Dzmitry G Shcharbin

List of Publications by Year
in descending order

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108 papers	2,815 citations	136940 32 h-index	206102 48 g-index
108 all docs	108 docs citations	108 times ranked	2743 citing authors

#	Article	IF	Citations
1	Characterization of carbosilane dendrimers as effective carriers of siRNA to HIV-infected lymphocytes. Journal of Controlled Release, 2008, 132, 55-64.	9.9	154
2	Poly(amidoamine) dendrimer complexes as a platform for gene delivery. Expert Opinion on Drug Delivery, 2013, 10, 1687-1698.	5.0	98
3	Dendrimers and hyperbranched structures for biomedical applications. European Polymer Journal, 2019, 119, 61-73.	5.4	98
4	How to study dendrimers and dendriplexes III. Biodistribution, pharmacokinetics and toxicity in vivo. Journal of Controlled Release, 2014, 181, 40-52.	9.9	93
5	How to study dendriplexes I: Characterization. Journal of Controlled Release, 2009, 135, 186-197.	9.9	83
6	Dendrimers Show Promise for siRNA and microRNA Therapeutics. Pharmaceutics, 2018, 10, 126.	4.5	77
7	How to study dendriplexes II: Transfection and cytotoxicity. Journal of Controlled Release, 2010, 141, 110-127.	9.9	72
8	Anticancer siRNA cocktails as a novel tool to treat cancer cells. Part (B). Efficiency of pharmacological action. International Journal of Pharmaceutics, 2015, 485, 288-294.	5.2	71
9	Serum albumins have five sites for binding of cationic dendrimers. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2007, 1774, 946-951.	2.3	70
10	Biological properties of low molecular mass peptide dendrimers. International Journal of Pharmaceutics, 2006, 309, 208-217.	5.2	67
11	Transfection efficiencies of PAMAM dendrimers correlate inversely with their hydrophobicity. International Journal of Pharmaceutics, 2010, 383, 228-235.	5.2	65
12	Anticancer siRNA cocktails as a novel tool to treat cancer cells. Part (A). Mechanisms of interaction. International Journal of Pharmaceutics, 2015, 485, 261-269.	5.2	64
13	Dendrimer Interactions with Hydrophobic Fluorescent Probes and Human Serum Albumin. Journal of Fluorescence, 2005, 15, 21-28.	2.5	61
14	Water-soluble carbosilane dendrimers protect phosphorothioate oligonucleotides from binding to serum proteins. Organic and Biomolecular Chemistry, 2007, 5, 1886-1893.	2.8	55
15	Influence of fourth generation poly(propyleneimine) dendrimers on blood cells. Journal of Biomedical Materials Research - Part A, 2012, 100A, 2870-2880.	4.0	54
16	Can dendrimer based nanoparticles fight neurodegenerative diseases? Current situation versus other established approaches. Progress in Polymer Science, 2017, 64, 23-51.	24.7	54
17	Dendrimers in gene transfection. Biochemistry (Moscow), 2009, 74, 1070-1079.	1.5	50
18	Hybrid metal-organic nanoflowers and their application in biotechnology and medicine. Colloids and Surfaces B: Biointerfaces, 2019, 182, 110354.	5.0	50

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19	Doxycycline-regulated GDNF expression promotes axonal regeneration and functional recovery in transected peripheral nerve. Journal of Controlled Release, 2013, 172, 841-851.	9.9	48
20	Analysis of Interaction between Dendriplexes and Bovine Serum Albumin. Biomacromolecules, 2007, 8, 2059-2062.	5.4	47
21	Fourth Generation Phosphorus-Containing Dendrimers: Prospective Drug and Gene Delivery Carrier. Pharmaceutics, 2011, 3, 458-473.	4.5	46
22	Effect of dendrimers on pure acetylcholinesterase activity and structure. Bioelectrochemistry, 2006, 68, 56-59.	4.6	45
