

ATHANASIOS NENES

Contact information

Earth & Atmospheric Sciences, Chemical & Biomolecular Engineering, Georgia Institute of Technology
311 Ferst Drive, Atlanta, Georgia 30332-0340, USA
Tel: +1-404-894-9225; Fax: +1-404-894-5638;
E-mail: athanasios.nenes@gatech.edu; <http://nenes.eas.gatech.edu>

Professional Preparation

Diploma	Chemical Engineering	1993	National Technical University of Athens, Greece
M.S.	Atmospheric Chemistry	1997	University of Miami
Ph.D.	Chemical Engineering	2003	California Institute of Technology

Appointments/Affiliations

2015-2016	Visiting Professor, California Institute of Technology; University of Athens, Greece; National Technical University of Athens, Greece
2015-present	Affiliated Scientist, National Observatory of Athens, Greece
2008-present	Affiliated Scientist, Foundation for Research and Technology, Greece
2011-present	Professor, Georgia Institute of Technology
2008-2011	Associate Professor, Georgia Institute of Technology
2002-2008	Assistant Professor, Georgia Institute of Technology

Areas of research interests

- Biomass Burning Aerosols: detection, properties and impacts.
- Aerosol impacts on marine productivity, biogeochemical cycling of nutrients and the carbon cycle.
- Bioaerosols, their atmospheric lifecycle and properties
- Aerosol-cloud interactions and their impacts on the hydrological cycle, climate and storm formation.
- Parameterization of cloud microphysical processes and their representation in models.
- Thermodynamic modeling of tropospheric aerosols.
- Instrumentation and techniques for characterizing volatility, hygroscopicity, Cloud Condensation Nuclei (CCN) and Ice Nuclei (IN) activity of aerosols.
- Laboratory and field studies on CCN/IN activity and aerosol-cloud interactions.
- Development of advanced sensitivity and network analysis tools for air quality and climate models.
- Land use/land change modeling and land-atmosphere dynamic coupling

Honors/Recognitions

European Research Council, Consolidator Grant, 2016; Johnson Faculty Fellow, Georgia Institute of Technology (GIT), 2016; Faces of Inclusive Excellence, GIT, 2015; Cullen-Peck Fellow, GIT, 2014; Dreyfus Foundation Postdoctoral Mentor in Environmental Chemistry, 2014; Vaughan Lectureship in Chemical Engineering, California Institute of Technology, 2014; Atmospheric Sciences Section Ascent Award, American Geophysical Union, 2012; Outstanding Faculty Research Author, GIT, 2012; Kenneth T. Whitby Award, American Association for Aerosol Research, 2011; Georgia Power Faculty Scholar, GIT, 2011; Group Achievement Award, NASA, 2009, 2010; Dean's Distinguished Lecture, College of Engineering, Columbia University, 2010; Henry G. Houghton Award, American Meteorological Society, 2009; Sigma Xi Young Faculty Award, GIT, 2007; Sheldon K Friedlander Award, American Association for Aerosol Research, 2005; Blanchard-Milliken Young Faculty Fellowship, GIT, 2004; NASA New Investigator Program Award, 2004; National Science Foundation CAREER Award, 2004; ACCESS Colloquium Participation, 2003; Dean's Prize, Rosenstiel School of Marine and Atmospheric Sciences, 1998; Best Diploma Thesis Award in Chemical Engineering, Chamber of Engineers (Greece), 1996.

Books/Book chapters/Reports:

National Academies of Sciences, Engineering, and Medicine (2016) *The Future of Atmospheric Chemistry Research: Remembering Yesterday, Understanding Today, Anticipating Tomorrow*. Washington, DC: The National Academies Press. DOI: 10.17226/235730

Nenes, A., Murray, B., Bougiatioti, A. (2014) Mineral Dust and Its Microphysical Interactions with Clouds, In Knippertz, P., and Stuut, J.B., *Mineral Dust: A Key Player in the Earth System*, pp. 287-325, Springer, ISBN 978-94-017-8977-6

Refereed Publications – Published/In press (ISI Web of Science citations: 10923, h-index: 52)

1. A. Sorooshian, A.B. MacDonald, H. Dadashazar, K.H. Bates, M.M. Coggon, J.S. Craven, E. Crosbie, S.P. Hersey, N. Hodas, J.J. Lin, A. Negron Marty, L.C. Maudlin, A.R. Metcalf, S.M. Murphy, L.T. Padro, G. Prabhakar, T.A. Rissman, T. Shingler, V. Varutbangkul, Z. Wang, R.K. Woods, P.Y. Chuang, A. Nenes, H.H. Jonsson, R.C. Flagan, J.H. Seinfeld (2018) A Multi-Year Data Set on Aerosol-Cloud-Precipitation-Meteorology Interactions for Marine Stratocumulus Clouds, *Sci.Data.*, in press
2. Carlton, A.G., de Gouw, J., Jimenez, J.L., Ambrose, J.L., Brown, S., Baker, K.R., Brock, C., Cohen, R.C., Edgerton, S., Farkas, C., Farmer, D., Goldstein, A.H., Gratz, L., Guenther, A., Hunt, S., Jaegle, L., Jaffe, D.A., Mak, J., McClure, C., Nenes, A., Nguyen, T.K., Pierce, J.R., Selin, N.E., Shah, V., Shaw, S., Shepson, P.B., Song, S., Stutz, J., Surratt, J., Turpin, B.J., Warneke, C., Washenfelder, R.A., Wennberg, P.O., Zhou, X. (2018) The Southeast Atmosphere Studies (SAS): Coordinated investigation and discovery to answer critical questions about fundamental atmospheric processes, *Bull.Am.Met.Soc.*, in press
3. Schmale, J., Henning, S., Decesari, S., Henzing, B., Keskinen, H., Paramonov, M., Sellegri, K., Ovadnevaite, J., Pohlker, M., Brito, J., Bougiatioti, A., Kristensson, A., Kalivitis, N., Stavroulas, I., Carbone, S., Jefferson, A., Park, M., Schlag, P., Iwamoto, Y., Aalto, P., Aijala, M., Bukowiecki, N., Ehn, M. Frank, G., Frohlich, R., Frumau, A., Herrmann, A., Herrmann, H., Holzinger, R., Kos, R., Kulmala, M., Mihalopoulos, N., Nenes, A., O'Dowd, C., Petaja, T., Picard, D., Pohlker, D., Pochl, U., Poulain, L., Prevot, A.S.H., Swietlicki, E., Andreae, M.O., Artaxo, P., Wiedensohler, A., Ogren, J., Matsuki, A., Yum, S.S., Stratmann, F., Baltensperger, U., and Gysel, M. (2018) What do we learn from long-term cloud condensation nuclei number concentration, particle number size distribution, and chemical composition measurements at regionally representative observatories?, *Atmos.Chem.Phys.*, **18**, 2853-2881
4. Psichoudaki, M., Nenes, A., Florou, K., Kaltsonoudis, C., Pandis, S.N. (2018) Hygroscopic properties of atmospheric particles emitted during wintertime biomass burning episodes in Athens, *Atmos.Env.*, **178**, 66–72
5. Sullivan, S.C., Kiselev, A., Leisner, T., Hoose, C., Nenes, A. (2018) Initiation of secondary ice nucleation in clouds, *Atmos.Chem.Phys.*, **18**, 1593-1610
6. Vratolis, S., Fetfatzis, P., Argyrouli, A., Papayannis, A., Muller, D., Veselovskii, I., Bougiatioti, A., Nenes, A., Remoundaki, E., Diapouli, E., Manousakas, M., Mylonaki, M., Eleftheriadis, K. (2018) A new method for the retrieval of the equivalent refractive index of atmospheric aerosols, *Atmos.Env.*, **117**, 54–62
7. Bracco, A., Falasca, F., Nenes, A., Fountalis, I., Dovrolis, C. (2018) Advancing Climate Science with Knowledge-Discovery through Data mining, *npj Clim.Atmos.Sci.*, **1**, doi:10.1038/s41612-017-0006-4
8. Giannaros, C., Nenes, A., Giannaros, T.M., Kourtidis, K. and Melas, D. (2018) A comprehensive approach for the simulation of Urban Heat Island effect with the WRF/SLUCM modeling system: The case of Athens (Greece), *Atmos.Res.*, **201**, 86-101
9. Kim, Y.H., Yiacomini, S., Nenes, A., and C. Tsouris (2017) Incorporating Radioactive Decay into Charging and Coagulation of Multicomponent Radioactive Aerosols, *J.Aer.Sci.*, **114**, 283–300
10. Guo, H., Weber, R.J., Nenes, A. (2017) High levels of ammonia do not raise fine particle pH sufficiently to yield nitrogen oxide-dominated sulfate production, *Sci.Rep.*, **7**, 12109, doi:10.1038/s41598-017-11704-0
11. Sullivan, S.C., Hoose, C., and A. Nenes (2017) Investigating the relative contributions of secondary ice formation processes to ice crystal number concentrations, *J.Geoph.Res.*, **122**, doi:10.1002/2017JD026546
12. Wong, J.P.S., Nenes, A., Weber, R.J. (2017) Changes in Light Absorptivity of Molecular Weight Separated Brown Carbon due to Photolytic Aging, *Env.Sci.Tech.*, **51**, 8414–8421
13. Yahya, K., Glotfelty, T., Wang, K., Zhang, Y., and A. Nenes (2017) Modeling Regional Air Quality and Climate: Improving Organic Aerosol and Aerosol Activation Processes in WRF/Chem version 3.7.1, *Geosci.Mod.Dev.*, **10**, 2333–2363, doi:10.5194/gmd-10-2333-2017
14. Zieger, P., O. Vaisanen, J. Corbin, D. Partridge, S. Bastelberger, M. Mousavi-Fard, B. Rosati, M. Gysel, U.K. Krieger, C. Leck, A. Nenes, I. Riipinen, A. Virtanen, and M. E. Salter (2017) Revising the hygroscopicity of inorganic sea salt aerosol, *Nature Comm.*, **8**, 15883, doi:10.1038/ncomms15883

