Dzmitry G Shcharbin

List of Publications by Citations

104 papers	2,320 citations	29 h-index	44 g-index
108 ext. papers	2,554 ext. citations	5.1 avg, IF	4.82 L-index

#	Paper	IF	Citations
104	Characterization of carbosilane dendrimers as effective carriers of siRNA to HIV-infected lymphocytes. *Journal of Controlled Release*, **2008**, 132, 55-64	11.7	141
103	Poly(amidoamine) dendrimer complexes as a platform for gene delivery. *Expert Opinion on Drug Delivery*, **2013**, 10, 1687-98	8	89
102	How to study dendrimers and dendriplexes III. Biodistribution, pharmacokinetics and toxicity in vivo. *Journal of Controlled Release*, **2014**, 181, 40-52	11.7	75
101	How to study dendriplexes I: Characterization. *Journal of Controlled Release*, **2009**, 135, 186-97	11.7	74
100	Dendrimers and hyperbranched structures for biomedical applications. *European Polymer Journal*, **2019**, 119, 61-73	5.2	65
99	Serum albumins have five sites for binding of cationic dendrimers. *Biochimica Et Biophysica Acta - Proteins and Proteomics*, **2007**, 1774, 946-51	4	65
98	How to study dendriplexes II: Transfection and cytotoxicity. *Journal of Controlled Release*, **2010**, 141, 110-27	11.7	64
97	Anticancer siRNA cocktails as a novel tool to treat cancer cells. Part (B). Efficiency of pharmacological action. *International Journal of Pharmaceutics*, **2015**, 485, 288-94	6.5	61
96	Dendrimer interactions with hydrophobic fluorescent probes and human serum albumin. *Journal of Fluorescence*, **2005**, 15, 21-8	2.4	61
95	Transfection efficiencies of PAMAM dendrimers correlate inversely with their hydrophobicity. *International Journal of Pharmaceutics*, **2010**, 383, 228-35	6.5	59
94	Biological properties of low molecular mass peptide dendrimers. *International Journal of Pharmaceutics*, **2006**, 309, 208-17	6.5	57
93	Dendrimers Show Promise for siRNA and microRNA Therapeutics. *Pharmaceutics*, **2018**, 10,	6.4	57
92	Anticancer siRNA cocktails as a novel tool to treat cancer cells. Part (A). Mechanisms of interaction. *International Journal of Pharmaceutics*, **2015**, 485, 261-9	6.5	56
91	Water-soluble carbosilane dendrimers protect phosphorothioate oligonucleotides from binding to serum proteins. *Organic and Biomolecular Chemistry*, **2007**, 5, 1886-93	3.9	52
90	Influence of fourth generation poly(propyleneimine) dendrimers on blood cells. *Journal of Biomedical Materials Research - Part A*, **2012**, 100, 2870-80	5.4	51
89	Doxycycline-regulated GDNF expression promotes axonal regeneration and functional recovery in transected peripheral nerve. *Journal of Controlled Release*, **2013**, 172, 841-51	11.7	48
88	Dendrimers in gene transfection. *Biochemistry (Moscow)*, **2009**, 74, 1070-9	2.9	44

