembryo. Chemosphere, 2016, 163, 242-251.	8.2	26
76	Assessment of agglomeration, co-sedimentation and trophic transfer of titanium dioxide nanoparticles in a laboratory-scale predator-prey model system. Scientific Reports, 2016, 6, 31422.	3.3	26
77	Chromium oxide nanoparticleâ€induced genotoxicity and p53â€dependent apoptosis in human lung alveolar cells. Journal of Applied Toxicology, 2015, 35, 1179-1188.	2.8	24
78	Combination of humic acid and clay reduce the ecotoxic effect of TiO2 NPs: A combined physico-chemical and genetic study using zebrafish embryo. Science of the Total Environment, 2020, 698, 134133.	8.0	24
79	Titanium dioxide nanoparticle–protein interaction explained by docking approach. International Journal of Nanomedicine, 2018, Volume 13, 47-50.	6.7	22
80	A critical review on the role of abiotic factors on the transformation, environmental identity and toxicity of engineered nanomaterials in aquatic environment. Environmental Pollution, 2022, 296, 118726.	7.5	22
81	Zinc oxide nanoparticle induced age dependent immunotoxicity in BALB/c mice. Toxicology Research, 2017, 6, 342-352.	2.1	20
82	Regional specificity in deltamethrin induced cytochrome P450 expression in rat brain. Toxicology and Applied Pharmacology, 2006, 217, 15-24.	2.8	19
83	Interaction of C₆₀ Fullerene with the Proteins Involved in DNA Mismatch Repair Pathway. Journal of Biomedical Nanotechnology, 2011, 7, 179-180.	1.1	19
84	In Silico Approaches for Predictive Toxicology. , 2018, , 91-109.		19
85	Protective effect of bioantioxidants on argemone oil/sanguinarine alkaloid induced genotoxicity in mice. Cancer Letters, 2006, 244, 109-118.	7.2	18
86	The Need for Novel Approaches in Ecotoxicity of Engineered Nanomaterials. Journal of Biomedical Nanotechnology, 2011, 7, 79-80.	1.1	18
87	Methods for Detection of Oxidative Stress and Genotoxicity of Engineered Nanoparticles. Methods in Molecular Biology, 2013, 1028, 231-246.	0.9	18
88	The Comet Assay: Assessment of In Vitro and In Vivo DNA Damage. Methods in Molecular Biology, 2019, 2031, 237-257.	0.9	18
89	Cellular Response to Metal Oxide Nanoparticles in Bacteria. Journal of Biomedical Nanotechnology, 2011, 7, 102-103.	1.1	18
90	ZnO nanoparticles-associated mitochondrial stress-induced apoptosis and G2/M arrest in HaCaT cells: a mechanistic approach. Mutagenesis, 2019, 34, 265-277.	2.6	17

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91	MiR-206 conjugated gold nanoparticle based targeted therapy in breast cancer cells. Scientific Reports, 2022, 12, 4713.	3.3	17
92	Nanoagriculture and Water Quality Management. Sustainable Agriculture Reviews, 2016, , 1-42.	1.1	16
93	Impact of humic acid on the fate and toxicity of titanium dioxide nanoparticles in Tetrahymena pyriformis and zebrafish embryos. Nanoscale Advances, 2019, 1, 219-227.	4.6	16
94	Effect of gold nanoparticle size and surface coating on human red blood cells. Bioinspired, Biomimetic and Nanobiomaterials, 2016, 5, 121-131.	0.9	13
95	Monitoring characteristics and genotoxic effects of engineered nanoparticleâ€“protein corona. Mutagenesis, 2017, 32, 479-490.	2.6	12
96	Bacterial Synthesis of Photocatalytically Active and Biocompatible TiO2and ZnO Nanoparticles. International Journal of Green Nanotechnology: Physics and Chemistry, 2010, 2, P80-P99.	1.5	11
