Alexey Kondyurin

List of Publications by Year in descending order

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144 papers 2,658 citations

218677 26 h-index 243625 44 g-index

145 all docs

145 docs citations

145 times ranked 2931 citing authors

#	Article	IF	CITATIONS
1	Substrate elasticity provides mechanical signals for the expansion of hemopoietic stem and progenitor cells. Nature Biotechnology, 2010, 28, 1123-1128.	17.5	244
2	Free radical functionalization of surfaces to prevent adverse responses to biomedical devices. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 14405-14410.	7.1	178
3	Surface plasma modification and tropoelastin coating of a polyurethane co-polymer for enhanced cell attachment and reduced thrombogenicity. Biomaterials, 2014, 35, 6797-6809.	11.4	74
4	Mechanisms for surface energy changes observed in plasma immersion ion implanted polyethylene: The roles of free radicals and oxygen-containing groups. Polymer Degradation and Stability, 2009, 94, 638-646.	5.8	63
5	Fourier transform Raman and Fourier transform infrared spectra of cross-linked polyurethaneurea films synthesized from solutions. Journal of Raman Spectroscopy, 2002, 33, 769-777.	2.5	62
6	Attachment of horseradish peroxidase to polytetrafluorethylene (teflon) after plasma immersion ion implantation. Acta Biomaterialia, 2008, 4, 1218-1225.	8.3	62
7	Carbon nanostructures for hard tissue engineering. RSC Advances, 2013, 3, 11058.	3.6	62
8	Etching and structural changes of polystyrene films during plasma immersion ion implantation from argon plasma. Nuclear Instruments & Methods in Physics Research B, 2006, 251, 413-418.	1.4	57
9	Comparison of Protein Surface Attachment on Untreated and Plasma Immersion Ion Implantation Treated Polystyrene: Protein Islands and Carpet. Langmuir, 2007, 23, 2741-2746.	3.5	54
10	The attachment of catalase and poly-l-lysine to plasma immersion ion implantation-treated polyethylene. Acta Biomaterialia, 2007, 3, 695-704.	8.3	53
11	Adhesion of Polytetrafluorethylene modified by an ion beam. Vacuum, 1999, 52, 285-289.	3.5	52
12	Acetylene plasma polymerized surfaces for covalent immobilization of dense bioactive protein monolayers. Surface and Coatings Technology, 2009, 203, 1310-1316.	4.8	50
13	Biospectroscopy of Nanodiamond-Induced Alterations in Conformation of Intra- and Extracellular Proteins: A Nanoscale IR Study. Analytical Chemistry, 2016, 88, 7530-7538.	6.5	50
14	Moir \tilde{A} © Patterns in Superimposed Nanoporous Thin Films Derived from Block-Copolymer Assemblies. Nano Letters, 2007, 7, 3628-3632.	9.1	45
15	Structure of polyethylene after pulse ion beam treatment. Journal of Applied Polymer Science, 1998, 69, 1071-1077.	2.6	44
16	Plasma immersion ion implantation of polyethylene. Vacuum, 2001, 64, 105-111.	3.5	40
17	Cell patterning via linker-free protein functionalization of an organic conducting polymer (polypyrrole) electrode. Acta Biomaterialia, 2012, 8, 2538-2548.	8.3	40
18	Plasma-based biofunctionalization of vascular implants. Nanomedicine, 2012, 7, 1907-1916.	3.3	40

