Kim Ã˜ Rasmussen

List of Publications by Year
in descending order

117 papers	4,585 citations	94433 37 h-index	110387 64 g-index
118 all docs	118 docs citations	118 times ranked	2392 citing authors

#	Article	IF	Citations
1	Increased irrigation water salinity enhances nitrate transport to deep unsaturated soil. Vadose Zone Journal, 2020, 19, e20041.	2.2	7
2	Identification of anomalous diffusion sources by unsupervised learning. Physical Review Research, 2020, 2, .	3.6	5
3	Describing nonequilibrium soft matter with mean field game theory. Journal of Chemical Physics, 2019, 150, 174905.	3.0	4
4	Nonnegative tensor decomposition with custom clustering for microphase separation of block copolymers. Statistical Analysis and Data Mining, 2019, 12, 302-310.	2.8	8
5	Effective particle size from molecular dynamics simulations in fluids. Theoretical and Computational Fluid Dynamics, 2018, 32, 215-233.	2.2	2
6	Evaluating the role of coherent delocalized phonon-like modes in DNA cyclization. Scientific Reports, 2017, 7, 9731.	3.3	13
7	The role of structural parameters in DNA cyclization. BMC Bioinformatics, 2016, 17, 68.	2.6	7
8	Allostery through protein-induced DNA bubbles. Scientific Reports, 2015, 5, 9037.	3.3	18
9	Effective Potential Theory: A Practical Way to Extend Plasma Transport Theory to Strong Coupling. Contributions To Plasma Physics, 2015, 55, 209-214.	1.1	2
10	Determination of the shear viscosity of the one-component plasma. Physical Review E, 2014, 90, 033105.	2.1	47
11	Specificity and Heterogeneity of Terahertz Radiation Effect on Gene Expression in Mouse Mesenchymal Stem Cells. Scientific Reports, 2013, 3, 1184.	3.3	78
12	Nanoscale distribution and segregation of midblock-selective co-penetrants in ABA triblock copolymer lamellae. RSC Advances, 2013, 3, 22863.	3.6	2
13	Statistical mechanics of a discrete SchrÃ¶dinger equation with saturable nonlinearity. Physical Review E, 2013, 87, 044901.	2.1	10
14	The self-assembly of particles with isotropic interactions. Journal of Physics Condensed Matter, 2013, 25, 325101.	1.8	1
15	Binding of Nucleoid-Associated Protein Fis to DNA Is Regulated by DNA Breathing Dynamics. PLoS Computational Biology, 2013, 9, e1002881.	3.2	23
16	DNA breathing dynamics distinguish binding from nonbinding consensus sites for transcription factor YY1 in cells. Nucleic Acids Research, 2012, 40, 10116-10123.	14.5	39
17	Anharmonic dynamics of intramolecular hydrogen bonds driven by DNA breathing. Physical Review E, 2012, 86, 061913.	2.1	2
18	Promoter polymorphisms in two overlapping 6p25 genes implicate mitochondrial proteins in cognitive deficit in schizophrenia. Molecular Psychiatry, 2012, 17, 1328-1339.	7.9	19

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19	The Transfer Integral Operator Method in the Study of DNA Unzipping and Bubble Formation. Journal of Nonlinear Mathematical Physics, 2011, 18, 381.	1.3	2
20	The Janus Character of Heterogeneous Dendritic Nanoparticles. Macromolecules, 2011, 44, 1046-1052.	4.8	11
21	Non-thermal effects of terahertz radiation on gene expression in mouse stem cells. Biomedical Optics Express, 2011, 2, 2679.	2.9	73
22	Feigenbaum cascade of discrete breathers in a model of DNA. Physical Review E, 2011, 83, 011904.	2.1	29
23	Exact solutions of a two-dimensional cubicâ€“quintic discrete nonlinear SchrÃ¶dinger equation. Physica Scripta, 2011, 84, 065001.	2.5	2
24	DNA Dynamics Is Likely to Be a Factor in the Genomic Nucleotide Repeats Expansions Related to Diseases. PLoS ONE, 2011, 6, e19800.	2.5	8
25	Exact solutions of the two-dimensional discrete nonlinear SchrÃ¶dinger equation with saturable nonlinearity. Journal of Physics A: Mathematical and Theoretical, 2010, 43, 375209.	2.1	4
26	DNA breathing dynamics in the presence of a terahertz field. Physics Letters, Section A: General, Atomic and Solid State Physics, 2010, 374, 1214-1217.	2.1	143
27	Controlling the phase behavior of block copolymers via sequential block growth. Polymer, 2010, 51, 5304-5308.	3.8	4
28	Mammalian Stem Cells Reprogramming in Response to Terahertz Radiation. PLoS ONE, 2010, 5, e15806.	2.5	109
29	DNA dynamics play a role as a basal transcription factor in the positioning and regulation of gene transcription initiation. Nucleic Acids Research, 2010, 38, 1790-1795.	14.5	59
30	AresetÂal.Reply:. Physical Review Letters, 2009, 102, .	7.8	2
31	A nonlinear dynamic model of DNA with a sequence-dependent stacking term. Nucleic Acids Research, 2009, 37, 2405-2410.	14.5	61
32	Pre-melting dynamics of DNA and its relation to specific functions. Journal of Physics Condensed Matter, 2009, 21, 034107.	1.8	25
33	Staggered and short-period solutions of the saturable discrete nonlinear SchrÃ¶dinger equation. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 085002.	2.1	7
34	Toward a Detailed Description of the Thermally Induced Dynamics of the Core Promoter. PLoS Computational Biology, 2009, 5, e1000313.	3.2	35
35	Dendrimers as synthetic gene vectors: Cell membrane attachment. Journal of Chemical Physics, 2009, 130, 155101.	3.0	23
36	Ordering and Reverse Ordering Mechanisms of Triblock Copolymers in the Presence of Solvent. International Journal of Molecular Sciences, 2009, 10, 805-816.	4.1	2

