Adam Gadomski

List of Publications by Year
in descending order

90 papers	774 citations	566801 15 h-index	676716 22 g-index
92 all docs	92 docs citations	92 times ranked	388 citing authors

#	Article	IF	Citations
1	Thermokinetic Approach of Single Particles and Clusters Involving Anomalous Diffusion under Viscoelastic Response. Journal of Physical Chemistry B, 2007, 111, 2293-2298.	1.2	33
2	Diffusion of clusters with randomly growing masses. Physical Review E, 1995, 51, 5762-5769.	0.8	29
3	Nonequilibrium thermodynamics versus model grain growth: derivation and some physical implications. Physica A: Statistical Mechanics and Its Applications, 2003, 326, 333-343.	1.2	29
4	Molecular Dynamic Analysis of Hyaluronic Acid and Phospholipid Interaction in Tribological Surgical Adjuvant Design for Osteoarthritis. Molecules, 2017, 22, 1436.	1.7	29
5	Some conceptual thoughts toward nanoscale oriented friction in a model of articular cartilage. Mathematical Biosciences, 2013, 244, 188-200.	0.9	28
6	Non-Markovian process driven by quadratic noise: Kramers-Moyal expansion and Fokker-Planck modeling. Physical Review E, 1995, 51, 2933-2938.	0.8	27
7	Hyaluronic acid and phospholipid interactions useful for repaired articular cartilage surfacesâ€"a mini review toward tribological surgical adjuvants. Colloid and Polymer Science, 2017, 295, 403-412.	1.0	26
8	A Kinetic Model of Protein Crystal Growth in Mass Convection Regime. Crystal Research and Technology, 2002, 37, 281-291.	0.6	23
9	The ultra-low friction of the articular surface is pH-dependent and is built on a hydrophobic underlay including a hypothesis on joint lubrication mechanism. Tribology International, 2010, 43, 1719-1725.	3.0	23
10	Physical crosslinking of hyaluronic acid in the presence of phospholipids in an aqueous nano-environment. Soft Matter, 2018, 14, 8997-9004.	1.2	23
11	MULTILINEAL RANDOM PATTERNS EVOLVING SUBDIFFUSIVELY IN SQUARE LATTICE. Fractals, 2003, 11, 233-241.	1.8	21
12	On the two principal curvatures as potential barriers in a model of complex matter agglomeration. Chemical Physics, 2003, 293, 169-177.	0.9	20
13	Directed Ion Transport as Virtual Cause of Some Facilitated Frictionâ€"Lubrication Mechanism Prevailing in Articular Cartilage: A Hypothesis. Tribology Letters, 2008, 30, 83-90.	1.2	17
14	The growing processes in diffusive and convective fields. Chemical Engineering Science, 1993, 48, 3713-3721.	1.9	16
15	Kineticâ€"thermodynamic effects accompanying model protein-like aggregation: The wave-like limit and beyond it. Physica A: Statistical Mechanics and Its Applications, 2007, 373, 43-57.	1.2	16
16	A critical discussion of the analytical approach to the normal grain growth of materials in aD-dimensional space with some possible extensions to other growth phenomena. Philosophical Magazine Letters, 1994, 70, 335-343.	0.5	15
17	On temperature- and space-dimension dependent matter agglomerations in a mature growing stage. Chemical Physics, 2005, 310, 153-161.	0.9	15
18	On thermal properties of poly(4-methyl-1-pentene) membranes cast from solution. Journal of Thermal Analysis, 1995, 45, 1175-1181.	0.7	14