15. Bougiatioti, A., Argyrouli, A., Solomos, S., Vratolis, S., Eleftheriadis, K., Papayannis, A. and Nenes, A. (2017) CCN activity, variability and influence on droplet formation during the HygrA-CD campaign in Athens, *Atmosphere*, **8**, 108, doi:10.3390/atmos8060108
16. Zhang, Y., Forrister, H., Liu, J., Dibb, J., Anderson, B., Schwarz, J.P., Perring, A.E., Jimenez, J.L., Campuzano-Jost, P., Wang, Y., Nenes, A., Weber, R.J. (2017) Convection Transports Brown Carbon to the Upper Troposphere Affecting Top of Atmosphere Radiative Forcing, *Nature Geosci.*, doi:10.1038/ngeo2960
17. Rastak, N., A. Pajunoja, J. C. Acosta Navarro, J. Ma, M. Song, D. G. Partridge, A. Kirkevåg, Y. Leong, W. W. Hu, N. F. Taylor, A. Lambe, K. Cerully, A. Bougiatioti, P. Liu, R. Krejci, T. Petäjä, C. Percival, P. Davidovits, D. R. Worsnop, A. M. L. Ekman, A. Nenes, S. Martin, J. L. Jimenez, D. R. Collins, D. O. Topping, A. K. Bertram, A. Zuend, A. Virtanen, and I. Riipinen (2017) Microphysical explanation of the RH-dependent water-affinity of biogenic organic aerosol and its importance for climate, *Geoph.Res.Let.*, **44**, doi:10.1002/2017GL073056
18. Guo, H., Liu, J., Ellis, R.A., Murphy, J.G., Froyd, K.D., Roberts, J.M., Veres, P.R., Hayes, P.L., Jimenez, J.L., Nenes, A., and Weber, R.J. (2017) Fine particle pH and gas-particle phase partitioning of inorganic species in Pasadena, California, during the 2010 CalNex campaign, *Atmos.Chem.Phys.*, **17**, 5703–5719
19. Karydis, V.A., A.P. Tsimpidi, A. Nenes and J. Lelieveld (2017) The global impact of mineral dust on cloud droplet number concentration, *Atmos.Chem.Phys.*, **17**, 5601–5621
20. Reddington, C. L., K. S. Carslaw, P. Stier, N. Schutgens, H. Coe, D. Liu, J. Allan, J. Browse, K. J. Pringle, L. A. Lee, M. Yoshioka, J. S. Johnson, L. A. Regayre, D. V. Spracklen, G. W. Mann, A. Clarke, M. Hermann, S. Henning, H. Wex, T. B. Kristensen, W. R. Leitch, U. Pöschl, D. Rose, M. O. Andreae, J. Schmale, Y. Kondo, N. Oshima, J. P. Schwarz, A. Nenes, B. Anderson, G. C. Roberts, J. R. Snider, C. Leck, P. K. Quinn, X. Chi, A. Ding, J. L. Jimenez, Q. Zhang (2017) The global aerosol synthesis and science project (GASSP)-Measurements and modelling to reduce uncertainty, *Bull.Am.Meteor.Soc.*, doi: 10.1175/BAMS-D-15-00317.1
21. Budisulistiorini, S., A. Nenes, A.G. Carlton, J.D. Surratt, V.F. McNeill, H.O. T. Pye (2017) Simulating Aqueous-Phase Isoprene-Epoxydiol (IEPOX) Secondary Organic Aerosol Production During the 2013 Southern Oxidant and Aerosol Study (SOAS), *Env.Sci.Tech.*, just accepted, doi: 10.1021/acs.est.6b05750
22. Field P., Lawson P., Brown P., Lloyd G, Westbrook C., Moisseev D., Miltenberger A., Nenes A., Blyth A., Choularton T., Connolly P., Buehl J., Crosier J., Cui, Z., Dearden C., DeMott P., Flossmann A., Heymsfield A., Huang Y., Kalesse H., Kanji Z. A., Korolev A., Kirchgaessner A., Lasher-Trapp S., Leisner T., McFarquhar G., Murray B., Phillips V., Stith J., Sullivan S. (2017) Chapter 7. Secondary Ice Production – current state of the science and recommendations for the future, *AMS Monograph Series*, vol.58, doi: 10.1175/AMSMONOGRAPHS-D-16-0014.1
23. Fang, T., Guo, H., Zeng, L., Verma, V., Nenes, A., Weber, R.J. (2017) Highly acidic ambient particles, soluble metals and oxidative potential: A link between sulfate and aerosol toxicity, *Env.Sci.Tech.*, **51** (5), 2611–2620, doi:10.1021/acs.est.6b06151
24. Shi, G., Xu, J., Peng, X., Sun, R., Chen, K., Tian, Y. Guan, X., Feng, Y., Yu, H., Nenes, A., Russell, A.G. (2017) pH of Aerosols in a Polluted Atmosphere: Source Contributions to Highly Acidic Aerosol, *Env.Sci.Tech.*, doi: 10.1021/acs.est.6b05736
25. Li, W., Xu, L., Liu, X., Zhang, J., Lin, Y., Yao, X., Gao, H., Zhang, D., Chen, J., Wang, W., Harrison, R., Zhang, X., Shao, L., Fu, P., Nenes, A., Shi, Z. (2017) Air pollution - aerosol interactions produce more bioavailable iron for ocean ecosystems, *Sci. Advances*, **3**, e1601749
26. Schmale, J., Henning S., Bas Henzing, J.S., Keskinen H., Sellegrì K., Ovadnevaite J., Bougiatioti A., Kalivitis N., Jefferson, A., Park M., Schlag, P., Kristensson, A, Yoshioka, M., Reddington, C., Pringle K., Aalto, P., Äijälä M., Baltensperger, U., Birmili W., Bukowiecki N., Fjæraa A.M., Fiebig, M., Frank, G., Fröhlich, R., Frumau, A., Hammer, E., Heikkinen, L., Herrmann, E., Holzinger, R., Kanakidou, M., Kiendler-Scharr, A., Kos, G., Kulmala, M., Mihalopoulos, N., Motos G., Nenes, A., O'Dowd, C., Paramonov, M., Petäjä, T., Picard, D., Poulain, L., Sonntag, A., Swietlicki, E., Svenningsson, B., Wiedensohler, A., Wittbom, C., Ogren, J., Yum, S., Lund Myhre, C., Carslaw, K., Stratmann, F., Gysel M. (2017) Multi-year, multi-site dataset of collocated cloud condensation nuclei, aerosol size distribution and chemical composition observations, *Sci.Dat.*, 4:170003 doi: 10.1038/sdata.2017.3