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19	The use of plasma-activated covalent attachment of early domains of tropoelastin to enhance vascular compatibility of surfaces. Biomaterials, 2013, 34, 7584-7591.	11.4	37
20	Nanoâ€Bioâ€Chemical Braille for Cells: The Regulation of Stem Cell Responses using Biâ€Functional Surfaces. Advanced Functional Materials, 2015, 25, 193-205.	14.9	36
21	Plasma Ion Implantation of Silk Biomaterials Enabling Direct Covalent Immobilization of Bioactive Agents for Enhanced Cellular Responses. ACS Applied Materials & Samp; Interfaces, 2018, 10, 17605-17616.	8.0	36
22	Plasma immersion ion implantation of polyurethane shape memory polymer: Surface properties and protein immobilization. Applied Surface Science, 2017, 416, 686-695.	6.1	30
23	Effect of Low Molecular Weight Additives on Immobilization Strength, Activity, and Conformation of Protein Immobilized on PVC and UHMWPE. Langmuir, 2011, 27, 6138-6148.	3 . 5	29
24	Orientation and conformation of anti-CD34 antibody immobilised on untreated and plasma treated polycarbonate. Acta Biomaterialia, 2015, 19, 128-137.	8.3	28
25	Exploiting sensor geometry for enhanced gas sensing properties of fluorinated carbon nanotubes under humid environment. Sensors and Actuators B: Chemical, 2019, 281, 945-952.	7.8	28
26	Plasma Polymer Surfaces Compatible with a CMOS Process for Direct Covalent Enzyme Immobilization. Plasma Processes and Polymers, 2009, 6, 68-75.	3.0	27
27	Ion beam modification of polyethylene and adhesion to epoxy adhesive. Vacuum, 1996, 47, 1085-1087.	3 . 5	26
28	Polymerisation of composite materials in space environment for development of a Moon base. Advances in Space Research, 2006, 37, 109-115.	2.6	26
29	Hydrogelâ^'Solid Hybrid Materials for Biomedical Applications Enabled by Surfaceâ€Embedded Radicals. Advanced Functional Materials, 2020, 30, 2004599.	14.9	26
30	Etching and structure changes in PMMA coating under argon plasma immersion ion implantation. Nuclear Instruments & Methods in Physics Research B, 2011, 269, 1361-1369.	1.4	25
31	A facile method to in situ formation of hydroxyapatite single crystal architecture for enhanced osteoblast adhesion. Journal of Materials Chemistry, 2012, 22, 19081.	6.7	25
32	Hybrid graphite film–carbon nanotube platform for enzyme immobilization and protection. Carbon, 2013, 65, 287-295.	10.3	25
33	Dewetting of thin polymer film on rough substrate: II. Experiment. Journal Physics D: Applied Physics, 2008, 41, 065307.	2.8	24
34	Bio-Activation of Polyether Ether Ketone Using Plasma Immersion Ion Implantation: A Kinetic Model. Plasma Processes and Polymers, 2015, 12, 180-193.	3.0	24
35	Ordered HAp nanoarchitecture formed on HAp–TCP bioceramics by "nanocarving―and mineralization deposition and its potential use for guiding cell behaviors. Journal of Materials Chemistry B, 2013, 1, 2455.	5.8	23
36	Plasma-Activated Tropoelastin Functionalization of Zirconium for Improved Bone Cell Response. ACS Biomaterials Science and Engineering, 2016, 2, 662-676.	5. 2	23