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19	Stochastic approach to the evolution of some polycrystalline (bio) polymeric complex systems. Chemical Physics Letters, 1996, 258, 6-12.	1.2	14
20	On the crystalline-amorphous supermolecular structure of poly(4-methyl-1-pentene) films cast from solution: experimental evidences and theoretical remarks. Journal of Molecular Liquids, 2000, 86, 249-257.	2.3	14
21	Controlling protein crystal growth rate by means of temperature. Journal of Physics Condensed Matter, 2011, 23, 235101.	0.7	14
22	The role of lamellate phospholipid bilayers in lubrication of joints. Acta of Bioengineering and Biomechanics, 2012, 14, 101-6.	0.2	14
23	The amphoteric effect on friction between the bovine cartilage/cartilage surfaces under slightly sheared hydration lubrication mode. Colloids and Surfaces B: Biointerfaces, 2016, 146, 452-458.	2.5	13
24	Anomalous Behavior of Hyaluronan Crosslinking Due to the Presence of Excess Phospholipids in the Articular Cartilage System of Osteoarthritis. International Journal of Molecular Sciences, 2017, 18, 2779.	1.8	13
25	Phase transformation kinetics in d-dimensional grains-containing systems: diffusion-type model. Physica A: Statistical Mechanics and Its Applications, 1998, 248, 365-378.	1.2	11
26	Polymorphic phase transitions in systems evolving in a two-dimensional discrete space. Physical Review E, 1999, 60, 1252-1261.	0.8	11
27	Some remarks concerning spherulitic growth. International Journal of Quantum Chemistry, 1994, 52, 301-308.	1.0	10
28	Nucleation-and-growth problem in model lipid membranes undergoing subgel phase transitions is a problem of time scale. European Physical Journal B, 1999, 9, 569-571.	0.6	9
29	On the Protein Crystal Formation as an Interface-Controlled Process with Prototype Ion-Channeling Effect. Journal of Biological Physics, 2007, 33, 313-329.	0.7	9
30	Stretched Exponential Kinetics of the Pressure Induced Hydration of Model Lipid Membranes. A Possible Scenario. Journal De Physique II, 1996, 6, 1537-1546.	0.9	9
31	Phenomenological Description for a Formation of Cylindrolites in Coâ€Operative and Dynamic 2Dâ€(Bio)Polymeric Systems. Zeitschrift Fur Elektrotechnik Und Elektrochemie, 1996, 100, 134-137.	0.9	8
32	A Simple Phenomenological Model of the Stress Relaxation in Slowly Evolving 3D Polycrystalline Materials. Modern Physics Letters B, 1997, 11, 645-657.	1.0	8
33	Fractal-type relations and extensions suitable for systems of evolving polycrystalline microstructures. Physica A: Statistical Mechanics and Its Applications, 1999, 274, 325-332.	1.2	8
34	On the kinetics of polymer crystallization: a possible mechanism. Journal of Molecular Liquids, 2000, 86, 237-247.	2.3	8
35	Finite volume effects in a model grain growth. Physica A: Statistical Mechanics and Its Applications, 2003, 325, 284-291.	1.2	8
36	COMPUTER MODEL OF BIOPOLYMER CRYSTAL GROWTH AND AGGREGATION BY ADDITION OF MACROMOLECULAR UNITS â€" A COMPARATIVE STUDY. International Journal of Modern Physics C, 2006, 17, 1037-1053.	0.8	8

