Normand Mousseau

List of Publications by Citations

189 papers	6,109 citations	44 h-index	72 g-index
209 ext. papers	6,591 ext. citations	4.3 avg, IF	5.92 L-index

#	Paper	IF	Citations
189	Amyloid Protein and Alzheimer's Disease: When Computer Simulations Complement Experimental Studies. *Chemical Reviews*, **2015**, 115, 3518-63	68.1	426
188	Event-Based Relaxation of Continuous Disordered Systems. *Physical Review Letters*, **1996**, 77, 4358-4361	7.4	354
187	High-quality continuous random networks. *Physical Review B*, **2000**, 62, 4985-4990	3.3	206
186	Dynamics of lennard-jones clusters: A characterization of the activation-relaxation technique. *Physical Review E*, **2000**, 62, 7723-8	2.4	199
185	Traveling through potential energy landscapes of disordered materials: The activation-relaxation technique. *Physical Review E*, **1998**, 57, 2419-2424	2.4	182
184	Fitting the Stillinger Weber potential to amorphous silicon. *Journal of Non-Crystalline Solids*, **2001**, 282, 248-255	3.9	136
183	In silico assembly of Alzheimer's Abeta16-22 peptide into beta-sheets. *Journal of the American Chemical Society*, **2004**, 126, 11509-16	16.4	125
182	Pathway complexity of Alzheimer's beta-amyloid Abeta16-22 peptide assembly. *Structure*, **2004**, 12, 1245-55	5.5	121
181	The OPEP protein model: from single molecules, amyloid formation, crowding and hydrodynamics to DNA/RNA systems. *Chemical Society Reviews*, **2014**, 43, 4871-93	58.5	118
180	Kinetic activation-relaxation technique: An off-lattice self-learning kinetic Monte Carlo algorithm. *Physical Review B*, **2008**, 78,	3.3	114
179	Kinetic activation-relaxation technique. *Physical Review E*, **2011**, 84, 046704	2.4	108
178	Thermodynamics and dynamics of amyloid peptide oligomerization are sequence dependent. *Proteins: Structure, Function and Bioinformatics*, **2009**, 75, 954-63	4.2	102
177	Structures of A 17-42 trimers in isolation and with five small-molecule drugs using a hierarchical computational procedure. *Journal of Physical Chemistry B*, **2012**, 116, 8412-22	3.4	92
176	Structures and thermodynamics of Alzheimer's amyloid-beta Abeta(16-35) monomer and dimer by replica exchange molecular dynamics simulations: implication for full-length Abeta fibrillation. *Journal of Physical Chemistry B*, **2009**, 113, 7668-75	3.4	92
175	Role of the region 23-28 in Abeta fibril formation: insights from simulations of the monomers and dimers of Alzheimer's peptides Abeta40 and Abeta42. *Current Alzheimer Research*, **2008**, 5, 244-50	3	91
174	Distinct dimerization for various alloforms of the amyloid-beta protein: A (1-40), A (1-42), and A (1-40)(D23N). *Journal of Physical Chemistry B*, **2012**, 116, 4043-55	3.4	90
173	Coarse-grained protein molecular dynamics simulations. *Journal of Chemical Physics*, **2007**, 126, 025101	3.9	84