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37	Nonlinearity in DNA and its Relation to Specific Functions. Journal of Biological Physics, 2009, 35, 31-41.	1.5	6
38	Profiling the Thermodynamic Softness of Adenoviral Promoters. Biophysical Journal, 2008, 95, 597-608.	0.5	25
39	Nanoparticle-regulated phase behavior of ordered block copolymers. Soft Matter, 2008, 4, 1609.	2.7	40
40	Bidirectional mapping between self-consistent field theory and molecular dynamics: Application to immiscible homopolymer blends. Journal of Chemical Physics, 2007, 127, 144901.	3.0	7
41	Local electronic structure in the Peyrardâ€“Bishopâ€“Holstein model. Journal of Physics Condensed Matter, 2007, 19, 136203.	1.8	15
42	Opening rates of DNA hairpins: Experiment and model. Physical Review E, 2007, 76, 011909.	2.1	9
43	Stress Distributions in Diblock Copolymers. Physical Review Letters, 2007, 99, 048302.	7.8	23
44	Lengthscales and cooperativity in DNA bubble formation. Europhysics Letters, 2006, 74, 540-546.	2.0	30
45	Sequencing DNA by Dynamic Force Spectroscopy:Â Limitations and Prospects. Nano Letters, 2006, 6, 1483-1486.	9.1	18
46	Selectivity- and Size-Induced Segregation of Molecular and Nanoscale Species in Microphase-Ordered Triblock Copolymers. Nano Letters, 2006, 6, 2115-2120.	9.1	83
47	Molecularly Asymmetric Triblock Copolymers as a Single-Molecule Route to Ordered Bidisperse Polymer Brushes. Langmuir, 2006, 22, 6465-6468.	3.5	13
48	Modeling non-equilibrium morphologies in specific polymeric materials. Journal of Polymer Science, Part B: Polymer Physics, 2006, 44, 2605-2611.	2.1	0
49	Non-exponential decay of base-pair opening fluctuations in DNA. Chemical Physics Letters, 2006, 432, 291-295.	2.6	22
50	Discrete nonlinear SchrÃ¶dinger equations with arbitrarily high-order nonlinearities. Physical Review E, 2006, 74, 016607.	2.1	26
51	Healing length and bubble formation in DNA. Physical Review E, 2006, 73, 051902.	2.1	37
52	Probing the Mechanical Unzipping of DNA. Physical Review Letters, 2006, 96, 248101.	7.8	44
53	Comment on â€œCan One Predict DNA Transcription Start Sites by Studying Bubbles?â€• Physical Review Letters, 2006, 96, 239801; author reply 239802.	7.8	17
54	Bubble statistics and dynamics in double-stranded DNA. Physical Review E, 2006, 74, 050901.	2.1	45