27. Pye, H. O. T., B. N. Murphy, L. Xu, N. L. Ng, A. G. Carlton, H. Guo, R. J. Weber, P. Vasilakos, K. W. Appel, S. H. Budisulistiorini, J. D. Surratt, A. Nenes, W. Hu, J. L. Jimenez, G. Isaacman-VanWertz, P. K. Misztal, and A. H. Goldstein (2017) On the implications of aerosol liquid water and phase separation for organic aerosol mass, *Atm.Chem.Phys.*, **17**, 343-369.
28. Tsekeri, A., Amiridis, V., Marengo, F., Marinou, E., Solomos, S., Rosenberg, P., Nenes, A., Trembath, J., Nott, G., Allan, J., Le Breton, M., Bacak, A., Coe, H., Percival, C., and Mihalopoulos, N., (2017) Profiling aerosol optical, microphysical and hygroscopic properties in ambient conditions by combining in-situ and remote sensing, *Atmos.Meas.Tech*, **10**, 83-107.
29. Kalkavouras P., Bossioli E., Bezantakos S., Bougiatioti A., Kalivitis N., Stavroulas I., Kouvarakis G., Protonotariou A. P., Dandou A., Biskos G., Mihalopoulos N., Nenes A., Tombrou M. (2017) New Particle Formation in the South Aegean Sea during the Etesians: importance for CCN production and cloud droplet number, *Atmos.Chem.Phys.*, **17**, 175–192.
30. Papayannis, A., Argyrouli, A., Bougiatioti, A., Remoundaki, E., Vratolis, S., Nenes, A., Van de Hey, J., Komppula, M., Solomos, S., Kazadzis, S., Banks, R., Labzovskii, L., Kalogiros, I., Tzani, C. G., Binietoglou, I., Giannakaki, E., and Zerefos, C. S. (2017) From hygroscopic aerosols to cloud droplets: the HygrA-CD Campaign in the Athens basin – An overview, *Sci.Tot.Env.*, **574**, 216–233
31. Kokkalis, P., Amiridis, V., Allan, J.D., Papayannis, A., Solomos, S., Binietoglou, I., Bougiatioti, A., Tsekeri, A., Nenes, A., Rosenberg, P.D., Marengo, F., Marinou, E., Vasilescu, J., Nicolae, D., Coe, H., Bacak, A., Chaikovskyn, A. (2017) Validation of LIRIC aerosol concentration retrievals using airborne measurements during a biomass burning episode over Athens, *Atmos.Res.* **183**, 255–267
32. Lee, S.H., Uin, J., Guenther, A.B., de Gouw, J.A., Goldstein A.H., Nadykto, A.B., Yu, F., Herb, J., Ng, N.L., Koss, A., Isaacman-VanWertz, G., Yee, L.D., Olson, K., Sanchez, J., Xu, L., Brune, W.H., Baumann, K., Kanawade, V.P., Keutsch, F.N., Millet, D.B., and Nenes, A. (2016) New Insights on Isoprene Suppression of New Particle Formation, *J.Geoph.Res.*, **121**, doi:10.1002/2016JD024844
33. Myriokefalitakis, S., Nenes, A., Baker, A.R., Mihalopoulos, A. and Kanakidou, M. (2016) Bioavailable atmospheric phosphorous supply to the global ocean: a 3-D global modelling study, *Biogeosciences*, **13**, 6519-6543.
34. Stockdale, A., Krom, M.D., Mortimer, R.J.G., Benning, L.G., Carslaw, K., Herbert, R., Shi, Z., Myriokefalitakis, S., Kanakidou, M., and Nenes, A. (2016) Supply of bioavailable phosphorus to the oceans: understanding the nature of atmospheric acid processing of mineral dusts, *Proc.Nat.Acad.Sci.*, doi:10.1073/pnas.1608136113
35. Dunne, E.M., Gordon, H., Kurten, A., Almeida, J., Williamson, C., Ortega, I.K., Pringle, K.J., Adamov, A., Baltensperger, U., Barmet, P., Benduhn, F., Bianchi, F., Breitenlechner, M., Clarke, A., Curtius, J., Dommen, J., Donahue, N.M., Duplissy, J., Ehrhart, S., Flagan, R.C., Franchin, A., Hansel, A., Kangasluoma, J., Kirkby, J., Kulmala, M., Kupc, A., Lehtipalo, K., Makhmutov, V., Nenes, A., Onnela, A., Rap, A., Reddington, C.L.S., Riccobono, F., Richards, N.A.D., Rissanen, M.P., Schobesberger, S., Sengupta, K., Simon, M., Stozkhov, Y., Tome, A., Trostl, J., Wagner, P.E., Winkler, P.M., Worsnop, D.R., and Carslaw, K.S. (2016) Global atmospheric particle formation from CERN CLOUD measurements, *Science*, doi:10.1126/science.aaf2649.
36. Guo, H., Sullivan, A.P., Campuzano-Jost, P., Schroder, J.C., Lopez-Hilfiker, F.D., Dibb, J.E., Jimenez, J.L., Thornton, J.A., Brown, S.S., Nenes, A., and Weber, R.J. (2016) Fine particle pH and the partitioning of nitric acid during winter in the northeastern United States, *J.Geoph.Res.*, **121**, 10,355–10,376, doi:10.1002/2016JD025311
37. Xu, L., Middlebrook, A.M., Liao, J., deGouw, J., Guo, H., Weber, R.J., Nenes, A., Lee, B.H., Thornton, J.A., Brock, C., Trainer, M.K., Neuman, J.A., Nowak, J.B., Pollack, I.B., Ryerson, T.B., Hanisco, T.F., Wennberg, P.O., Schwarz, J.P., Welti, A., Holloway, J.S., Gilman, J.B., Lerner, B.M., Graus, M., Warneke, C., Ng, N.L. (2016) Enhanced formation of Isoprene-derived Organic Aerosol in Power Plant Plumes during Southeast Nexus (SENEX), *J.Geoph.Res.*, **121**, doi:10.1002/2016JD025156
38. Longo, A.F., Feng, Y., Lai, B., Landing, W.M., Shelley R.U., Nenes, A., Mihalopoulos, N., Violaki, K., Ingall, E.D. (2016) Influence of Atmospheric Processes on the Solubility and Composition of Iron in Saharan Dust, *Env.Sci.Tech.*, **50**, 6912–6920, doi:10.1021/acs.est.6b02605
39. Violaki, K., Fang, T., Mihalopoulos, N., Weber, R., and Nenes, A. (2016) Real-Time, Online Automated System for Measurement of Water-Soluble Reactive Phosphate Ions in Atmospheric Particles, *Anal. Chem.*, **88**, 7163–7170, doi: 10.1021/acs.analchem.6b01264