172	Exploring the early steps of amyloid peptide aggregation by computers. *Accounts of Chemical Research*, **2005**, 38, 885-91	24.3	81
171	Complex folding pathways in a simple beta-hairpin. *Proteins: Structure, Function and Bioinformatics*, **2004**, 56, 464-74	4.2	76
170	Optimized energy landscape exploration using the ab initio based activation-relaxation technique. *Journal of Chemical Physics*, **2011**, 135, 034102	3.9	72
169	Distinct Morphologies for Amyloid Beta Protein Monomer: A□1-40, A□1-42, and A□1-40(D23N). *Journal of Chemical Theory and Computation*, **2011**, 7, 2584-92	6.4	71
168	Self-assembly of the beta2-microglobulin NHVTLSQ peptide using a coarse-grained protein model reveals a beta-barrel species. *Journal of Physical Chemistry B*, **2008**, 112, 4410-8	3.4	71
167	Sampling the diffusion paths of a neutral vacancy in silicon with quantum mechanical calculations. *Physical Review B*, **2004**, 70,	3.3	70
166	Energy landscape of small clusters of self-interstitial dumbbells in iron. *Physical Review B*, **2011**, 83,	3.3	69
165	Sampling the self-assembly pathways of KFFE hexamers. *Biophysical Journal*, **2004**, 87, 3648-56	2.9	69
164	A multiscale approach to characterize the early aggregation steps of the amyloid-forming peptide GNNQQNY from the yeast prion sup-35. *PLoS Computational Biology*, **2011**, 7, e1002051	5	68
163	Activated mechanisms in amorphous silicon: An activation-relaxation-technique study. *Physical Review B*, **2000**, 61, 1898-1906	3.3	68
162	Replica exchange molecular dynamics simulations of coarse-grained proteins in implicit solvent. *Journal of Physical Chemistry B*, **2009**, 113, 267-74	3.4	67
161	Structure and thermodynamics of amylin dimer studied by Hamiltonian-temperature replica exchange molecular dynamics simulations. *Journal of Physical Chemistry B*, **2011**, 115, 3146-54	3.4	61
160	Length mismatch in random semiconductor alloys. III. Crystalline and amorphous SiGe. *Physical Review B*, **1992**, 46, 15887-15893	3.3	61
159	Effect of the disulfide bond on the monomeric structure of human amylin studied by combined Hamiltonian and temperature replica exchange molecular dynamics simulations. *Journal of Physical Chemistry B*, **2010**, 114, 7071-7	3.4	60
158	The conformations of the amyloid-beta (21-30) fragment can be described by three families in solution. *Journal of Chemical Physics*, **2006**, 125, 084911	3.9	60
157	Computational simulations of the early steps of protein aggregation. *Prion*, **2007**, 1, 3-8	2.3	59
156	Topology of Amorphous Tetrahedral Semiconductors on Intermediate Length Scales. *Physical Review Letters*, **1997**, 78, 1484-1487	7.4	57
155	Following the aggregation of amyloid-forming peptides by computer simulations. *Journal of Chemical Physics*, **2005**, 122, 174904	3.9	57

154	Identification of Relaxation and Diffusion Mechanisms in Amorphous Silicon. *Physical Review Letters* , **1998**, 81, 1865-1868	7.4	55
153	Self-organization with equilibration: a model for the intermediate phase in rigidity percolation. *Physical Review E*, **2006**, 74, 016116	2.4	54
152	Sampling the complex energy landscape of a simple hairpin. *Journal of Chemical Physics*, **2003**, 119, 6403-6406	3.9	54
151	Structures of soluble amyloid oligomers from computer simulations. *Proteins: Structure, Function and Bioinformatics*, **2006**, 65, 180-91	4.2	52
150	Self-vacancies in gallium arsenide: An ab initio calculation. *Physical Review B*, **2005**, 71,	3.3	51
149	Synchronization by Disorder in Coupled Systems. *Physical Review Letters*, **1996**, 77, 968-971	7.4	49
148	Realistic models of paracrystalline silicon. *Physical Review B*, **2001**, 63,	3.3	48
147	Evolution of the potential-energy surface of amorphous silicon. *Physical Review Letters*, **2010**, 105, 045503	7.4	46
146	Exploring the energy landscape of proteins: A characterization of the activation-relaxation technique. *Journal of Chemical Physics*, **2002**, 117, 11379-11387	3.9	46
145	The Activation-Relaxation Technique: ART Nouveau and Kinetic ART. *Journal of Atomic, Molecular, and Optical Physics*, **2012**, 2012, 1-14		41
144	Length distributions in metallic alloys. *Physical Review B*, **1992**, 45, 2015-2022	3.3	41
143	Surface diffusion coefficients by thermodynamic integration: Cu on Cu(100). *Physical Review B*, **1998**, 58, 12667-12670	3.3	40
142	Simulation of Single Particle Displacement Damage in Silicon: Part II: Generation and Long-Time Relaxation of Damage Structure. *IEEE Transactions on Nuclear Science*, **2017**, 64, 141-148	1.7	39
141	Self-assembly of amyloid-forming peptides by molecular dynamics simulations. *Frontiers in Bioscience - Landmark*, **2008**, 13, 5681-92	2.8	37
140	Structural model for crystalline and amorphous Si-Ge alloys. *Physical Review B*, **1993**, 48, 5172-5178	3.3	37
139	Dynamical models of hydrogenated amorphous silicon. *Physical Review B*, **1991**, 43, 9810-9817	3.3	36
138	Kinetics of amyloid aggregation: a study of the GNNQQNY prion sequence. *PLoS Computational Biology*, **2012**, 8, e1002782	5	35
137	Energy landscape of relaxed amorphous silicon. *Physical Review B*, **2003**, 68,	3.3	35