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37	Polymerization in microgravity as a new process in space technology. Acta Astronautica, 2001, 48, 169-180.	3.2	22
38	Dewetting of thin polymer film on rough substrate: I. Theory. Journal Physics D: Applied Physics, 2008, 41, 065306.	2.8	22
39	Mechanisms for Covalent Immobilization of Horseradish Peroxidase on Ion-Beam-Treated Polyethylene. Scientifica, 2012, 2012, 1-28.	1.7	22
40	Influence of pH on yeast immobilization on polystyrene surfaces modified by energetic ion bombardment. Colloids and Surfaces B: Biointerfaces, 2013, 104, 145-152.	5.0	22
41	Depth-Resolved Structural and Compositional Characterization of Ion-Implanted Polystyrene that Enables Direct Covalent Immobilization of Biomolecules. Journal of Physical Chemistry C, 2015, 119, 16793-16803.	3.1	21
42	Covalent Attachment and Bioactivity of Horseradish Peroxidase on Plasmaâ€Polymerized Hexane Coatings. Plasma Processes and Polymers, 2008, 5, 727-736.	3.0	20
43	Surface attachment of horseradish peroxidase to nylon modified by plasmaâ€immersion ion implantation. Journal of Applied Polymer Science, 2011, 120, 2891-2903.	2.6	20
44	Biointerface: protein enhanced stem cells binding to implant surface. Journal of Materials Science: Materials in Medicine, 2012, 23, 2203-2215.	3.6	20
45	Plasma Ion Activated Expanded Polytetrafluoroethylene Vascular Grafts with a Covalently Immobilized Recombinant Human Tropoelastin Coating Reducing Neointimal Hyperplasia. ACS Biomaterials Science and Engineering, 2016, 2, 1286-1297.	5.2	19
46	A sterilizable, biocompatible, tropoelastin surface coating immobilized by energetic ion activation. Journal of the Royal Society Interface, 2017, 14, 20160837.	3.4	19
47	Enhanced biocompatibility of polyurethane-type shape memory polymers modified by plasma immersion ion implantation treatment and collagen coating: An in vivo study. Materials Science and Engineering C, 2019, 99, 863-874.	7.3	19
48	lon implantation treatment of beads for covalent binding of molecules: Application to bioethanol production using thermophilic beta-glucosidase. Enzyme and Microbial Technology, 2014, 54, 20-24.	3.2	18
49	Pulse and continuous ion beam treatment of polyethylene. Vacuum, 2002, 68, 341-347.	3.5	17
50	Immobilisation of a fibrillin-1 fragment enhances the biocompatibility of PTFE. Colloids and Surfaces B: Biointerfaces, 2014, 116, 544-552.	5.0	17
51	Microscopic unravelling of nano-carbon doping in MgB2 superconductors fabricated by diffusion method. Journal of Alloys and Compounds, 2015, 644, 900-905.	5.5	17
52	Plasma mediated protein immobilisation enhances the vascular compatibility of polyurethane with tissue matched mechanical properties. Biomedical Materials (Bristol), 2017, 12, 045002.	3.3	17
53	The protein corona determines the cytotoxicity of nanodiamonds: implications of corona formation and its remodelling on nanodiamond applications in biomedical imaging and drug delivery. Nanoscale Advances, 2020, 2, 4798-4812.	4.6	17
54	Photopolymerisation of composite material in simulated free space environment at low Earth orbital flight. European Polymer Journal, 2006, 42, 2703-2714.	5.4	16

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55	Plasma immersion ion implantation of Pebax polymer. Nuclear Instruments & Methods in Physics Research B, 2006, 251, 407-412.	1.4	16
56	Ion-implanted polytetrafluoroethylene enhances <i>Saccharomyces cerevisiae</i> biofilm formation for improved immobilization. Journal of the Royal Society Interface, 2012, 9, 2923-2935.	3.4	16
57	Cluster of differentiation antibody microarrays on plasma immersion ion implanted polycarbonate. Materials Science and Engineering C, 2014, 35, 434-440.	7.3	16
58	Weakened foreign body response to medical polyureaurethane treated by plasma immersion ion implantation. Nuclear Instruments & Methods in Physics Research B, 2019, 440, 163-174.	1.4	16
59	POLYMERIZATION PROCESSES OF EPOXY PLASTIC IN SIMULATED FREE SPACE CONDITIONS. Acta Astronautica, 2001, 48, 109-113.	3.2	15
60	Etching and structure transformations in uncured epoxy resin under rf-plasma and plasma immersion ion implantation. Nuclear Instruments & Methods in Physics Research B, 2010, 268, 1568-1580.	1.4	15
61	Improved Multiprotein Microcontact Printing on Plasma Immersion Ion Implanted Polystyrene. ACS Applied Materials & Samp; Interfaces, 2018, 10, 227-237.	8.0	15
62	Electric field assisted ion exchange of silver in soda-lime glass: A study of ion depletion layers and interactions with potassium. Journal of Applied Physics, 2019, 125, .	2.5	15
63	Drug release from polyureaurethane coating modified by plasma immersion ion implantation. Journal of Biomaterials Science, Polymer Edition, 2004, 15, 145-159.	3.5	14
64	Crosslinked Polyurethane Coating on Vascular Stents for Enhanced X-ray Contrast. Journal of Bioactive and Compatible Polymers, 2005, 20, 77-93.	2.1	14
65	Polymerization Processes of Epoxy Matrix Composites under Simulated Free Space Conditions. High Performance Polymers, 2004, 16, 163-175.	1.8	13
66	Curing of liquid epoxy resin in plasma discharge. European Polymer Journal, 2004, 40, 1915-1923.	5.4	13
67	CelB and \hat{l}^2 -glucosidase immobilization for carboxymethyl cellulose hydrolysis. RSC Advances, 2013, 3, 23604.	3.6	13
68	Cell growing on ion implanted polytetrafluorethylene. Applied Surface Science, 2014, 314, 670-678.	6.1	13
69	Fabrication of Antimicrobial Poly(propylene carbonate) Film by Plasma Surface Modification. Industrial & Engineering Chemistry Research, 2017, 56, 12578-12587.	3.7	13
70	Ion beam and laser processing for hydroxyapatite formation. Vacuum, 2004, 76, 339-342.	3.5	12
71	Nanostructured Carbonized Thin Films Produced by Plasma Immersion Ion Implantation of Blockâ€Copolymer Assemblies. Plasma Processes and Polymers, 2008, 5, 155-160.	3.0	12
72	Immobilization of bioactive plasmin reduces the thrombogenicity of metal surfaces. Colloids and Surfaces B: Biointerfaces, 2015, 136, 944-954.	5.0	12