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55	Bubble Nucleation and Cooperativity in DNA Melting. Physical Review Letters, 2005, 94, 035504.	7.8	108
56	Exact solutions of the saturable discrete nonlinear SchrÃ¶dinger equation. Journal of Physics A, 2005, 38, 807-814.	1.6	78
57	ac conductivity in a DNA charge transport model. Physical Review E, 2005, 72, 021912.	2.1	45
58	Thermally induced coherent vibrations in DNA. , 2004, , .		0
59	DNA dynamically directs its own transcription initiation. Nucleic Acids Research, 2004, 32, 1584-1590.	14.5	156
60	Ordering mechanisms in triblock copolymers. Physical Review E, 2004, 69, 031801.	2.1	20
61	Multipeaked polarons in soft potentials. Physical Review E, 2004, 70, 025601.	2.1	16
62	Statistical mechanics of general discrete nonlinear SchrÃ¶dinger models: Localization transition and its relevance for Klein-Gordon lattices. Physical Review E, 2004, 70, 066610.	2.1	43
63	Elastic moduli of multiblock copolymers in the lamellar phase. Journal of Chemical Physics, 2004, 120, 3990-3996.	3.0	19
64	Improved convergence in block copolymer self-consistent field theory by Anderson mixing. Journal of Chemical Physics, 2004, 120, 31-34.	3.0	136
65	Sequence-specific thermal fluctuations identify start sites for DNA transcription. Europhysics Letters, 2004, 68, 127-133.	2.0	103
66	Tunable nanopatterning by diblock copolymers in small confinements. Journal of Polymer Science, Part B: Polymer Physics, 2004, 42, 3695-3700.	2.1	7
67	Origins of Elastic Properties in Ordered Block Copolymer/Nanoparticle Composites. Nano Letters, 2004, 4, 2455-2459.	9.1	32
68	Temperature-Dependent Signatures of Coherent Vibrational Openings in DNA. Nano Letters, 2004, 4, 629-632.	9.1	25
69	Nonlinear excitations in DNA: polarons and bubbles. Synthetic Metals, 2004, 141, 93-97.	3.9	40
70	Morphology and bridging properties of (AB)n multiblock copolymers. Journal of Polymer Science, Part B: Polymer Physics, 2003, 41, 104-111.	2.1	26
71	Charge trapping in DNA due to intrinsic vibrational hot spots. Journal of Chemical Physics, 2003, 118, 3731-3735.	3.0	61
72	Localization in physical systems described by discrete nonlinear SchrÃ¶dinger-type equations. Chaos, 2003, 13, 588-595.	2.5	9

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73	Ferroelastic dynamics and strain compatibility. Physical Review B, 2003, 67, .	3.2	156
74	Polaron normal modes in the Peyrard-Bishop-Holstein model. Physical Review B, 2003, 68, .	3.2	40
75	On dynamics of ferroelastic transitions. European Physical Journal Special Topics, 2003, 112, 195-199.	0.2	3
76	Efficient computation of the structural phase behavior of block copolymers. Physical Review E, 2002, 65, 041806.	2.1	288
77	Delocalizing Transition of Bose-Einstein Condensates in Optical Lattices. Physical Review Letters, 2002, 89, 030402.	7.8	33
78	Improved numerical algorithm for exploring block copolymer mesophases. Journal of Polymer Science, Part B: Polymer Physics, 2002, 40, 1777-1783.	2.1	274
79	THE DISCRETE NONLINEAR SCHRÃ–DINGER EQUATION: A SURVEY OF RECENT RESULTS. International Journal of Modern Physics B, 2001, 15, 2833-2900.	2.0	345
80	Comparison of one-dimensional and two-dimensional discrete breathers. Mathematics and Computers in Simulation, 2001, 55, 449-462.	4.4	9
81	Three-Dimensional Elastic Compatibility and Varieties of Twins in Martensites. Physical Review Letters, 2001, 87, 055704.	7.8	105
82	Hysteresis and metastability in the quenched turbulent dynamics of the complex Ginzburg-Landau equation. Physical Review E, 2001, 65, 016122.	2.1	6
83	Parametric Quantum Resonances for Boseâ€“Einstein Condensates. Journal of Low Temperature Physics, 2000, 120, 205-212.	1.4	9
84	Localized excitations and their thresholds. Physical Review E, 2000, 61, 4652-4655.	2.1	34
85	Spontaneous pattern formation in driven nonlinear lattices. Physical Review E, 2000, 62, 7353-7357.	2.1	13
86	Two-dimensional discrete breathers: Construction, stability, and bifurcations. Physical Review E, 2000, 61, 2006-2009.	2.1	50
87	Electrodynamic properties of single-crystal and thin-film strontium titanate. Integrated Ferroelectrics, 2000, 28, 193-200.	0.7	0
88	Statistical Mechanics of a Discrete Nonlinear System. Physical Review Letters, 2000, 84, 3740-3743.	7.8	138
89	Higher-order effects on Shapiro steps in Josephson junctions. Physical Review B, 1999, 59, 58-61.	3.2	6
90	Pulse shaping using nonlinear dielectric SrTiO3. Applied Physics Letters, 1999, 74, 1770-1772.	3.3	9

