

Robert L Mcgraw

List of Publications by Year in descending order

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33
papers

2,596
citations

331259

21
h-index

414034

32
g-index

34
all docs

34
docs citations

34
times ranked

2074
citing authors

#	ARTICLE	IF	CITATIONS
1	Description of Aerosol Dynamics by the Quadrature Method of Moments. <i>Aerosol Science and Technology</i> , 1997, 27, 255-265.	1.5	941
2	Formation of nanoparticles of blue haze enhanced by anthropogenic pollution. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 17650-17654.	3.3	244
3	Hydrogen-Bonding Interaction in Molecular Complexes and Clusters of Aerosol Nucleation Precursors. <i>Journal of Physical Chemistry A</i> , 2009, 113, 680-689.	1.1	183
4	Bivariate Extension of the Quadrature Method of Moments for Modeling Simultaneous Coagulation and Sintering of Particle Populations. <i>Journal of Colloid and Interface Science</i> , 2001, 236, 242-251.	5.0	147
5	Scaling Properties of the Critical Nucleus in Classical and Molecular-Based Theories of Vapor-Liquid Nucleation. <i>Physical Review Letters</i> , 1996, 76, 2754-2757.	2.9	141
6	Size truncation effect, threshold behavior, and a new type of autoconversion parameterization. <i>Geophysical Research Letters</i> , 2005, 32, .	1.5	85
7	Chemically resolved aerosol dynamics for internal mixtures by the quadrature method of moments. <i>Journal of Aerosol Science</i> , 2003, 34, 189-209.	1.8	84
8	Interfacial curvature free energy, the Kelvin relation, and vapor-liquid nucleation rate. <i>Journal of Chemical Physics</i> , 1997, 106, 5284-5287.	1.2	82
9	Liquid-drop formalism and free-energy surfaces in binary homogeneous nucleation theory. <i>Journal of Chemical Physics</i> , 1999, 111, 2019-2027.	1.2	82
10	An analytical expression for predicting the critical radius in the autoconversion parameterization. <i>Geophysical Research Letters</i> , 2004, 31, n/a-n/a.	1.5	54
11	Temperature-Dependent Heterogeneous Efflorescence of Mixed Ammonium Sulfate/Calcium Carbonate Particles. <i>Journal of Physical Chemistry A</i> , 2000, 104, 10797-10806.	1.1	52
12	Multivariate analysis of homogeneous nucleation rate measurements. Nucleation in the p-toluic acid/sulfuric acid/water system. <i>Journal of Chemical Physics</i> , 2008, 128, 064508.	1.2	51
13	Cloud microphysical relationships and their implication on entrainment and mixing mechanism for the stratocumulus clouds measured during the VOCALS project. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 5047-5069.	1.2	50
14	Two-dimensional kinetics of binary nucleation in sulfuric acid-water mixtures. <i>Journal of Chemical Physics</i> , 1995, 102, 2098-2108.	1.2	44
15	Representation of generally mixed multivariate aerosols by the quadrature method of moments: II. Aerosol dynamics. <i>Journal of Aerosol Science</i> , 2004, 35, 577-598.	1.8	41
16	Kinetic Potential and Barrier Crossing: A Model for Warm Cloud Drizzle Formation. <i>Physical Review Letters</i> , 2003, 90, 018501.	2.9	40
17	A corresponding states correlation of the homogeneous nucleation thresholds of supercooled vapors. <i>Journal of Chemical Physics</i> , 1981, 75, 5514-5521.	1.2	39
18	Kinetic extensions of the nucleation theorem. <i>Journal of Chemical Physics</i> , 2003, 118, 9337-9347.	1.2	32

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19	Deliquescence and efflorescence of small particles. <i>Journal of Chemical Physics</i> , 2009, 131, 194705.	1.2	32
20	Optical properties of atmospheric aerosols from moments of the particle size distribution. <i>Geophysical Research Letters</i> , 1995, 22, 2929-2932.	1.5	26
21	Brownian drift-diffusion model for evolution of droplet size distributions in turbulent clouds. <i>Geophysical Research Letters</i> , 2006, 33, .	1.5	26
22	Hydrates in binary sulfuric acid-water vapor: Comparison of CIMS measurements with the Liquid-Drop Model. <i>Geophysical Research Letters</i> , 1998, 25, 3143-3146.	1.5	18
23	1983, 78, 2542-2548.	1.2	16
24	Dynamics of Barrier Crossing in Classical Nucleation Theory. <i>Journal of Physical Chemistry B</i> , 2001, 105, 11838-11848.	1.2	16
25	Analytic formulation and parametrization of the kinetic potential theory for drizzle formation. <i>Physical Review E</i> , 2004, 70, 031606.	0.8	14
26	Kinetics of Heterogeneous Nucleation in Supersaturated Vapor: Fundamental Limits to Neutral Particle Detection Revisited. <i>Aerosol Science and Technology</i> , 2012, 46, 1053-1064.	1.5	11
27	A new approach to estimate supersaturation fluctuations in stratocumulus cloud using ground-based remote-sensing measurements. <i>Atmospheric Measurement Techniques</i> , 2019, 12, 5817-5828.	1.2	11
28	Numerical advection of correlated tracers: preserving particle size/composition moment sequences during transport of aerosol mixtures. <i>Journal of Physics: Conference Series</i> , 2007, 78, 012045.	0.3	10
29	Temperature Dependence in Heterogeneous Nucleation with Application to the Direct Determination of Cluster Energy on Nearly Molecular Scale. <i>Scientific Reports</i> , 2017, 7, 16896.	1.6	8
30	Surfactants and cloud droplet activation: A systematic extension of Köhler theory based on analysis of droplet stability. <i>Journal of Chemical Physics</i> , 2021, 154, 024707.	1.2	8
31	A unifying identity for the work of cluster formation in heterogeneous and homogeneous nucleation theory. <i>Journal of Chemical Physics</i> , 2018, 149, 084702.	1.2	4
32	Arrhenius Temperature Dependence of Homogeneous Nucleation Rates. , 2007, , 144-148.		2
33	Humidity, Ice, and Nitric Acid. <i>Science</i> , 2004, 304, 961-963.	6.0	2