23	Dendrimer-protein interactions versus dendrimer-based nanomedicine. Colloids and Surfaces B: Biointerfaces, 2017, 152, 414-422.	5.0	42
24	Novel â€˜SiCâ€™ carbosilane dendrimers as carriers for anti-HIV nucleic acids: Studies on complexation and interaction with blood cells. Colloids and Surfaces B: Biointerfaces, 2013, 109, 183-189.	5.0	40
25	Nanomaterials in Stroke Treatment. Stroke, 2013, 44, 2351-2355.	2.0	39
26	Dendrimerâ€“protein interactions studied by tryptophan room temperature phosphorescence. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2006, 1764, 1750-1756.	2.3	38
27	Nanoparticles in Combating Cancer: Opportunities and Limitations: A Brief Review. Current Medicinal Chemistry, 2020, 28, 346-359.	2.4	38
28	The effect of PAMAM dendrimers on human and bovine serum albumin at different pH and NaCl concentrations. Journal of Biomaterials Science, Polymer Edition, 2005, 16, 1081-1093.	3.5	37
29	Carbosilane Dendrimers are a Non-Viral Delivery System for Antisense Oligonucleotides: Characterization of Dendriplexes. Journal of Biomedical Nanotechnology, 2012, 8, 57-73.	1.1	34
30	Ruthenium metallodendrimers with anticancer potential in an acute promyelocytic leukemia cell line (HL60). European Polymer Journal, 2017, 87, 39-47.	5.4	34
31	Cytotoxicity, haematotoxicity and genotoxicity of high molecular mass arborescent polyoxyethylene polymers with polyglycidol-block-containing shells. Cell Biology International, 2006, 30, 248-252.	3.0	33
32	Carbosilane dendrimers NN8 and NN16 form a stable complex with siGAG1. Colloids and Surfaces B: Biointerfaces, 2011, 83, 388-391.	5.0	33
33	Ruthenium dendrimers as carriers for anticancer siRNA. Journal of Inorganic Biochemistry, 2018, 181, 18-27.	3.5	33
34	Fluorescent Phosphorus Dendrimer as a Spectral Nanosensor for Macrophage Polarization and Fate Tracking in Spinal Cord Injury. Macromolecular Bioscience, 2015, 15, 1523-1534.	4.1	31
35	Nanoparticle corona for proteins: mechanisms of interaction between dendrimers and proteins. Colloids and Surfaces B: Biointerfaces, 2015, 134, 377-383.	5.0	31
36	The breakdown of bilayer lipid membranes by dendrimers. Cellular and Molecular Biology Letters, 2006, 11, 242-8.	7.0	30

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37	Does fluorescence of ANS reflect its binding to PAMAM dendrimer?. Bioorganic Chemistry, 2007, 35, 170-174.	4.1	30
38	Use of polyamidoamine dendrimers to engineer BDNF-producing human mesenchymal stem cells. Molecular Biology Reports, 2010, 37, 2003-2008.	2.3	30
39	Circulating microRNAs in Medicine. International Journal of Molecular Sciences, 2022, 23, 3996.	4.1	30
40	Estimation of PAMAM Dendrimers' Binding Capacity by Fluorescent Probe ANS. Journal of Fluorescence, 2003, 13, 519-524.	2.5	29
41	Interaction between PAMAM 4.5 dendrimer, cadmium and bovine serum albumin: A study using equilibrium dialysis, isothermal titration calorimetry, zeta-potential and fluorescence. Colloids and Surfaces B: Biointerfaces, 2007, 58, 286-289.	5.0	26
42	Multi-Target Inhibition of Cancer Cell Growth by SiRNA Cocktails and 5-Fluorouracil Using Effective Piperidine-Terminated Phosphorus Dendrimers. Colloids and Interfaces, 2017, 1, 6.	2.1	26
43	Gold nanoparticles stabilized by cationic carbosilane dendrons: synthesis and biological properties. Dalton Transactions, 2017, 46, 8736-8745.	3.3	25
44	Complexes of Pro-Apoptotic siRNAs and Carbosilane Dendrimers: Formation and Effect on Cancer Cells. Pharmaceutics, 2019, 11, 25.	4.5	24