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37	Ranking structures and rankâ€“rank correlations of countries: The FIFA and UEFA cases. International Journal of Modern Physics C, 2014, 25, 1450060.	0.8	8
38	Primacy and ranking of UEFA soccer teams from biasing organization rules. Physica Scripta, 2014, 89, 108002.	1.2	8
39	Entropy Production Associated with Aggregation into Granules in a Subdiffusive Environment. Entropy, 2018, 20, 651.	1.1	8
40	The Anomalies of Hyaluronan Structures in Presence of Surface Active Phospholipidsâ€”Molecular Mass Dependence. Polymers, 2018, 10, 273.	2.0	8
41	Diffusion-migration concept applied to growth and structure formation in model biomembranes. Physics Letters, Section A: General, Atomic and Solid State Physics, 1995, 203, 367-372.	0.9	7
42	Description of the kinetics of a model tribopolymerization process. Journal of Mathematical Chemistry, 1997, 22, 161-183.	0.7	7
43	On the elastic contribution to crystal growth in complex environments. Physica Status Solidi (B): Basic Research, 2005, 242, 538-549.	0.7	7
44	Toward a Governing Mechanism of Nanoscale Articular Cartilage (Physiologic) Lubrication: Smoluchowski-type Dynamics in Amphiphile Proton Channels. Acta Physica Polonica B, 2013, 44, 1801.	0.3	7
45	Effect of Chitosan Deacetylation on Its Affinity to Type III Collagen: A Molecular Dynamics Study. Materials, 2022, 15, 463.	1.3	7
46	On the diffusion-driven growth: The perturbed sphere problem revisited. European Physical Journal D, 1992, 42, 577-590.	0.4	6
47	ON ANOMALOUS DIFFUSION OF GROWING CLUSTERS. Fractals, 1993, 01, 875-880.	1.8	6
48	Influence of temporal surface effects on the asymptotic behaviour of the nucleation-and-growth phenomena in some biopolymeric systems. Vacuum, 1998, 50, 79-83.	1.6	6
49	COMPUTER MODEL OF A LYSOZYME CRYSTAL GROWTH WITH/WITHOUT NANOTEMPLATE â€" A COMPARISON. International Journal of Modern Physics C, 2006, 17, 1359-1366.	0.8	6
50	Capstan-like mechanism in hyaluronanâ€“phospholipid systems. Chemistry and Physics of Lipids, 2018, 216, 17-24.	1.5	6
51	Simple example of structure versus property relationship applied to a reduced-friction biosystem, a quite personal opinion. BioSystems, 2008, 94, 215-217.	0.9	5
52	On morphological selection rule of noisy character applied to model (dis)orderly protein formations. Journal of Chemical Physics, 2010, 132, 195103.	1.2	5
53	Spatiotemporal models in biology and the health sciences. BioSystems, 2019, 179, 15-16.	0.9	5
54	On the spherical prototype of a complex dissipative late-stage formation seen in terms of least action Vojtaâ€“Natanson principle. BioSystems, 2008, 94, 242-247.	0.9	4

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55	Comment on â€œHow skew distributions emerge in evolving systemsâ€•by Choi M. Y. et al.. Europhysics Letters, 2010, 89, 40002.	0.7	4
56	Thermodiffusion as a close-to-interface effect that matters in non-isothermal (dis)orderly protein aggregations. Physics Letters, Section A: General, Atomic and Solid State Physics, 2014, 378, 2881-2887.	0.9	4
57	Multilevel-interaction friction procedure applicable in case of two opposing surfaces competing with one anotherâ€”A gedanken experiment. Physics Essays, 2015, 28, 650-653.	0.1	4
58	On anomalous diffusion of fractal clusters under certain realistic physical conditions. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1994, 16, 1265-1270.	0.4	3
59	On the formation of crystalline microstructures of monolayers seen in terms of qualitative diffusion-type models at mesoscale. Technical Physics Letters, 2008, 34, 803-805.	0.2	3
60	A Method of Mechanical Control of Structure-property Relationship in Grains-containing Material Systems. Acta Physica Polonica B, 2013, 44, 1049.	0.3	3
61	Lipid distribution in human knee and hip articular cartilage correlated to tissue surface roughness and surface active phospholipid layer presence: evidence of cooperative interfacial lipid delivery mechanisms. Osteoarthritis and Cartilage, 2014, 22, S312-S313.	0.6	3
62	On two opposing (bio)surfaces as comprehended in terms of an extension of the Coulomb-Amontons law of friction with its virtual usefulness for biotribology at the nanoscale. Biophysics (Russian) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 45	0.2	3
63	Changes of Conformation in Albumin with Temperature by Molecular Dynamics Simulations. Entropy, 2020, 22, 405.	1.1	3
64	Agglomeration/Aggregation and Chaotic Behaviour in d-Dimensional Spatio-Temporal Matter Rearrangements Number-Theoretic Aspects. , 2006, , 275-294.		3
65	Spherulites: How Do They Emerge at an Onset of Nonequilibrium Kinetic-Thermodynamic and Structural Singularity Addressing Conditions?. Entropy, 2022, 24, 663.	1.1	3
66	Growing lysozyme crystals under various physicochemical conditions: Computer modelling. Journal of Non-Crystalline Solids, 2008, 354, 4221-4226.	1.5	2
67	Supermolecular structure formation of PMP membranes: Theoretical argumentation in terms of the experimental evidences. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2009, 163, 105-113.	1.7	2
68	Revealing solâ€“gel type main effects by exploring a molecular cluster behavior in model in-plane amphiphilic aggregations. Physica A: Statistical Mechanics and Its Applications, 2010, 389, 3053-3068.	1.2	2
69	On the origin of the phaseâ€“space diffusion limit in (dis)ordered protein aggregation. Physica A: Statistical Mechanics and Its Applications, 2013, 392, 3155-3167.	1.2	2
70	Three types of computational soft-matter problems revisited, an own-selection-based opinion. Frontiers in Physics, 2014, 2, .	1.0	2
71	Temperature dependent volume expansion of microgel in nonequilibria. European Physical Journal B, 2018, 91, 1.	0.6	2
72	On (sub)mesoscopic scale peculiarities of diffusion driven growth in an active matter confined space, and related (bio)material realizations. BioSystems, 2019, 176, 56-58.	0.9	2