87	Analysis of interaction between dendriplexes and bovine serum albumin. *Biomacromolecules*, **2007**, 8, 2059-62	6.9	44
86	Can dendrimer based nanoparticles fight neurodegenerative diseases? Current situation versus other established approaches. *Progress in Polymer Science*, **2017**, 64, 23-51	29.6	42
85	Fourth generation phosphorus-containing dendrimers: prospective drug and gene delivery carrier. *Pharmaceutics*, **2011**, 3, 458-73	6.4	42
84	Effect of dendrimers on pure acetylcholinesterase activity and structure. *Bioelectrochemistry*, **2006**, 68, 56-9	5.6	41
83	Novel \Si-CVcarbosilane dendrimers as carriers for anti-HIV nucleic acids: studies on complexation and interaction with blood cells. *Colloids and Surfaces B: Biointerfaces*, **2013**, 109, 183-9	6	35
82	Dendrimer-protein interactions versus dendrimer-based nanomedicine. *Colloids and Surfaces B: Biointerfaces*, **2017**, 152, 414-422	6	34
81	Dendrimer-protein interactions studied by tryptophan room temperature phosphorescence. *Biochimica Et Biophysica Acta - Proteins and Proteomics*, **2006**, 1764, 1750-6	4	34
80	Nanomaterials in stroke treatment: perspectives. *Stroke*, **2013**, 44, 2351-5	6.7	33
79	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, 1081-93	3.5	33
78	Carbosilane dendrimers are a non-viral delivery system for antisense oligonucleotides: characterization of dendriplexes. *Journal of Biomedical Nanotechnology*, **2012**, 8, 57-73	4	32
77	Carbosilane dendrimers NN8 and NN16 form a stable complex with siGAG1. *Colloids and Surfaces B: Biointerfaces*, **2011**, 83, 388-91	6	31
76	Hybrid metal-organic nanoflowers and their application in biotechnology and medicine. *Colloids and Surfaces B: Biointerfaces*, **2019**, 182, 110354	6	30
75	Nanoparticle corona for proteins: mechanisms of interaction between dendrimers and proteins. *Colloids and Surfaces B: Biointerfaces*, **2015**, 134, 377-83	6	28
74	Use of polyamidoamine dendrimers to engineer BDNF-producing human mesenchymal stem cells. *Molecular Biology Reports*, **2010**, 37, 2003-8	2.8	28
73	Does fluorescence of ANS reflect its binding to PAMAM dendrimer?. *Bioorganic Chemistry*, **2007**, 35, 170-4	5.1	28
72	Cytotoxicity, haematotoxicity and genotoxicity of high molecular mass arborescent polyoxyethylene polymers with polyglycidol-block-containing shells. *Cell Biology International*, **2006**, 30, 248-52	4.5	28
71	The breakdown of bilayer lipid membranes by dendrimers. *Cellular and Molecular Biology Letters*, **2006**, 11, 242-8	8.1	28
70	Estimation of PAMAM Dendrimers\Binding Capacity by Fluorescent Probe ANS. *Journal of Fluorescence*, **2003**, 13, 519-524	2.4	28

69	Fluorescent Phosphorus Dendrimer as a Spectral Nanosensor for Macrophage Polarization and Fate Tracking in Spinal Cord Injury. *Macromolecular Bioscience*, **2015**, 15, 1523-34	5.5	27
68	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, 286-9	6	25
67	Ruthenium dendrimers as carriers for anticancer siRNA. *Journal of Inorganic Biochemistry*, **2018**, 181, 18-27	4.2	24
66	Ruthenium metallodendrimers with anticancer potential in an acute promyelocytic leukemia cell line (HL60). *European Polymer Journal*, **2017**, 87, 39-47	5.2	22
65	Non-viral engineering of skin precursor-derived Schwann cells for enhanced NT-3 production in adherent and microcarrier culture. *Current Medicinal Chemistry*, **2012**, 19, 5572-9	4.3	22
64	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	3	21
63	Impact of PAMAM G2 and G6 dendrimers on bovine serum albumin (fatty acids free and loaded with different fatty acids). *Colloids and Surfaces B: Biointerfaces*, **2008**, 63, 27-33	6	21
62	Binding properties of polyamidoamine dendrimers. *Journal of Applied Polymer Science*, **2007**, 103, 2036-2040	2.4	20
61	Stabilizing effect of small concentrations of PAMAM dendrimers at the insulin aggregation. *Colloids and Surfaces B: Biointerfaces*, **2014**, 116, 757-60	6	19
60	Binding properties of water-soluble carbosilane dendrimers. *Journal of Fluorescence*, **2009**, 19, 267-75	2.4	19
59	Gold nanoparticles stabilized by cationic carbosilane dendrons: synthesis and biological properties. *Dalton Transactions*, **2017**, 46, 8736-8745	4.3	18
58	Dendrimers complexed with HIV-1 peptides interact with liposomes and lipid monolayers. *Biochimica Et Biophysica Acta - Biomembranes*, **2015**, 1848, 907-15	3.8	18
57	Dendrimer-driven neurotrophin expression differs in temporal patterns between rodent and human stem cells. *Molecular Pharmaceutics*, **2012**, 9, 1521-8	5.6	18
56	Neurons and stromal stem cells as targets for polycation-mediated transfection. *Bulletin of Experimental Biology and Medicine*, **2011**, 151, 126-9	0.8	18
55	Contribution of hydrophobicity, DNA and proteins to the cytotoxicity of cationic PAMAM dendrimers. *International Journal of Pharmaceutics*, **2013**, 454, 1-3	6.5	17
54	Effect of dendrimers on selected enzymes--Evaluation of nano carriers. *International Journal of Pharmaceutics*, **2016**, 499, 247-254	6.5	16
53	The interaction between PAMAM G3.5 dendrimer, Cd2+, dendrimer-Cd2+ complexes and human serum albumin. *Colloids and Surfaces B: Biointerfaces*, **2009**, 69, 95-8	6	16
52	Nanoparticles in Combating Cancer: Opportunities and Limitations. A Brief Review. *Current Medicinal Chemistry*, **2021**, 28, 346-359	4.3	16