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73	Covalent linker-free immobilization of conjugatable oligonucleotides on polypropylene surfaces. RSC Advances, 2016, 6, 83328-83336.	3.6	12
74	Study of the nature of interaction of EPDM-40 rubber with an epoxy adhesive. Journal of Adhesion Science and Technology, 1992, 6, 1137-1145.	2.6	11
75	Interrupted plasma treatment of EPDM-40 rubber. Journal of Applied Polymer Science, 1993, 48, 1417-1423.	2.6	11
76	Study of the Reaction of Epoxides with Carboxylic Acids by IR and Raman Spectrometry. Journal of Raman Spectroscopy, 1996, 27, 413-418.	2.5	11
77	Adhesion of UV-treated rubbers to epoxy adhesives. Journal of Applied Polymer Science, 1996, 62, 1-8.	2.6	11
78	Large-size space laboratory for biological orbit experiments. Advances in Space Research, 2001, 28, 665-671.	2.6	11
79	Calcium phosphate formation on plasma immersion ion implanted low density polyethylene and polytetrafluorethylene surfaces. Journal of Materials Science: Materials in Medicine, 2008, 19, 1145-1153.	3.6	11
80	Effect of plasma immersion ion implantation on polycaprolactone with various molecular weights and crystallinity. Journal of Materials Science: Materials in Medicine, 2018, 29, 5.	3.6	11
81	Reducing Water Permeability while Maintaining Transparency of PET: A Plasma Immersion Ion Implantation Study. Plasma Processes and Polymers, 2008, 5, 834-839.	3.0	10
82	Graded metal carbon protein binding films prepared by hybrid cathodic arc $\hat{a}\in$ " Glow discharge plasma assisted chemical vapor deposition. Surface and Coatings Technology, 2015, 265, 222-234.	4.8	10
83	Structural Analysis and Protein Functionalization of Electroconductive Polypyrrole Films Modified by Plasma Immersion Ion Implantation. ACS Biomaterials Science and Engineering, 2017, 3, 2247-2258.	5. 2	10
84	Creation of biological module for self-regulating ecological system by the way of polymerization of composite materials in free space. Advances in Space Research, 2004, 34, 1585-1591.	2.6	9
85	Radiation damage of polyethylene exposed in the stratosphere at an altitude ofÂ40Âkm. Polymer Degradation and Stability, 2013, 98, 1526-1536.	5.8	9
86	Nanotoxicity of nanodiamond in two and three dimensional liver models. International Journal of Nanotechnology, 2017, 14, 133.	0.2	9
87	Covalent Biofunctionalization of the Inner Surfaces of a Hollow-Fiber Capillary Bundle Using Packed-Bed Plasma Ion Implantation. ACS Applied Materials & Samp; Interfaces, 2020, 12, 32163-32174.	8.0	9
88	An influence of the viscosity of polymer substrate on ion beam synthesis of iron granular films. Nuclear Instruments & Methods in Physics Research B, 2003, 206, 1115-1119.	1.4	8
89	Plasma immersion ion implantation of a two-phase blend of polysulfone and polyvinylpyrrolidone. Materials and Design, 2016, 97, 381-391.	7.0	8
90	Bound ("Glassyâ€) Rubber as a Free Radical Cross-linked Rubber Layer on a Carbon Black. Materials, 2018, 11, 1992.	2.9	8