45	Impact of PAMAM G2 and G6 dendrimers on bovine serum albumin (fatty acids free and loaded with) Tj ETQq1 1 0.784314 rgBT /Over	5.0	23
46	In vivo therapeutic applications of phosphorus dendrimers: state of the art. Drug Discovery Today, 2021, 26, 677-689.	6.4	23
47	Non-Viral Engineering of Skin Precursor-Derived Schwann Cells for Enhanced NT-3 Production in Adherent and Microcarrier Culture. Current Medicinal Chemistry, 2012, 19, 5572-5579.	2.4	22
48	Binding properties of polyamidoamine dendrimers. Journal of Applied Polymer Science, 2007, 103, 2036-2040.	2.6	21
49	Binding Properties of Water-Soluble Carbosilane Dendrimers. Journal of Fluorescence, 2009, 19, 267-275.	2.5	21
50	Effect of dendrimers on selected enzymesâ€"Evaluation of nano carriers. International Journal of Pharmaceutics, 2016, 499, 247-254.	5.2	21
51	Stabilizing effect of small concentrations of PAMAM dendrimers at the insulin aggregation. Colloids and Surfaces B: Biointerfaces, 2014, 116, 757-760.	5.0	20
52	Dendrimers complexed with HIV-1 peptides interact with liposomes and lipid monolayers. Biochimica Et Biophysica Acta - Biomembranes, 2015, 1848, 907-915.	2.6	20
53	Ruthenium Dendrimers against Human Lymphoblastic Leukemia 1301 Cells. International Journal of Molecular Sciences, 2020, 21, 4119.	4.1	20
54	Neurons and Stromal Stem Cells as Targets for Polycation-Mediated Transfection. Bulletin of Experimental Biology and Medicine, 2011, 151, 126-129.	0.8	19

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55	Synthesis and Characterization of FITC Labelled Ruthenium Dendrimer as a Prospective Anticancer Drug. Biomolecules, 2019, 9, 411.	4.0	19
56	Dendrimer-Driven Neurotrophin Expression Differs in Temporal Patterns between Rodent and Human Stem Cells. Molecular Pharmaceutics, 2012, 9, 1521-1528.	4.6	18
57	Contribution of hydrophobicity, DNA and proteins to the cytotoxicity of cationic PAMAM dendrimers. International Journal of Pharmaceutics, 2013, 454, 1-3.	5.2	18
58	The interaction between PAMAM G3.5 dendrimer, Cd2+, dendrimerâ€“Cd2+ complexes and human serum albumin. Colloids and Surfaces B: Biointerfaces, 2009, 69, 95-98.	5.0	17
59	Non-virally Modified Human Mesenchymal Stem Cells Produce Ciliary Neurotrophic Factor in Biodegradable Fibrin-Based 3D Scaffolds. Journal of Pharmaceutical Sciences, 2012, 101, 1546-1554.	3.3	17
60	Interference of cationic polymeric nanoparticles with clinical chemistry testsâ€”Clinical relevance. International Journal of Pharmaceutics, 2014, 473, 599-606.	5.2	15
61	Evaluation of dendronized gold nanoparticles as siRNAs carriers into cancer cells. Journal of Molecular Liquids, 2021, 324, 114726.	4.9	15
62	Ruthenium dendrimers against acute promyelocytic leukemia:Âin vitro studies on HL-60 cells. Future Medicinal Chemistry, 2019, 11, 1741-1756.	2.3	14
63	Role of cationic carbosilane dendrons and metallic core of functionalized gold nanoparticles in their interaction with human serum albumin. International Journal of Biological Macromolecules, 2018, 118, 1773-1780.	7.5	13
64	Phosphorus dendrimers as powerful nanoplatforms for drug delivery, as fluorescent probes and for liposome interaction studies: A concise overview. European Journal of Medicinal Chemistry, 2020, 208, 112788.	5.5	13
65	A new application of inorganic sorbent for biomolecules: IMAC practice of Fe3+-nano flowers for DNA separation. Materials Science and Engineering C, 2020, 113, 111020.	7.3	13