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91	Electrodynamic properties of coplanar waveguides made from high-temperature superconducting YBa2Cu3O7â˜Î´ electrodes on nonlinear dielectric SrTiO3 substrates. Journal of Applied Physics, 1999, 86, 1558-1568.	2.5	14
92	Localization in a nonlinear disordered system. Europhysics Letters, 1999, 47, 421-427.	2.0	29
93	Models for energy and charge transport and storage in biomolecules. Journal of Biological Physics, 1999, 25, 41-63.	1.5	76
94	Comparative study of broadband electrodynamic properties of single-crystal and thin-film strontium titanate. Applied Physics Letters, 1999, 75, 4189-4191.	3.3	2
95	Localized excitations in discrete nonlinear SchrÃ¶dinger systems: Effects of nonlocal dispersive interactions and noise. Physica D: Nonlinear Phenomena, 1998, 113, 134-151.	2.8	38
96	Dynamics of breathers in discrete nonlinear SchrÃ¶dinger models. Physica D: Nonlinear Phenomena, 1998, 119, 115-124.	2.8	52
97	Switching between bistable states in a discrete nonlinear model with long-range dispersion. Physical Review E, 1998, 57, 4739-4742.	2.1	24
98	Soliton motion in a parametrically ac-driven damped Toda lattice. Physical Review E, 1998, 58, 6695-6699.	2.1	8
99	Creation and annihilation of intrinsic localized excitations. Physical Review E, 1998, 58, R40-R43.	2.1	6
100	Solitary excitations in discrete two-dimensional nonlinear SchrÃ¶dinger models with dispersive dipole-dipole interactions. Physical Review B, 1998, 57, 11303-11318.	3.2	25
101	Effects of nonlocal dispersive interactions on self-trapping excitations. Physical Review E, 1997, 55, 6141-6150.	2.1	83
102	Breatherlike excitations in discrete lattices with noise and nonlinear damping. Physical Review B, 1997, 55, 5759-5766.	3.2	26
103	Two-dimensional effects in nonlinear Kronig-Penney models. Physical Review B, 1997, 55, R13365-R13368.	3.2	16
104	Dynamics of nonlinear localized states on finite discrete chains. Physical Review E, 1997, 55, 6151-6154.	2.1	15
105	Stabilization of nonlinear excitations by disorder. Physical Review B, 1997, 56, 14407-14413.	3.2	13
106	Nonlinear and stochastic modelling of energy transfer in Scheibe aggregates. Mathematics and Computers in Simulation, 1996, 40, 339-358.	4.4	6
107	Effect of nonlocal dispersion on self-interacting excitations. Physics Letters, Section A: General, Atomic and Solid State Physics, 1996, 222, 152-156.	2.1	38
108	Dynamics in discrete two-dimensional nonlinear SchrÃ¶dinger equations in the presence of point defects. Physical Review B, 1996, 54, 900-912.	3.2	41

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109	Collapse of solitary excitations in the nonlinear SchrÃ¶dinger equation with nonlinear damping and white noise. Physical Review E, 1996, 54, 924-930.	2.1	16
110	Solitonlike solutions of the generalized discrete nonlinear SchrÃ¶dinger equation. Physical Review E, 1996, 54, 5788-5801.	2.1	57
111	The temperature-dependent collapse regime in a nonlinear dynamical model of Scheibe aggregates. Physica D: Nonlinear Phenomena, 1995, 87, 321-324.	2.8	7
112	The influence of noise on critical collapse in the nonlinear SchrÃ¶dinger equation. Physics Letters, Section A: General, Atomic and Solid State Physics, 1995, 204, 121-127.	2.1	30
113	Dipole-like nonlinear excitations in an inhomogeneous two-dimensional system. Physics Letters, Section A: General, Atomic and Solid State Physics, 1995, 203, 175-180.	2.1	9
114	Breatherlike impurity modes in discrete nonlinear lattices. Physical Review E, 1995, 52, R4628-R4631.	2.1	18
115	Nonlinear excitations in two-dimensional molecular structures with impurities. Physical Review E, 1995, 52, 2951-2962.	2.1	58
116	Temperature effects in a nonlinear model of monolayer Scheibe aggregates. Physical Review E, 1994, 49, 4627-4636.	2.1	77
117	Driving and collapse in a nonlinear SchrÃ¶dinger equation. Physics Letters, Section A: General, Atomic and Solid State Physics, 1994, 184, 241-244.	2.1	11