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91	Biological impact of nanodiamond particles – label free, high-resolution methods for nanotoxicity assessment. Nanotoxicology, 2019, 13, 1210-1226.	3.0	8
92	Molecular dynamics of antimony trichloride in crystals of bimolecular menshutkin complexes with benzene, diphenyl and phenanthrene by Raman spectroscopy. Journal of Raman Spectroscopy, 1991, 22, 249-252.	2.5	7
93	Direct Curing of Polymer Construction Material in Simulated Earth's Moon Surface Environment. Journal of Spacecraft and Rockets, 2011, 48, 378-384.	1.9	7
94	Plasma processing of PDMS based spinal implants for covalent protein immobilization, cell attachment and spreading. Journal of Materials Science: Materials in Medicine, 2018, 29, 178.	3.6	7
95	Extracellular Vesicle-Based Coatings Enhance Bioactivity of Titanium Implants—SurfEV. Nanomaterials, 2021, 11, 1445.	4.1	7
96	Curing of large prepreg shell in solar synchronous Low Earth Orbit: Precession flight regimes. Acta Astronautica, 2018, 151, 342-347.	3.2	6
97	Plasmaâ€Activated Substrate with a Tropoelastin Anchor for the Maintenance and Delivery of Multipotent Adult Progenitor Cells. Macromolecular Bioscience, 2019, 19, 1800233.	4.1	5
98	Curing of Composite Materials for an Inflatable Construction on the Moon. , 2012, , 503-518.		5
99	Inter- and intramolecular force constants of some trihalides of the fifth group in the gas, liquid and solid. Journal of Raman Spectroscopy, 1993, 24, 825-831.	2.5	4
100	Vibrational spectra of some diisocyanates in the liquid state or on EPDM-40 rubber surface. Journal of Applied Polymer Science, 1994, 54, 1385-1393.	2.6	4
101	EPDM Rubber Modified by Nitrogen Plasma Immersion Ion Implantation. Materials, 2018, 11, 657.	2.9	4
102	Increasing binding density of yeast cells by control of surface charge with allylamine grafting to ion modified polymer surfaces. Colloids and Surfaces B: Biointerfaces, 2014, 122, 537-544.	5.0	3
103	Biointerfaces: Nanoâ€Bioâ€Chemical Braille for Cells: The Regulation of Stem Cell Responses using Biâ€Functional Surfaces (Adv. Funct. Mater. 2/2015). Advanced Functional Materials, 2015, 25, 339-339.	14.9	3
104	Chemical toughening of glass by potassium diffusion: how non-bridging oxygen and a surface calcium barrier limit the process. Journal of the Ceramic Society of Japan, 2019, 127, 98-104.	1.1	3
105	Interactions of ion beam with polymer. , 2008, , 1-10.		3
106	Intermolecular vibrations of water molecules in the crystalline hydrates of MCl2·2H2O (M=Cu, Fe,) Tj ETQq0 0	0 rgBT /Ον	erlgck 10 Tf 5
107	HADES tracking system: first in-beam experience. IEEE Transactions on Nuclear Science, 2004, 51, 939-942.	2.0	2
108	Enhancement of hydroxyapatite formation by laser-liquid-solid interaction., 2004,,.		2