66	Stability of Dendriplexes Formed by Anti-HIV Genetic Material and Poly(propylene imine) Dendrimers in the Presence of Glucosaminoglycans. Journal of Physical Chemistry B, 2012, 116, 14525-14532.	2.6	11
67	Hybrid phosphorusâ€“viologen dendrimers as new soft nanoparticles: design and properties. Organic Chemistry Frontiers, 2021, 8, 4607-4622.	4.5	11
68	Aligned collagenâ€“GAG matrix as a 3D substrate for Schwann cell migration and dendrimer-based gene delivery. Journal of Materials Science: Materials in Medicine, 2014, 25, 1979-1989.	3.6	10
69	Interaction between dendrimers and regulatory proteins. Comparison of effects of carbosilane and carbosilaneâ€“viologenâ€“phosphorus dendrimers. RSC Advances, 2016, 6, 97546-97554.	3.6	10
70	Dendronization of gold nanoparticles decreases their effect on human alpha-1-microglobulin. International Journal of Biological Macromolecules, 2018, 108, 936-941.	7.5	10
71	Prospects of Cationic Carbosilane Dendronized Gold Nanoparticles as Non-viral Vectors for Delivery of Anticancer siRNAs siBCL-xL and siMCL-1. Pharmaceutics, 2021, 13, 1549.	4.5	10
72	Binding of poly(amidoamine), carbosilane, phosphorus and hybrid dendrimers to thrombinâ€”Constants and mechanisms. Colloids and Surfaces B: Biointerfaces, 2017, 155, 11-16.	5.0	9

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73	Effect of PEGylation on the biological properties of cationic carbosilane dendronized gold nanoparticles. International Journal of Pharmaceutics, 2020, 573, 118867.	5.2	9
74	Generation Dependent Effects and Entrance to Mitochondria of Hybrid Dendrimers on Normal and Cancer Neuronal Cells In Vitro. Biomolecules, 2020, 10, 427.	4.0	9
75	THE EFFECT OF OXIDATIVE STRESS INDUCED BY t-BUTYL HYDROPEROXIDE ON THE STRUCTURAL DYNAMICS OF MEMBRANE PROTEINS OF CHINESE HAMSTER FIBROBLASTS. Cell Biology International, 1999, 23, 345-350.	3.0	8
76	Complex formation between endogenous toxin bilirubin and polyamidoamine dendrimers: A spectroscopic study. Biochimica Et Biophysica Acta - General Subjects, 2006, 1760, 1021-1026.	2.4	8
77	Impact of maltose modified poly(propylene imine) dendrimers on liver alcohol dehydrogenase (LADH) internal dynamics and structure. New Journal of Chemistry, 2012, 36, 1992.	2.8	8
78	Combined therapy of ruthenium dendrimers and anti-cancer drugs against human leukemic cells. Dalton Transactions, 2021, 50, 9500-9511.	3.3	8
79	Acidosis, magnesium and acetylsalicylic acid: Effects on thrombin. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2013, 104, 158-164.	3.9	7
80	Recent Patents in Dendrimers for Nanomedicine: Evolution 2014. Recent Patents on Nanomedicine, 2014, 4, 25-31.	0.5	7
81	Effect of acetylsalicylic acid on the currentâ€“voltage characteristics of planar lipid membranes. Biophysical Chemistry, 2009, 142, 27-33.	2.8	6
82	Phosphorus-containing nanoparticles: biomedical patents review. Expert Opinion on Therapeutic Patents, 2015, 25, 539-548.	5.0	6
83	The Interaction between Polycationic Poly-Lysine Dendrimers and Charged and Neutral Fluorescent Probes. Journal of Fluorescence, 2006, 17, 73-79.	2.5	5
84	<title>Tryptophan phosphorescence as a monitor of flexibility of membrane proteins in cells</title>. Proceedings of SPIE, 1997, , .	0.8	4
85	The influence of heterocyclic compound-PAMAM dendrimer complexes on evoked electrical responses in slices of hypoxic brain tissue. Cellular and Molecular Biology Letters, 2014, 19, 243-8.	7.0	4
86	Immunoreactivity changes of human serum albumin and alpha-1-microglobulin induced by their interaction with dendrimers. Colloids and Surfaces B: Biointerfaces, 2019, 179, 226-232.	5.0	4