40. Ito, T., Nenes, A., Johnson, M. S., Meskhidze, N., Valett, J., and Deutsch, C. (2016) Late 20th century deoxygenation of the tropical Pacific enhanced by aerosol pollutants, *Nature Geosci.*, doi:10.1038/ngeo2717
41. Laaksonen, A., Malila, J., Nenes, A., Hung, H.M., Chen, J.P. (2016) Surface fractal dimension, water adsorption efficiency, and cloud nucleation activity of insoluble aerosol, *Sci.Rep.*, **6**, 25504, doi:10.1038/srep25504
42. Sullivan, S.C., Lee, D., Oreopoulos, L., and Nenes, A (2016) The role of updraft velocity in temporal variability of cloud hydrometeor number, *Proc.Nat.Acad.Sci*, **113**, 21, doi: 10.1073/pnas.1514039113
43. Seinfeld, J.H., Bretherton, C.S., Carslaw, K.S., Coe, H., DeMott, P.J., Dunlea, E.J., Feingold, G., Ghan, S.J., Guenther, A.B., Kahn, R.A., Kracunas, I.P., Kreidenweis, S.M., Molina, M.J., Nenes, A., Penner, J.E., Prather, K.A., Ramanathan, V., Ramaswamy, V., Rasch, P.J., Ravishankara, A.R., Rosenfeld, D., Stephens, G., Wood R. (2016) Improving Our Fundamental Understanding of the Role of Aerosol-Cloud Interactions in the Climate System, *Proc.Nat.Acad.Sci*, **113**, 21, 5781-5790, doi: 10.1073/pnas.1514043113
44. Weber, R.J., Guo, H., Russell, A.G., Nenes, A. (2016) High aerosol acidity despite declining atmospheric sulfate concentrations over the past 15 years, *Nature Geosci.*, doi:10.1038/ngeo2665
45. Warneke C., M. Trainer, J.A. de Gouw, D. Parrish, D. Fahey, D. Murphy, A.R. Ravishankara, A. Middlebrook, C. Brock, J. Roberts, S. Brown, A. Neuman, B. Lerner, D. Lack, D. Law, G. Hubler, I. Pollack, T. Ryerson, J. Gilman, J. Liao, J. Holloway, J. Peischl, J. Nowak, K. Aikin, K.-E. Min, R. Washenfelder, M. Graus, M. Richardson, M. Markovic, N. Wagner, A. Welti, P. Veres, P. Edwards, J. Schwarz, T. Gordon, B. Dube, S. Mc Keen, J. Brioude, R. Ahmadov, K. Bougiatioti, J. Lin, A. Nenes, G. Wolfe, T. Hanisco, B. Lee, F. Lopez-Hilfiker, J. Thornton, F. Keutsch, J. Kaiser, J. Mao, C. Hatch (2016) Instrumentation and Measurement Strategy for the NOAA SENEX Aircraft Campaign as Part of the Southeast Atmosphere Study 2013, *Atm.Meas.Tech.*, **9**, 3063-3093
46. Bougiatioti, A., Bezantakos, S., Stavroulas, I., Kokkalis, P., Biskos, G., Mihalopoulos, N., Papayannis, A., Nenes, A. (2016) Contribution of biomass burning to CCN number and hygroscopicity during summertime in the Eastern Mediterranean, *Atmos.Chem.Phys.*, **16**, 7389-7409
47. Metzger, S., Steil, B., Abdelkader, M., Klingmuler, K., Xu, L., Fountoukis, C., Nenes, A., Penner, J., and Lelieveld, J. (2016) Aerosol Water Parameterization: A single parameter framework, *Atm.Chem.Phys.*, **16**, 7213-7237
48. Zhu, S., Sartelet, K.N., Zhang, Y., Nenes, A. (2016) Three-dimensional modelling of the mixing state of particles over Greater Paris, *J. Geoph.Res.*, **121**, doi:10.1002/2015JD024241
49. Sanchez, K.J., Modini, R.L., Frossard, A.A., Ahlm, L., Russell, L.M., Corrigan, C.E., Roberts, G.C., Hawkins, L.N., Schroder, J.C., Bertram, A.K., Zhao, R., Lee, A.K.Y., Abbatt, J.P.D., Lin, J., Nenes, A., Wang, Z., Wonschusch, A., Sorooshian, A., Noone, K.J., Jonsson, H., Albrecht, B.A., Toom-Sauntry, D., Macdonald, A.M., Leaitch, W.R., and Seinfeld, J.H. (2016) Meteorological and Aerosol Effects on Marine Cloud Microphysical Properties, *J.Geoph.Res.*, **121**, doi:10.1002/2015JD024595
50. Kanakidou, M., Myriokefalitakis, S., Daskalakis, N., Fanourgakis, G., Nenes, A., Baker, A., Tsigaridis, K., Mihalopoulos, N. (2016) Past, Present and Future Atmospheric Nitrogen Deposition, *J. Atmos.Sci.*, **73**, 2039–2047
51. Bougiatioti, A., Nikolaou, P., I. Stavroulas, G. Kouvarakis, A. Nenes, R. Weber, M. Kanakidou, and N. Mihalopoulos (2016) Particle water and pH in the Eastern Mediterranean: Sources variability and implications for nutrients availability, *Atmos.Chem.Phys.*, **16**, 4579–4591
52. Hoyle, C.R., Webster, C.S., Rieder, H.E., Nenes, A., Hammer, E., Herrmann, E., Gysel, M., Bukowiecki, N., Weingartner, E., Steinbacher, M., and U. Baltensperger (2016) Chemical and physical influences on aerosol activation in liquid clouds: a study based on observations from the Jungfrauoch, Switzerland, *Atmos.Chem.Phys.*, **16**, 4043–4061
53. Kim, Y.H., Yiacoumi, S., Nenes, A. and Tsouris, C. (2016) Modeling of Surface Charging and Aggregation Kinetics of Atmospheric Particles, *Atmos.Chem.Phys.*, **16**, 3449–3462
54. Sullivan, S., Morales-Betancourt, R., Barahona, D., and Nenes, A. (2016) Understanding cirrus ice crystal number variability for different heterogeneous ice nucleation spectra, *Atmos.Chem.Phys.*, **16**, 2611–2629
55. Zamora, L.M., Kahn, R.A., Cubison, M.J., Diskin, G.S., Jimenez, J.L., Kondo, Y., McFarquhar, G.M., Nenes, A., Thornhill, K.L., Wisthaler, A., Zelenyuk, A., and Ziemba, L.D. (2016) Aircraft-measured indirect cloud effects from biomass burning smoke in the Arctic and subarctic, *Atmos.Chem.Phys.*, **16**,