97	Nanotherapeutics for the Treatment of Cancer and Arthritis. Current Drug Metabolism, 2019, 20, 430-445.	1.2	10
98	TiO2 nanoparticles induce cytotoxicity and genotoxicity in human alveolar cells. Molecular Cytogenetics, 2014, 7, P77.	0.9	9
99	Nanomaterial Functionalization Strategies in Bio-Interface Development for Modern Diagnostic Devices. , 2020, , 195-214.		9
100	TiO2 nanoparticles induced micronucleus formation in human liver (HepG2) cells: comparison of conventional and flow cytometry based methods. Molecular Cytogenetics, 2014, 7, P79.	0.9	8
101	Development of food-grade antimicrobials of fenugreek oil nanoemulsionâ€”bioactivity and toxicity analysis. Environmental Science and Pollution Research, 2023, 30, 24907-24918.	5.3	8
102	Comprehensive Molecular Analysis of the Responses Induced by Titanium Dioxide Nanoparticles in Human Keratinocyte Cells. Journal of Translational Toxicology, 2014, 1, 28-39.	0.3	7
103	Impact of Nanomaterials on the Aquatic Food Chain. Sustainable Agriculture Reviews, 2017, , 309-333.	1.1	6
104	Impact of Titanium Dioxide Nanoparticle Dispersion State and Dispersion Method on Their Toxicity Towards A549 Lung Cells and <I>Escherichia</I> <I>coli</I> Bacteria. Journal of Translational Toxicology, 2014, 1, 10-20.	0.3	6
105	Introduction to Nanofood. Food Engineering Series, 2020, , 1-23.	0.7	6
106	Cytotoxicity assessment of ZnO nanoparticles on human epidermal cells. Molecular Cytogenetics, 2014, 7, P81.	0.9	5
107	BSA coated gold nanoparticles exhibit size dependent interaction with lung cancer (A549) cells. Molecular Cytogenetics, 2014, 7, P83.	0.9	5
108	Fabrication of methotrexate-loaded gold nanoconjugates and its enhanced anticancer activity in breast cancer. 3 Biotech, 2021, 11, 175.	2.2	4

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109	The Comet Assay: A Versatile Tool for Assessing DNA Damage. Issues in Toxicology, 2016, , 1-64.	0.1	4
110	Chapter 1. Nanotoxicology: Challenges for Biologists. Issues in Toxicology, 2017, , 1-16.	0.1	4
111	Chapter 4. Protocols for In vitro and In vivo Toxicity Assessment of Engineered Nanoparticles. Issues in Toxicology, 2017, , 94-132.	0.1	4
112	In vitro methods to assess the cellular toxicity of nanoparticles. , 2020, , 21-40.		3
113	Microorganisms: A Versatile Model for Toxicity Assessment of Engineered Nanoparticles. , 2012, , 497-524.		2
114	PEGylated nanoceria protect human epidermal cells from reactive oxygen species. Molecular Cytogenetics, 2014, 7, P78.	0.9	2
115	Assessment of the impact of abiotic factors on the stability of engineered nanomaterials in fish embryo media. Emergent Materials, 0, , 1.	5.7	2
116	CHAPTER 3. Factors Affecting a Nanoparticle's Protein Corona Formation. Issues in Toxicology, 2019, , 61-79.	0.1	2
117	Stable Metal Oxide Nanoparticle Formulation for Toxicity Studies. Journal of Biomedical Nanotechnology, 2011, 7, 104-105.	1.1	2
118	TiO2 NPs induced hepatic injury in mammals: a mechanistic approach. Molecular Cytogenetics, 2014, 7, P82.	0.9	1
119	Detection of Mutation in Prokaryotic Cells. , 2018, , 35-48.		1
120	Chapter 8. Detection of DNA Damage in Drosophila. Issues in Toxicology, 2016, , 177-192.	0.1	0
121	Fate and potential hazards of nanoparticles in the environment. , 2022, , 581-602.		0