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109	Structure of polymers after ion beam treatment. , 2008, , 75-145.		2
110	Interaction of ion beam with polymer. , 2008, , 29-73.		2
111	Electrically conductive hexagonally ordered nanoporous membranes produced by ion-beam induced carbonization of block-copolymer precursors. Nanotechnology, 2011, 22, 305603.	2.6	2
112	lon implanted, radical-rich surfaces for the rapid covalent immobilization of active biomolecules. , $2013, \ldots$		2
113	TCT-433 Plasmin Immobilization for Reduced Thrombogenicity of Metallic Implants. Journal of the American College of Cardiology, 2014, 64, B127.	2.8	2
114	Deployment of Large-Size Shell Constructions by Internal Pressure. Mechanics of Composite Materials, 2015, 51, 629-636.	1.4	2
115	Hybrid Carbon-Based Nanostructured Platforms for the Advanced Bioreactors. Journal of Nanoscience and Nanotechnology, 2015, 15, 10074-10090.	0.9	2
116	Biological and medical applications. , 2015, , 185-216.		2
117	First Stratospheric Flight of Preimpregnated Uncured Epoxy Matrix. Journal of Spacecraft and Rockets, 2016, 53, 1019-1027.	1.9	2
118	Biological and medical applications. , 2008, , 205-241.		2
119	Fragment method for the study of hydrogen bonding in polymers. Vibrational Spectroscopy, 1991, 2, 183-186.	2.2	1
120	Study of molecular dynamics of antimony trichloride in some complexes with aromatic hydrocarbons. Journal of Molecular Structure, 1992, 267, 247-254.	3.6	1
121	Ion beam patterning of solid surfaces for hydroxyapatite deposition. Vacuum, 2004, 76, 335-338.	3.5	1
122	With reference to article: "Impact of the first-generation drug-eluting stent implantation on periprocedural myocardial injury in patients with stable angina pectoris― Dewetting problem. Journal of Cardiology, 2013, 62, 265-266.	1.9	1
123	Ion beam synthesis. , 2015, , 175-183.		1
124	Bio-functionalisation of polyether ether ketone using plasma immersion ion implantation. Proceedings of SPIE, 2015, , .	0.8	1
125	Interactions of energetic ions with polymers: chemical picture. , 2015, , 29-67.		1
126	Cost-Effective Creation of Biofunctionalised Scaffolds, Tailored to Function as Stem Cell Niches for Expansion, Transport and Delivery. Cytotherapy, 2016, 18, S60.	0.7	1

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127	Sources for ion beam treatment. , 2008, , 11-28.		1
128	Wetting., 2008,, 147-160.		1
129	Computational Modeling of the Curing of a Frame of an Inflatable Satellite Antenna in Near-Earth Orbit. Journal of Applied Mechanics and Technical Physics, 2021, 62, 1234-1242.	0.5	1
130	Influence of the non-diagonal part of the potential energy matrix in the SbC13 molecule on the results of calculating the force constants of intermolecular interaction. Journal of Raman Spectroscopy, 1992, 23, 589-593.	2.5	0
131	Interphase Interaction in Adhesion Bonds of Rubbers with a Quinol-Type Curing Adhesive. International Polymer Science and Technology, 2001, 28, 18-22.	0.1	0
132	Adhesion of quinone adhesive to rubbers. Journal of Adhesion, 2002, 78, 431-441.	3.0	0
133	Ion-beam-modified surfaces as substrates for hydroxyapatite growth induced by laser-liquid-solid interaction. , 2004, , .		0
134	Ion beam synthesis. , 2008, , 195-204.		0
135	Adhesion., 2008,, 161-178.		0
136	Universal Biomolecule Binding Interlayers Created by Energetic Ion Bombardment. Materials Research Society Symposia Proceedings, 2011, 1354, 3.	0.1	0
137	Polymerization of liquid polymer matrix in free-space environment. , 2015, , 231-259.		0
138	Adhesion., 2015,, 145-160.		0
139	Hardness., 2015,, 161-173.		0
140	To Avoid A Foreign Body Reaction For Polyurethane Implants Modified By High-Energy Ions., 2021,,.		0
141	Protection in an aggressive environment. , 2008, , 243-260.		0
142	Hardness. , 2008, , 179-194.		0
143	Polymerization of liquid polymer matrix in free space environment. , 2008, , 261-302.		0
144	Curing of Construction Composite Materials on Asteroids. , 2013, , 379-401.		0