56. Asa-Awuku, A., Sorooshian, A., Flagan, R.C., Seinfeld, J.H. and Nenes, A. (2015) CCN Properties of Organic Aerosol Collected Below and Within Marine Stratocumulus Clouds near Monterey California, *Atmosphere.*, **6**, 1590-1607, doi:10.3390/atmos6111590
57. Turner, M., Henze, D., Hakami, A., Capps, S., Zhao, S-L., Resler, J., Carmichael, G., Stanier, C., Baek, J., Sandu, A., Russell, A., Nenes, A., Pinder, R., Napelenok, S., Bash, J., Percell, P., Chai, T. (2015) Sector-specific health impacts of BC emissions in six urban US regions, *Env. Res. Let.*, **10**, 114014
58. M. Paramonov, V.-M. Kerminen, M. Gysel, P. P. Aalto, M. O. Andreae, E. Asmi, U. Baltensperger, A. Bougiatioti, D. Brus, G. Frank, N. Good, S. S. Gunthe, L. Hao, M. Irwin, A. Jaatinen, Z. Jurányi, S. M. King, A. Kortelainen, A. Kristensson, H. Lihavainen, M. Kulmala, U. Lohmann, S. T. Martin, G. McFiggans, N. Mihalopoulos, A. Nenes, C. D. O'Dowd, J. Ovadnevaite, T. Petäjä, U. Pöschl, G. C. Roberts, D. Rose, B. Svenningsson, E. Swietlicki, E. Weingartner, J. Whitehead, A. Wiedensohler, C. Wittbom, and B. Sierau (2015) A synthesis of cloud condensation nuclei counter (CCNC) measurements within the EUCAARI network, *Atmos.Chem.Phys.*, **15**, 12211-12229
59. Zhang, W., Trail, M., Hu, Y., Nenes, A., Russell, A.G. (2015) Use of High-Order Sensitivity Analysis and Reduced-Form Modeling to Quantify Uncertainty in Particulate Matter Simulations in the Presence of Uncertain Emissions Rates, *Atmos.Env.*, **122**, 103-113
60. Kalivitis, N., Kerminen, V.-M., Kouvarakis, G., Stavroulas, I., Bougiatioti, A., Nenes, A., Manninen, H.E., Petäjä, T., Kulmala, M. and N. Mihalopoulos (2015) Atmospheric new-particle formation as source of CCN in the Eastern Mediterranean marine boundary layer, *Atmos.Chem.Phys.*, **15**, 9203-9215
61. Kerl, P., Zhang, W., Moreno-Cruz, J., Nenes, A., Realff, M., Russell, A., Sokol, J., Thomas, V.M. (2015) A New Approach for Optimal Electricity Planning and Dispatching with Hourly Time-Scale Air Quality and Health Considerations, *Proc.Nat.Acad.Sci.*, **112**, 10884-10889, doi:10.1073/pnas.1413143112
62. Budisulistiorini, S.H., Li, X., Bairai, S.T., Renfro, J., Liu, Y., Liu, Y.J., McKinney, K.A., Martin, S.T., McNeill, V.F., Pye, H.O.T., Nenes, A., Neff, M.E., Stone, E.A., Mueller, S., Knote, C., Shaw, S.L., Zhang, Z., Gold, A., and J. D. Surratt (2015) Examining the Effects of Anthropogenic Emissions on Isoprene-Derived Secondary Organic Aerosol Formation During the 2013 Southern Oxidant and Aerosol Study (SOAS) at the Look Rock, Tennessee, Ground Site, *Atmos.Chem.Phys.*, **15**, 8871-8888
63. Cerully, K., Bougiatioti, A., Guo, H., Xu, L., Hite, J.R., Ng, N.L., Weber, R., Nenes, A. (2015) On The Link Between Hygroscopicity, Volatility, And Oxidation State Of Ambient and Water-Soluble Aerosol In The Southeastern United States, *Atmos.Chem.Phys.*, **15**, 8679-8694
64. Hildebrandt Ruiz, L., Paciga, A., Cerully, K., Nenes, A., Donahue, N.M., Pandis, S.N. (2015) Aging of Secondary Organic Aerosol from Small Aromatic VOCs: Changes in Chemical Composition, Mass Yield, Volatility and Hygroscopicity, *Atmos.Chem.Phys.*, **15**, 8301-8313
65. Zhang, Y., Zhang, X., Wang, K., He, J., Fan, J., Leung, L.R., and Nenes, A. (2015) Incorporation of an Advanced Aerosol Activation Parameterization into WRF-CAM5: Parameterization Intercomparison and Impacts on Aerosol Indirect Effects, *J.Geoph.Res.*, **120**, doi:10.1002/2014JD023051
66. Shinozuka, Y., Clarke, A.D., Nenes, A., Jefferson, A., Wood, R., Redemann, J., McNaughton, C.S., Strom, J., Tunved, P., Thornhill, K.L., Moore, R.H., Latham, T.L., Yoon, Y.J. (2015) The relationship between cloud condensation nuclei (CCN) concentration and light extinction of dried particles: indications of underlying aerosol processes and implications for satellite-based CCN estimates, *Atmos.Chem.Phys.*, **15**, 7585-7604
67. Trail, M.A., Tsimpidi, A.P., Liu, P., Tsigaridis, K., Hu, Y., Nenes, A., Stone, B., Russell, A. G. (2015) Reforestation And Crop Land Conversion Impacts On Future Regional Air Quality In The Southeastern U.S., *Agric.For.Meteor.*, **209-210**, 78-86
68. Myriokefalitakis, S., Daskalakis, N., Mihalopoulos, N., Baker, A., Nenes, A., and Kanakidou, M. (2015) Changes In Dissolved Iron Deposition To The Oceans Driven By Human Activity: A 3-D Global Modelling Study, *Biogeosci.*, **12**, 3973-3992
69. Forrister, H., Liu, J., Scheuer, E., Dibb, J., Ziemba, L., Thornhill, K.L., Anderson, B., Diskin, G., Perring, A., Shwarz, J., Campuzano-Jost, P., Jimenez, J.L., Nenes, S., Weber, R.J. (2015) Evolution of Brown Carbon in a Wildfire Plume, *Geoph.Res.Let.*, **42**, doi:10.1002/2015GL063897
70. Modini, R. L., Frossard, A. A., Ahlm, L., Russell, L.M., Corrigan, C., Roberts, G. C., Hawkins, L. N.,

- Schroder, J. C., Bertram, A. K., Zhao, R., Lee, A. K. Y., Abbatt, J. P. D., Lin, J., Nenes, A., Wang, Z., Wonaschütz, A., Sorooshian, A., Noone, K. J., Jonsson, H., Seinfeld, J. H., Toom-Saunty, D., Macdonald, A. M., and W. R. Leitch (2015) Sea-spray-aerosol-cloud interactions off the coast of California, *J.Geoph.Res.*, **120**, doi:10.1002/2014JD022963
71. Guo, H., Xu, L., Bougiatioti, K., Cerully, K., Capps, S., Carlton, A., Lee, S., Ng, N.L., Bergin, M., Nenes, A., Weber, R. (2015) Particle water and pH in the southeast United States, *Atmos.Chem.Phys.*, **15**, 5211–5228
 72. Trail, M.A., Tsimpidi, A.P., Liu, P., Tsigaridis, K., Hu, Y., Rudokas, J., Miller, P., Nenes, A., Russell, A. G. (2015) Impacts of potential CO₂-reduction policies on air quality in the United States, *Env. Sci. Tech.*, **49**, doi:10.1021/acs.est.5b00473
 73. Turner, M., Henze, D., Hakami, A., Zhao, S., Resler, J., Carmichael, G., Stanier, C., Baek, J., Sandu, A., Russell, A., Nenes, A., Jeong, G., Capps, S., Percell, P., Pinder, R., Napelenok, S., Bash, J., Chai, T. (2015) Differences Between Magnitudes and Health Impacts of BC Emissions Across the US Using 12km Scale Seasonal Source Apportionment, *Env.Sci.Tech.*, **49**, 4362–4371, doi:10.1021/es505968b
 74. Sheyko, B., Morales, R., Capps, S., Barahona, D., and Nenes, A. (2015) The development and application of the adjoint of a physically-based cirrus formation parameterization within CAM 5.1, *J.Geoph.Res.*, **120**, doi:10.1002/2014JD022457
 75. Hennigan, C.J., Izumi, J., Sullivan, A.P., Weber, R.J. and Nenes, A. (2015) A Critical Evaluation of Proxy Methods used to Estimate the Acidity of Atmospheric Particles, *Atmos.Chem.Phys.*, **15**, 2775-2790
 76. Xu, L., Guo, H., Boyd, C., Bougiatioti, A., Cerully, K., Hite, J., Isaacman, G., Olson, K., Goldstein, A., Kosse, A., Gouw, J.D., Baumann, K., Knote, C., Lee, S., Weber, R., Nenes, A., Ng, N.L. (2015) Effects of Anthropogenic Emissions on Aerosol Formation from Isoprene and Monoterpenes in the Southeastern United States: Insights from SOAS and Beyond, *Proc.Nat.Acad.Sci.*, **112**, 37-42, doi: 10.1073/pnas.1417609112
 77. Wong, J. P. S., J. Liggio, S.-M. Li, A. Nenes, Abbatt, J. P. D. (2014) Suppression in Droplet Growth Kinetics by the Addition of Organics to Sulfate Particles, *J.Geoph.Res.*, **119**, 12,222–12,232, doi:10.1002/2014JD021689
 78. You, Y., Kanawade, V.P., de Gouw, J.A., Guenther, A.B., Madronich, S., Sierra-Hernandez, M.R., Lawler, M., Smith, J.N., Takahama, S., Koss, A., Baumann, K., Weber, R.J., Nenes, A., Giulia, R., Guo, H., Edgerton, E.S., Porcelli, L., Brune, W.H., Goldstein, A.H., Olson, K., and Lee, S.-H. (2014) Atmospheric Amines and Ammonia Measured with a Chemical Ionization Mass Spectrometer (CIMS), *Atmos.Chem.Phys.*, **14**, 12181-12194
 79. Morales Betancourt, R., and Nenes, A. (2014) Aerosol Activation Parameterization: The population splitting concept revisited, *Geosci.Mod.Dev.*, **7**, 2345–2357
 80. Barahona, D., Molod, A., Bacmeister, J., Nenes, A., Gettelman, A., Morrison, H., Phillips, V., and Eichmann, A. (2014) Development of Two-Moment Cloud Microphysics for Liquid and Ice within the NASA Goddard Earth Observing System Model (GEOS-5), *Geosci.Mod.Dev.*, **7**, 1733-1766
 81. Gantt, B., He, J., Zhang, X., Zhang, Y., and Nenes, A. (2014) Incorporation of Advanced Aerosol Activation Treatments into CESM/CAM5: Model Evaluation and Impacts on Aerosol Indirect Effects, *Atmos.Chem.Phys.*, **14**, 7485-7497
 82. Coggon, M.M., Sorooshian, A., Wang, Z., Metcalf, A.R., Lin, J.J., Nenes, A., Jonsson, H.H., Flagan, R.C., Seinfeld, J.H. (2014) Impacts of continental biogenic aerosol on marine stratocumulus off the coast of California, *J. Geoph. Res.*, **119**, doi:10.1002/2013JD021228
 83. Longo, A.F., Ingall, E.D., Diaz, J.M., Oakes, M., King, L.E., Nenes, A., Mihalopoulos, N., Violaki, K., Avila, A., Benitez-Nelson, C.R., Brandes, J., McNulty, I., and Vine, D.J. (2014) P-NEXFS Analysis of Aerosol Phosphorus Delivered to the Mediterranean Sea, *Geoph.Res.Let.*, **41**, doi:10.1002/2014GL060555
 84. Trail, M., Tsimpidi, A.P., Liu, P., Tsigaridis, K., Hu, Y., Rodukus, J., Nenes, A. and Russell, A.G (2014) Sensitivity of air quality to potential future climate change and emissions in the United States and major cities, *Atm. Environ.*, **94**, 552-563
 85. Drozd, G., Woo, J., Häkkinen, S.A.K., Nenes, A, McNeill, V.F. (2014) Inorganic salts interact with oxalic acid in sub-micron particles to form material with low hygroscopicity and volatility, *Atmos.Chem.Phys.*, **14**, 5205-5215