51	Complexes of Pro-Apoptotic siRNAs and Carbosilane Dendrimers: Formation and Effect on Cancer Cells. *Pharmaceutics*, **2019**, 11,	6.4	16
50	Non-virally modified human mesenchymal stem cells produce ciliary neurotrophic factor in biodegradable fibrin-based 3D scaffolds. *Journal of Pharmaceutical Sciences*, **2012**, 101, 1546-54	3.9	15
49	Synthesis and Characterization of FITC Labelled Ruthenium Dendrimer as a Prospective Anticancer Drug. *Biomolecules*, **2019**, 9,	5.9	13
48	Interference of cationic polymeric nanoparticles with clinical chemistry tests--clinical relevance. *International Journal of Pharmaceutics*, **2014**, 473, 599-606	6.5	13
47	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, 14525-32	3.4	10
46	In vivo therapeutic applications of phosphorus dendrimers: state of the art. *Drug Discovery Today*, **2021**, 26, 677-689	8.8	10
45	Interaction between dendrimers and regulatory proteins. Comparison of effects of carbosilane and carbosilane□iologen□hosphorus dendrimers. *RSC Advances*, **2016**, 6, 97546-97554	3.7	9
44	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	7.9	9
43	Ruthenium dendrimers against acute promyelocytic leukemia:□studies on HL-60 cells. *Future Medicinal Chemistry*, **2019**, 11, 1741-1756	4.1	9
42	Dendronization of gold nanoparticles decreases their effect on human alpha-1-microglobulin. *International Journal of Biological Macromolecules*, **2018**, 108, 936-941	7.9	9
41	Impact of maltose modified poly(propylene imine) dendrimers on liver alcohol dehydrogenase (LADH) internal dynamics and structure. *New Journal of Chemistry*, **2012**, 36, 1992	3.6	8
40	Binding of poly(amidoamine), carbosilane, phosphorus and hybrid dendrimers to thrombin-Constants and mechanisms. *Colloids and Surfaces B: Biointerfaces*, **2017**, 155, 11-16	6	7
39	Ruthenium Dendrimers against Human Lymphoblastic Leukemia 1301 Cells. *International Journal of Molecular Sciences*, **2020**, 21,	6.3	7
38	A new application of inorganic sorbent for biomolecules: IMAC practice of Fe-nano flowers for DNA separation. *Materials Science and Engineering C*, **2020**, 113, 111020	8.3	7
37	Aligned collagen-GAG matrix as a 3D substrate for Schwann cell migration and dendrimer-based gene delivery. *Journal of Materials Science: Materials in Medicine*, **2014**, 25, 1979-89	4.5	7
36	Acidosis, magnesium and acetylsalicylic acid: effects on thrombin. *Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy*, **2013**, 104, 158-64	4.4	7
35	Complex formation between endogenous toxin bilirubin and polyamidoamine dendrimers: a spectroscopic study. *Biochimica Et Biophysica Acta - General Subjects*, **2006**, 1760, 1021-6	4	7
34	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, 345-50	4.5	7