87	First protein affinity application of Cu2+-bound pure inorganic nanoflowers. Polymer Bulletin, 2022, 79, 3233-3251.	3.3	4
88	Blood Compatibility of Amphiphilic Phosphorous Dendronsâ€”Prospective Drug Nanocarriers. Biomedicines, 2021, 9, 1672.	3.2	4
89	Phosphorescence of Tryptophan Residues of Proteins at Room Temperature. Journal of Applied Spectroscopy, 2002, 69, 213-219.	0.7	3
90	Slow internal dynamics of membrane proteins in mechanisms of protease-induced aggregation of platelets. Cell Biology International, 2003, 27, 571-578.	3.0	3

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91	The effects of magnesium, acetylsalicylic acid, and emoxypine on platelet aggregation. Biophysics (Russian Federation), 2014, 59, 900-903.	0.7	3
92	Comparison of the effects of dendrimer, micelle and silver nanoparticles on phospholipase A2 structure. Journal of Biotechnology, 2021, 331, 48-52.	3.8	3
93	Ultrasonic Formation of Fe₃O₄-Reduced Graphene Oxideâ€“Salicylic Acid Nanoparticles with Switchable Antioxidant Function. ACS Biomaterials Science and Engineering, 2022, 8, 1181-1192.	5.2	3
94	Dendrimers in Anti-HIV Therapy. , 0, , .		2
95	Cationic Carbosilane Dendrimers as Nonâ€viral Vectors of Nucleic Acids (Oligonucleotide or siRNA) for Gene Therapy Purposes. , 2013, , 40-55.		2
96	Recombination Prolonged Luminescence of Indole and Tryptophan in a Solution at Room Temperature. Journal of Applied Spectroscopy, 2003, 70, 270-275.	0.7	1
97	Room Temperature Phosphorescence of the Membrane Proteins of Human Erythrocytes. Journal of Applied Spectroscopy, 2003, 70, 385-390.	0.7	1
98	Differences between Cu- and Feâ€“Cu nanoflowers in their interactions with fluorescent probes ANS and Fura-2 and proteins albumin and thrombin. Polymer Bulletin, 2022, 79, 5247-5259.	3.3	1
99	Phosphorescent Analysis of Lipid Peroxidation Products in vitro and in situ. , 1999, , 349-350.		1
100	Room Temperature Tryptophan Phosphorescence as monitor of internal dynamics of isolated human erythrocyte membranes proteins. , 1999, , 21-22.		1
101	SMALL NON-CODING RNA: BIOLOGICAL FUNCTIONS AND BIOMEDICAL APPLICATION. Vestsi Natsyianal'nai Akademii Navuk Belarusi Seryia Biialahichnykh Navuk, 2018, 63, 232-244.	0.1	1
102	Engineered phosphorus dendrimers as powerful non-viral nanoplatforms for gene delivery: a great hope for the future of cancer therapeutics. Exploration of Targeted Anti-tumor Therapy, 0, , 50-61.	0.8	1
103	Mobility of Chromophores Absorbing Light in the 320â€“420 nm Range in Transparent and Cataract Lens Tissue. Journal of Applied Spectroscopy, 2014, 81, 820-826.	0.7	0
104	Circulating tumor cells and circulating cancer stem cells and their detection by the method of flow cytometry. Vestsi Natsyianal'nai Akademii Navuk Belarusi Seryia Biialahichnykh Navuk, 2021, 66, 370-384.	0.1	0
105	Phosphorus Dendrimers as Vectors for Gene Therapy in Cancer. , 2018, , 227-244.		0
106	Hybride metall-organic nanoflowers and their applications in biotechnology. Vestsi Natsyianal'nai Akademii Navuk Belarusi Seryia Biialahichnykh Navuk, 2019, 64, 374-384.	0.1	0
107	Interactions of dendrimers and dendronized nanoparticles with proteins. Vestsi Natsyianal'nai Akademii Navuk Belarusi Seryia Biialahichnykh Navuk, 2020, 65, 497-509.	0.1	0
108	Interaction of polyamidoamine dendrimers and amphiphylic dendrons with lipid membranes. Vestsi Natsyianal'nai Akademii Navuk Belarusi Seryia Biialahichnykh Navuk, 2021, 66, 497-512.	0.1	0