86. Romakkaniemi, S., Jaatinen, A., Laaksonen, A., Nenes, A., Raatikainen, T. (2014) Effect of phase partitioning of semivolatile aerosol compounds on particles CCN-activity, *Atmos.Meas.Tech.*, **7**, 1377–1384.
87. Morales Betancourt, R., and Nenes, A. (2014) Understanding the contributions of aerosol properties and parameterization discrepancies to droplet number variability in a Global Climate Model, *Atmos.Chem.Phys.*, **14**, 4809–4826.
88. Bougiatioti, A., Stavroulas, I., Kostenidou, E., Zampas, P., Theodosi, C., Kouvarakis, G., Canonaco, F., Prévôt, A.S.H., Nenes, A., Pandis, S.N., and Mihalopoulos, N. (2014) Processing of biomass burning aerosol in the Eastern Mediterranean during summertime, *Atmos.Chem.Phys.*, **14**, 4793–4807.
89. Raatikainen, T., Lin, J.J., Cerully, K., Latham, T.L., Moore, R.H. and Nenes, A. (2014) CCN data interpretation under dynamic operation conditions, *Aeros.Sci.Tech.*, **48**, doi:10.1080/02786826.2014.899429
90. Cerully, K., Hite, J., McLaughlin, M., and Nenes, A. (2014) Toward the Determination of Joint Volatility-Hygroscopicity Distributions: Development and Response Characterization for Single-Component Aerosol, *Aer.Sci.Tech.*, **48**, doi:10.1080/02786826.2013.870326
91. Trail, M., Tsimpidi, A.P., Liu, P., Tsigaridis, K., Hu, Y., Nenes, A. Stone, B., and Russell, A.G. (2013) Potential impact of land use change on future regional climate in the Southeastern U.S.: Reforestation and crop land conversion, *J.Geoph.Res.*, **118**, doi:10.1002/jgrd.50331
92. Trail, M., Tsimpidi, A.P., Liu, P., Tsigaridis, K., Hu, Y., Nenes, A. and Russell, A.G. (2013) Downscaling a Global Climate Model to Simulate Climate Change Impacts on U.S. Regional and Urban Air Quality, *Geosci.Mod.Dev.*, **6**, 1429–1445
93. Ryerson, T.B., Andrews, A.E., Angevine, W.M., Bates, T.S., Brock, C.A., Cairns, B., Cohen, R.C., Cooper, O.R., de Gouw, J.A., Fehsenfeld, F.C., Ferrare, R.A., Fischer, M.L., Flagan, R.C., Goldstein, A.H., Hair, J.W., Hardesty, R.M., Hostetler, C.A., Jimenez, J.L., Langford, A.O., McCauley, E., McKeen, S.A., Molina, L.T., Nenes, A., Oltmans, S.J., Parrish, D.D., Pederson, J.R., Pierce, R.B., Prather, K., Quinn, P.K., Seinfeld, J.H., Senff, C.J., Sorooshian, A., Stutz, J., Surratt, J.D., Trainer, M., Volkamer, R., Williams, E.J., and Wofsy, S.C. (2013) The 2010 California Research at the Nexus of Air Quality and Climate Change (CalNex) field study, *J.Geoph.Res.*, **118**, doi:10.1002/jgrd.50331
94. Russell, L.M., Sorooshian, A., Seinfeld, J.H., Albrecht, B.A., Nenes, A., Ahlm, L., Chen, Y.C., Coggon, M., Craven, J.S., Flagan, R.C., Frossard, A.A., Jonsson, H., Jung, E., Lin, J.J., Metcalf, A.R., Modini, R., Mulmenstadt, J., Roberts, G.C., Shingler, T., Song, S., Wang, Z., Wonaschutz, A. (2013) Eastern Pacific Emitted Aerosol Cloud Experiment (E-PEACE), *Bull.Amer.Met.Soc.*, **94**, 709–729, doi: <http://dx.doi.org/10.1175/BAMS-D-12-00015.1>
95. Lance, S., Raatikainen, T., Onasch, T., Worsnop, D. R., Yu, X.-Y., Alexander, M. L., Stolzenburg, M. R., McMurry, P. H., Smith, J. N., and A. Nenes (2013) Aerosol mixing-state, hygroscopic growth and cloud activation efficiency during MIRAGE 2006, *Atmos.Chem.Phys.*, **13**, 5049–5062
96. DeLeon-Rodriguez, N., Latham, T.L., Rodriguez, L.M., Barazesh, J.M., Anderson, B.E., Beyersdorf, A.J., Ziemba, L.D., Bergin, M., Nenes, A., Konstantinidis, K.T. (2013) Reply to Smith and Griffin: Methods, air flows, and conclusions are robust in the DeLeon-Rodriguez et al. study, *Proc.Nat.Acad.Sci.*, doi: 10.1073/pnas.1304466110
97. Moore, R.H., Karydis, V.L., Capps, S.L., Latham, T.L. and Nenes, A. (2013) Droplet Number Prediction Uncertainties From CCN: An Integrated Assessment Using Observations and a Global Model Adjoint, *Atmos.Chem.Phys.*, **13**, 4235–4251
98. Hersey, S., Craven, J., Metcalf, A., Lin, J., Latham, T., Suski, K., Cahill, J., Duong, H., Sorooshian, A., Jonsson, H., Nenes, A., Prather, K., Flagan, R., Seinfeld, J. (2013) Composition and Hygroscopicity of the Los Angeles Aerosol: CalNex, *J. Geoph. Res.*, **117**, doi:10.1002/jgrd.50307
99. Latham, T.L., Beyersdorf A.J., Thornhill K.L., Winstead E.L., Cubison M.J., Hecobian A., Jimenez J.L., Weber R.J., Anderson B.E., and Nenes A. (2013) Analysis of CCN activity of Arctic aerosol and Canadian biomass burning during summer 2008, *Atmos.Chem.Phys.*, **13**, 2735–2756
100. Frosch, M., Bilde, M., Nenes, A., Praplan, A.P., Jurányi, Z., Dommen, J., Gysel, M., Weingartner, E., and Baltensperger, U. (2013) CCN activity and volatility of β -caryophyllene secondary organic aerosol, *Atmos.Chem.Phys.*, **13**, 2283–2297
101. Storelvmo, T., Kristjánsson, J.E., Muri, H., Pfeffer, M., Barahona, B., and Nenes, A. (2013) Cirrus Cloud Seeding has Potential to Cool Climate, *Geoph.Res.Let.*, **40**, doi:10.1029/2012GL054201