33	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	6.8	7
32	Recent Patents in Dendrimers for Nanomedicine: Evolution 2014. *Recent Patents on Nanomedicine*, **2014**, 4, 25-31		6
31	Effect of PEGylation on the biological properties of cationic carbosilane dendronized gold nanoparticles. *International Journal of Pharmaceutics*, **2020**, 573, 118867	6.5	6
30	Evaluation of dendronized gold nanoparticles as siRNAs carriers into cancer cells. *Journal of Molecular Liquids*, **2021**, 324, 114726	6	6
29	Phosphorus-containing nanoparticles: biomedical patents review. *Expert Opinion on Therapeutic Patents*, **2015**, 25, 539-48	6.8	5
28	Generation Dependent Effects and Entrance to Mitochondria of Hybrid Dendrimers on Normal and Cancer Neuronal Cells In Vitro. *Biomolecules*, **2020**, 10,	5.9	5
27	Effect of acetylsalicylic acid on the current-voltage characteristics of planar lipid membranes. *Biophysical Chemistry*, **2009**, 142, 27-33	3.5	5
26	The interaction between polycationic poly-lysine dendrimers and charged and neutral fluorescent probes. *Journal of Fluorescence*, **2007**, 17, 73-9	2.4	5
25	Phosphorescence of Tryptophan Residues of Proteins at Room Temperature. *Journal of Applied Spectroscopy*, **2002**, 69, 213-219	0.7	3
24	Slow internal dynamics of membrane proteins in mechanisms of protease-induced aggregation of platelets. *Cell Biology International*, **2003**, 27, 571-8	4.5	3
23	Combined therapy of ruthenium dendrimers and anti-cancer drugs against human leukemic cells. *Dalton Transactions*, **2021**, 50, 9500-9511	4.3	3
22	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	6	2
21	Cationic Carbosilane Dendrimers as Non-viral Vectors of Nucleic Acids (Oligonucleotide or siRNA) for Gene Therapy Purposes **2013**, 40-55		2
20	Dendrimers in Anti-HIV Therapy **2011**,		2
19	Tryptophan phosphorescence as a monitor of flexibility of membrane proteins in cells **1997**,		2
18	Hybrid phosphorus viologen dendrimers as new soft nanoparticles: design and properties. *Organic Chemistry Frontiers*, **2021**, 8, 4607-4622	5.2	2
17	Prospects of Cationic Carbosilane Dendronized Gold Nanoparticles as Non-viral Vectors for Delivery of Anticancer siRNAs siBCL-xL and siMCL-1. *Pharmaceutics*, **2021**, 13,	6.4	2
16	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	8.1	1

15	The effects of magnesium, acetylsalicylic acid, and emoxypine on platelet aggregation. *Biophysics (Russian Federation)*, **2014**, 59, 900-903	0.7	1
14	Recombination Prolonged Luminescence of Indole and Tryptophan in a Solution at Room Temperature. *Journal of Applied Spectroscopy*, **2003**, 70, 270-275	0.7	1
13	Room Temperature Phosphorescence of the Membrane Proteins of Human Erythrocytes. *Journal of Applied Spectroscopy*, **2003**, 70, 385-390	0.7	1
12	Phosphorescent Analysis of Lipid Peroxidation Products in vitro and in situ **1999**, 349-350		1
11	First protein affinity application of Cu2+-bound pure inorganic nanoflowers. *Polymer Bulletin*,1	2.4	1
10	Comparison of the effects of dendrimer, micelle and silver nanoparticles on phospholipase A2 structure. *Journal of Biotechnology*, **2021**, 331, 48-52	3.7	1
9	Room Temperature Tryptophan Phosphorescence as monitor of internal dynamics of isolated human erythrocyte membranes proteins **1999**, 21-22		0
8	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*,50-61	2.5	0
7	Mobility of Chromophores Absorbing Light in the 320–420 nm Range in Transparent and Cataract Lens Tissue. *Journal of Applied Spectroscopy*, **2014**, 81, 820-826	0.7	
6	Interactions of dendrimers and dendronized nanoparticles with proteins. *Vestsi Natsyianalmai Akademii Navuk Belarusi Seryia Biialahichnykh Navuk*, **2020**, 65, 497-509	0.2	
5	Interaction of polyamidoamine dendrimers and amphiphylic dendrons with lipid membranes. *Vestsi Natsyianalmai Akademii Navuk Belarusi Seryia Biialahichnykh Navuk*, **2021**, 66, 497-512	0.2	
4	Phosphorus Dendrimers as Vectors for Gene Therapy in Cancer **2018**, 227-244		
3	Hybride metall-organic nanoflowers and their applications in biotechnology. *Vestsi Natsyianalmai Akademii Navuk Belarusi Seryia Biialahichnykh Navuk*, **2019**, 64, 374-384	0.2	
2	Differences between Cu- and Fe-Cu nanoflowers in their interactions with fluorescent probes ANS and Fura-2 and proteins albumin and thrombin. *Polymer Bulletin*,1	2.4	
1	Circulating tumor cells and circulating cancer stem cells and their detection by the method of flow cytometry. *Vestsi Natsyianalmai Akademii Navuk Belarusi Seryia Biialahichnykh Navuk*, **2021**, 66, 370-384	0.2	