136	Liquid–liquid phase transition in Stillinger–Weber silicon. *Journal of Physics Condensed Matter*, **2005**, 17, 2269-2279	1.8	35
135	Molecular dynamics simulations of the bacterial ABC transporter SAV1866 in the closed form. *Journal of Physical Chemistry B*, **2012**, 116, 2934-42	3.4	34
134	Nucleation and crystallization process of silicon using the Stillinger-Weber potential. *Physical Review B*, **2005**, 71,	3.3	34
133	Understanding long-time vacancy aggregation in iron: A kinetic activation-relaxation technique study. *Physical Review B*, **2014**, 90,	3.3	33
132	The activation–relaxation technique: an efficient algorithm for sampling energy landscapes. *Computational Materials Science*, **2001**, 20, 285-292	3.2	33
131	Contribution of vacancies to relaxation in amorphous materials: A kinetic activation-relaxation technique study. *Physical Review B*, **2013**, 87,	3.3	30
130	Dependence of the vibrational spectra of amorphous silicon on the defect concentration and ring distribution. *Journal of Physics Condensed Matter*, **1999**, 11, 9647-9658	1.8	30
129	Replenish and relax: explaining logarithmic annealing in ion-implanted c-Si. *Physical Review Letters*, **2013**, 111, 105502	7.4	29
128	Probing amyloid fibril formation of the NFGAIL peptide by computer simulations. *Journal of Chemical Physics*, **2007**, 126, 065101	3.9	29
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126	Mitigating Alzheimer's Disease with Natural Polyphenols: A Review. *Current Alzheimer Research*, **2019**, 16, 529-543	3	27
125	Self-organized criticality in the intermediate phase of rigidity percolation. *Physical Review E*, **2007**, 75, 056108	2.4	26
124	Approximate ab initio calculations of electronic structure of amorphous silicon. *Physical Review B*, **2000**, 62, 15307-15310	3.3	26
123	Diffusion of point defects in crystalline silicon using the kinetic activation-relaxation technique method. *Physical Review B*, **2015**, 91,	3.3	25
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119	Long-time relaxation of ion-bombarded silicon studied with the kinetic activation-relaxation technique: Microscopic description of slow aging in a disordered system. *Physical Review B*, **2013**, 88,	3.3	24