102. Raatikainen, T., Nenes, A., Seinfeld, J. H., Morales, R., Moore, R. H., Latham, T. L., Lance, S., Padro, L. T., Lin, J. J., Cerully, K., Bougiatioti, A., Cozic, J., Ruehl, C., Chuang, P. Y., Anderson, B., Flagan, R. C., Jonsson, H., Mihalopoulos, N., and J. N. Smith (2013) Worldwide data sets constrain the water vapor uptake coefficient in cloud formation, *Proc. Nat. Acad. Sci.*, 10.1073/pnas.1219591110
103. Sareen, N., Schwier, A. N., Latham, T., Nenes, A. and V. F. McNeill (2013) Surfactants from the gas phase may enhance aerosol cloud nucleation, *Proc. Nat. Acad. Sci.*, doi: 10.1073/pnas. 1204838110
104. DeLeon-Rodriguez, N., Latham, T. L., Rodriguez, L. M., Barazesh, J. M., Anderson, B. E., Beyersdorf, A. J., Ziemba, L. D., Bergin, M., Nenes, A., Konstantinidis, K. T. (2013) The microbiome of the upper troposphere: species composition and prevalence, effects of tropical storms, and atmospheric implications, *Proc. Nat. Acad. Sci.*, doi: 10.1073/pnas.1212089110
105. Sud, Y. C., Lee, D., Oreopoulos, L., Barahona, D., Nenes, A. and M. J. Suarez (2013) Performance of McRAS-AC in the GEOS-5 AGCM: Part 1, Aerosol-activated Cloud Microphysics, Precipitation, Radiative Effects, and Circulation, *Geos. Mod. Dev.*, **6**, 57–79
106. Liu, X., Shi, X., Zhang, K., Jensen, E. J., Gettelman, A., Barahona, D., Nenes, A. and P. Lawson (2012) Sensitivity Studies of Dust Ice Nuclei Effect on Cirrus Clouds with the Community Atmosphere Model CAM5, *Atmos. Chem. Phys.*, **12**, 12061–12079
107. Karydis, V. A., Capps, S. L., Moore, R. H., Russell, A., Henze, D. K. and A. Nenes (2012) Using a global aerosol model adjoint to unravel the footprint of spatially-distributed emissions on cloud droplet number and cloud albedo, *Geoph. Res. Lett.*, **39**, L24804, doi:10.1029/2012GL053346
108. Ruehl, C., Chuang, P. Y., Nenes, A., Cappa, C., and Kolesar, K. (2012) Strong Evidence of Surface Tension Reduction in Microscopic Aqueous Droplets, *Geoph. Res. Lett.*, **39**, L23801, doi:10.1029/2012GL053706
109. Morales, R., Lee, D., Oreopoulos, L., Sud, Y., Barahona, D. and Nenes, A. (2012) Sensitivity of Cirrus and Mixed-Phase Clouds to the Ice Nuclei Spectra in McRAS-AC: Single Column Model simulations, *Atmos. Chem. Phys.*, **12**, 10679–10692, doi:10.5194/acp-12-10679-2012
110. Padró, L. T., Moore, R. H., Zhang, X., Rastogi, N., Weber, R. J., and A. Nenes (2012) Mixing State and Compositional Effects on CCN Activity, and Droplet Activation Kinetics of Size-Resolved CCN in an Urban Environment, *Atmos. Chem. Phys.*, **12**, 10239-10255, doi:10.5194/acp-12-10239-2012
111. Wang, K., Zhang, Y., Nenes, A., and Fountoukis, C. (2012) Implementation of Dust Emission and Chemistry into the Community Multiscale Air Quality Modeling System and Initial Application to an Asian Dust Storm Episode, *Atmos. Chem. Phys.*, **12**, 10209-10237, doi:10.5194/acp-12-10209-2012
112. Zhang, Y., Karamchandani, P., Glotfelty, T., Streets, D. G., Skamarock, W. C., Grell, G., Nenes, A., Yu, F., and Bennartz, R. (2012) Development and Initial Application of the Global-Through-Urban Weather Research and Forecasting Model with Chemistry (GU-WRF/Chem), *J. Geoph. Res.*, **117**, D20206, doi:10.1029/2012JD017966
113. Karydis, V. S., Capps, S. L., Russell, A. G. and Nenes, A. (2012) Adjoint sensitivity of global cloud droplet number to aerosol and dynamical parameters, *Atmos. Chem. Phys.*, **12**, 9041–9055
114. Tsimpidi, A. P., Trail, M., Hu, Y., Nenes, A. and Russell, A. G. (2012) Modeling an air pollution episode in northwestern United States: Identifying the impact of nitrogen oxide and volatile organic compound sources on air pollutants formation using direct sensitivity analysis, *A. W. M. A.*, **62**(10), 1150-1165
115. Coggon, M. M., Sorooshian, A., Wang, Z., Metcalf, A. R., Frossard, A. A., Lin, J. J., Craven, J. S., Nenes, A., Jonsson, H. H., Russell, L. M., Flagan, R. C., and Seinfeld, J. H. (2012) Ship Impacts on the Marine Atmosphere: Insights into the Contribution of Shipping Emissions to the Properties of Marine Aerosol and Clouds, *Atmos. Chem. Phys.*, **12**, 8439-8458
116. Gantt, B., Xu, J., Meskhidze, N., Zhang, Y., Nenes, A., Ghan, S. J., Liu, X., Easter, R., and Zaveri, R. (2012) Global distribution and climate forcing of marine organic aerosol - Part 2: Effects on cloud properties and radiative forcing, *Atmos. Chem. Phys.*, **12**, 6555-6563
117. Mamouri, R. E., Papayannis, A., Amiridis, V., Müller, D., Kokkalis, P., Rapsomanikis, S., Karageorgos, C., Tsaknakis, G., Nenes, A., Kazadzis, S., and E. Remoundaki (2012) Multi-wavelength Raman lidar, sunphotometric and aircraft measurements in combination with inversion models for the estimation of the aerosol optical and physico-chemical properties over Athens, Greece, *Atmos. Meas. Tech.*, **5**, 1793-1808