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73	On the Harmonic-Mean Property of Model Dispersive Systems Emerging Under Mononuclear, Mixed and Polynuclear Path Conditions. , 2007, , 283-296.		2
74	Shape Change of Micelles Dragged with Constant Velocity as Addressed in Terms of Biolubrication Application. Acta Physica Polonica A, 2016, 129, 188-189.	0.2	2
75	Unravelling a Self-healing Thermo- and Hydrodynamic Mechanism of Transient Pore's Late-stage Closing in Vesicles, and Related Soft-matter Systems, in Terms of Liaison Between Surface-tension and Bending Effects. Acta Physica Polonica B, 2016, 47, 1341.	0.3	2
76	CURVATURE EFFECTS IN CLUSTERS GROWN IN A 2D DISCRETE SPACE: AN ALGEBRAIC APPROACH. International Journal of Modern Physics C, 2002, 13, 1285-1299.	0.8	1
77	Editorial introduction to the special issue on bio(nano)materials with structureâ€“property relationship. BioSystems, 2008, 94, 191-192.	0.9	1
78	Derivation of the refractive index of lipid monolayers at an air-water interface. Optical Materials, 2019, 93, 1-5.	1.7	1
79	Information and Statistical Measures in Classical vs. Quantum Condensed-Matter and Related Systems. Entropy, 2020, 22, 645.	1.1	1
80	Stochastic Evolution of a Discrete Line: Numerical Results. , 2000, , 496-506.		1
81	MODEL MULTILINEAL PATTERN FORMATION: A COMPUTER EXPERIMENT. Computational Methods in Science and Technology, 2001, 7, 75-90.	0.3	1
82	A Tribute to Marian Smoluchowski's Legacy on Soft Grains Assembly and Hydrogel Formation. Acta Physica Polonica B, 2018, 49, 993.	0.3	1
83	Scaling concept applied to the defect formation caused by interactions between melittin and phosphatidylcholine (PC) model membranes. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1994, 16, 1551-1557.	0.4	0
84	Czochralski's contribution: 50 years on. Europhysics News, 2004, 35, 20-22.	0.1	0
85	Soft-Material Dissipative Formation by a Kramers-Type Picture. Research Letters in Materials Science, 2007, 2007, 1-4.	0.2	0
86	Jan Czochralski, the pioneer of crystal research. Europhysics News, 2011, 42, 22-24.	0.1	0
87	Micelle Confined in Aqueous Environment: Lubrication at the Nanoscale and Its Nonlinear Characteristics. Springer Proceedings in Mathematics and Statistics, 2016, , 73-80.	0.1	0
88	Modelling Complex Projects and Their Managerâ€™s Behavior with Cybernetic and Nonlinear Dynamic Systems Theory (NDS). DEStech Transactions on Materials Science and Engineering, 2017, , .	0.0	0
89	Fractional Calculus Evaluation ofÂHyaluronic Acid Crosslinking in a Nanoscopic Part of Articular Cartilage Model System. Springer Proceedings in Mathematics and Statistics, 2018, , 25-35.	0.1	0
90	Note on Appearance of Zigzak Type Self Similarity in Flying Bird Flocks Performing Directional Collective Motions in Mild-Weather Conditions. Current Topics in Biophysics, 2018, 41, 5-9.	0.3	0