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116	Tight-binding molecular-dynamics studies of defects and disorder in covalently bonded materials. *Computational Materials Science*, **1998**, 12, 210-241	3.2	23
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113	Following atomistic kinetics on experimental timescales with the kinetic Activation-Relaxation Technique. *Computational Materials Science*, **2015**, 100, 111-123	3.2	21
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111	Computer models for amorphous silicon hydrides. *Physical Review B*, **1990**, 41, 3702-3707	3.3	21
110	Photometric and polarimetric variability and mass-loss rate of the massive binary Wolf-Rayet star HDE 311884 (WN6 + 05: V). *Astrophysical Journal*, **1990**, 350, 767	4.7	20
109	Gallium self-interstitial relaxation in GaAs: An ab initio characterization. *Physical Review B*, **2007**, 76,	3.3	19
108	Strong Long-Range Relaxations of Structural Defects in Graphene Simulated Using a New Semiempirical Potential. *Journal of Physical Chemistry C*, **2015**, 119, 9646-9655	3.8	18
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105	Comment on "Mechanism of void nucleation and growth in bcc Fe: atomistic simulations at experimental time scales". *Physical Review Letters*, **2012**, 108, 219601; author reply 219602	7.4	17
104	Is Hydrogen Diffusion along Grain Boundaries Fast or Slow? Atomistic Origin and Mechanistic Modeling. *Physical Review Letters*, **2019**, 122, 215501	7.4	16
103	Probing the Huntingtin 1-17 membrane anchor on a phospholipid bilayer by using all-atom simulations. *Biophysical Journal*, **2015**, 108, 1187-98	2.9	16
102	The complex folding pathways of protein A suggest a multiple-funnelled energy landscape. *Journal of Chemical Physics*, **2008**, 128, 045101	3.9	16
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99	Crystallization of amorphous silicon induced by mechanical shear deformations. *Physical Review B*, **2011**, 84,	3.3	15
98	Crystallization study of model tetrahedral semiconductors. *Journal of Physics Condensed Matter*, **2002**, 14, 6627-6638	1.8	15
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92	Insights on finite size effects in ab initio study of CO adsorption and dissociation on Fe 110 surface. *Journal of Applied Physics*, **2016**, 120, 055301	2.5	14
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90	ARTIST: an activated method in internal coordinate space for sampling protein energy landscapes. *Proteins: Structure, Function and Bioinformatics*, **2006**, 63, 967-75	4.2	13
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88	Carbon diffusion paths and segregation at high-angle tilt grain boundaries in Fe studied by using a kinetic activation-relation technique. *Physical Review B*, **2018**, 97,	3.3	11
87	Free-Energy Landscape of the Amino-Terminal Fragment of Huntingtin in Aqueous Solution. *Biophysical Journal*, **2016**, 110, 1075-88	2.9	11
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73	Fast bond-transposition algorithms for generating covalent amorphous structures. *Current Opinion in Solid State and Materials Science*, **2001**, 5, 497-502	12	9
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71	. *IEEE Transactions on Nuclear Science*, **2018**, 65, 724-731	1.7	8
70	Strain effects and intermixing at the Si surface: Importance of long-range elastic corrections in first-principles calculations. *Physical Review B*, **2014**, 90,	3.3	8
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64	Stretched-exponential dynamics in a chain of coupled chaotic oscillators. *Europhysics Letters*, **2002**, 60, 827-833	1.6	8
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62	Amorphous silicon under mechanical shear deformations: Shear velocity and temperature effects. *Physical Review B*, **2011**, 83,	3.3	7
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58	MODELS OF PARACRYSTALLINE SILICON WITH A DEFECT-FREE BANDGAP. *International Journal of Modern Physics B*, **2001**, 15, 3253-3257	1.1	7
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56	Recent developments in the study of continuous random networks		7
55	Enthalpy-entropy compensation of atomic diffusion originates from softening of low frequency phonons. *Nature Communications*, **2020**, 11, 3977	17.4	7
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52	First stages of silicon oxidation with the activation relaxation technique. *Physical Review B*, **2012**, 86,	3.3	6
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45	Comment on Boson peak in amorphous silicon: A numerical study *Physical Review B*, **2002**, 66,	3.3	5
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43	Frustration-Induced Phase Transition in High-Dimensional Deterministic Cellular Automata. *Europhysics Letters*, **1994**, 28, 551-556	1.6	5
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36	Simulation of Single Particle Displacement Damage in Si1−xGex Alloys Interaction of Primary Particles With the Material and Generation of the Damage Structure. *IEEE Transactions on Nuclear Science*, **2020**, 67, 1273-1283	1.7	3
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19	Comment on Systematic approach to generate near-perfect periodic continuous random network models: Application to amorphous Si3N4 *Physical Review B*, **1997**, 56, 14190-14191	3.3	1
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4	Exploring the Folding and Aggregation Mechanisms of Amyloid-Forming Peptides by Computer Simulations **2004**, 379-381		
3	Atomistic Kinetic Monte Carlo and Solute Effects **2020**, 2437-2456		
2	Computer Modelling of Glasses and Glassy Alloys **1997**, 133-150		
1	Off-Lattice Kinetic Monte Carlo Methods **2018**, 1-29		