118. Raatikainen, T., Moore, R. H., Latham, T. L. and A. Nenes (2012) A coupled observation–modeling approach for studying activation kinetics from measurements of CCN activity, *Atmos.Chem.Phys.*, **12**, 4227–4243, doi:10.5194/acp-12-4227-2012
119. Bangert, M., Nenes, A., Vogel, B., Vogel, H., Barahona, D., Karydis, V.A., and Blahak, U. (2012) Saharan Dust Event Impacts on Cloud Formation and Radiation over Western Europe, *Atmos.Chem.Phys.*, **12**, 4045–4063, doi:10.5194/acp-12-4045-2012
120. Bahadur, R., Russell, L.M., Jacobson, M.Z., Prather, K., Nenes, A., Adams, P.J., and Seinfeld, J.H. (2012) Importance of Composition and Hygroscopicity of BC Particles to the Effect of BC Mitigation on Cloud Properties : Application to California Conditions, *J.Geoph.Res.*, **117**, D09204, doi:10.1029/2011JD017265
121. Papayannis, A., Mamouri, R. E., Amiridis, V., Remoundaki, E., Tsaknakis, G., Kokkalis, P., Veselovskii, I., Kolgotin, A., Nenes, A., and Fountoukis, C. (2012) Optical-microphysical properties of Saharan dust aerosols and composition relationship using a multi-wavelength Raman lidar, in situ sensors and modelling: A case study analysis, *Atmos.Chem.Phys.*, **12**, 4011–4032
122. Liu, P., Tsimpidi, A.P., Hu, Y., Stone, B., Russell, A.G., and Nenes, A. (2012) Differences between Downscaling with Spectral and Grid Nudging Using WRF, *Atmos.Chem.Phys.*, **12**, 3601–3610
123. Lebensperger, E. M., Mickley, L. J., Jacob, D. J., Chen, W. T., Nenes, A., Adams, P. J., Seinfeld, J. H., and Kumar, N. (2012) Climate Response to 1950–2050 US Aerosol Trends: Part 2: Climate Response, *Atmos.Chem.Phys.*, **12**, 3349–3362
124. Lebensperger, E. M., Mickley, L. J., Jacob, D. J., Chen, W. T., Nenes, A., Adams, P. J., Seinfeld, J. H., and Kumar, N. (2012) Climate Response to 1950–2050 US Aerosol Trends: Part 1: Aerosol trends and radiative forcing, *Atmos.Chem.Phys.*, **12**, 3333–3348
125. Moore, R.H., Cerully, K., Bahreini, R., Brock, C.A., Middlebrook, A.M., and Nenes, A. (2012) Hygroscopicity and Composition of California CCN During Summer 2010, *J. Geoph. Res.*, **117**, D00V12, doi:10.1029/2011JD017352
126. Zhang, W., Capps, S.L., Hu, Y., Nenes, A., Napelenok, S.L., and A.G. Russell (2012) Development of the High-Order Decoupled Direct Method in Three Dimensions for Particulate Matter: Enabling Advanced Sensitivity Analysis in Air Quality Models, *Geoph.Mod.Dev.*, **5**, 355–368
127. Moore, R.H., Raatikainen, T., Langridge, J.M., Bahreini, R., Brock, C.A., Holloway, J.S., Lack, D.A., Middlebrook, A.M., Perring, A.E., Schwarz, J.P., Spackman J.R., and Nenes, A. (2012) CCN Spectra, Hygroscopicity, and Droplet Activation Kinetics of Secondary Organic Aerosol Resulting from the 2010 Deepwater Horizon Oil Spill, *Env.Sci.Tech.*, doi: 10.1021/es203362w
128. Capps, S.L., Henze, D.K., Hakami, A., Russell, A.G., and Nenes, A. (2012) ANISORROPIA: the adjoint of the aerosol thermodynamic model ISORROPIA, *Atmos.Chem.Phys.*, **12**, 527–543
129. Westervelt, D.M., Moore, R.H., Nenes, A. and Adams, P.J. (2012) Effect of Primary Organic Sea Spray Emissions on Cloud Condensation Nuclei Concentrations, *Atmos.Chem.Phys.*, **12**, 89–101
130. Cerully, K.M., Raatikainen, T., Lance, S., Tkacik, D., Tiitta, P., Petäjä, T., Ehn, M., Kulmala, M., Worsnop, D.R., Laaksonen, A., Smith, J.N. and A. Nenes (2011) Aerosol Hygroscopicity and CCN Activation Kinetics in a Boreal Forest Environment during the 2007 EUCAARI Campaign, *Atmos.Chem.Phys.*, **11**, 12369–12386
131. Karydis, V.A., Kumar, P., Barahona, D., Sokolik, I.N., and A. Nenes (2011) On the effect of insoluble dust particles on global CCN and droplet number, *J.Geoph.Res.*, **116**, D23204, doi:10.1029/2011JD016283
132. Moore, R.H., Bahreini, R., Brock, C.A., Froyd, K.D., Cozic, J., Holloway, J.S., Middlebrook, A.M., Murphy, D.M., Nenes, A. (2011) Hygroscopicity and Composition of Alaskan Arctic CCN during April 2008, *Atmos.Chem.Phys.*, **11**, 11807–11825
133. Meskhidze, N., Xu, J., Gantt, B., Zhang, Y., Nenes, A., Ghan, S.J., Liu, X., Easter, R., and Zaveri, R. (2011) Global distribution and climate forcing of marine organic aerosol: 1. Model improvements and evaluation, *Atmos.Chem.Phys.*, **11**, 11689–11705
134. Ghan, S.J., Abdul-Razzak, H., Nenes, A., Ming, Y., Liu, X., Ovchinnikov, M., Shipway, B., Meskhidze, N., Xu, J., Shi, X. (2011) Droplet Nucleation: Physically-based Parameterization and Comparative Evaluation, *J. Adv. Model. Earth Syst.*, **3**, doi:10.1029/2011MS000074
135. Lack, D.A., Cappa, C.D., Langridge, J., Bahreini, R., Buffaloe, G., Brock, C., Cerully, K., Coffman, D., Fahey, D.W., Hayden, K., Holloway, J., Lerner, B., Massoli, P., Li, S-M., McLaren, R., Middlebrook,

- A., Moore, R., Nenes, A., Nuaanan, I., Onasch, T., Peischl, J., Perring, A., Quinn, P., Ryerson, T., Schwartz, J.P., Spackman, R., Wofsy, S.C., Worsnop, D., Xiang, B. and E. Williams (2011) Observed Changes in Climate and Air Quality – Relevant Shipping Emissions Due to Vessel Fuel Quality and Speed Regulation, *Env.Sci.Tech.*, doi: 10.1021/es2013424
136. Bougiatioti, A., Nenes, A., Fountoukis, C., Kalivitis, N., Pandis, S.N., and Mihalopoulos, N. (2011) Size-resolved CCN distributions and activation kinetics of aged continental and marine aerosol, *Atmos.Chem.Phys.*, **11**, 8791-8808
137. Kumar, P., Sokolik, I. N., and Nenes, A. (2011) Measurements of Cloud Condensation Nuclei Activity and Droplet Activation Kinetics of Wet Processed Regional Dust Samples and Minerals, *Atmos.Chem.Phys.*, **11**, 8661-8676
138. Schwier, A.N., Sareen, N., Latham, T., Nenes, A. and McNeill, V.F. (2011) Ozone oxidation of oleate films decreases aerosol CCN activity, *J.Geoph.Res.*, **116**, D16202, doi:10.1029/2010JD015520
139. Morales, R., Nenes, A., Jonsson, H., Flagan, R.C. and J.H. Seinfeld (2011) Evaluation Of An Entraining Droplet Activation Parameterization Using In-Situ Cloud Data, *J.Geoph.Res.*, **116**, D15205, doi:10.1029/2010JD015324
140. Lance, S., Shupe, M., Feingold, G., Brock, C., Cozic, J., Holloway, J., Moore, R.H., Nenes, A., Schwarz, J., Spackman, R., Froyd, K.D., Murphy, D.M., Brioude, J., Cooper, O., Stohl, A. and Burkhardt, J.F. (2011) CCN as a Modulator for Ice Processes in Arctic Mixed-Phase Clouds, *Atmos.Chem.Phys.*, **11**, 8003–8015
141. Nenes, A., Krom, M.D., Mihalopoulos, N., Van Cappellen, P., Shi, Z., Bougiatioti, A., Zampas, P., and Herut, B. (2011) Atmospheric acidification of mineral aerosols: A source of bioavailable phosphorus for the oceans, *Atmos.Chem.Phys.*, **11**, 6265-6272
142. Myriokefalitakis, S., Tsigaridis, K., Mihalopoulos, N., Sciare, J., Nenes, A., Kawamura, K., Segers, A., and Kanakidou, M. (2011) In-Cloud Oxalate Formation in the Global Troposphere: A 3D Modeling Study, *Atmos.Chem.Phys.*, **11**, 5761–5782
143. Latham, T.L., Kumar, P., Nenes, A., Dufek, J., Sokolik, I.N., Trail, M., and Russell, A. (2011) Hygroscopic Properties of Volcanic Ash, *Geoph.Res.Let.*, **38**, L11802, doi:10.1029/2011GL047298
144. Asa-Awuku, A., Moore, R.H., Nenes, A., Bahreini, R., Holloway, J.S., Brock, C.A., Middlebrook, A.M., Ryerson, T., Jimenez, J., DeCarlo, P., Hecobian, A., Weber, R. Stickel, R., Tanner, D.J., Huey, L.G (2011) Airborne Cloud Condensation Nuclei Measurements during the 2006 Texas Air Quality Study, *J.Geoph.Res.*, **116**, D11201, doi:10.1029/2010JD014874
145. Barahona, D., Sotiropoulou, R.E.P., and Nenes, A. (2011) Global Distribution of Cloud Droplet Number Concentration, Autoconversion Rate and Aerosol Indirect Effect under Diabatic Droplet Activation, *J.Geoph.Res.*, **116**, D09203, doi:10.1029/2010JD015274
146. Barahona, D. and Nenes, A. (2011) Dynamical States of Low Temperature Cirrus, *Atmos.Chem.Phys.*, **11**, 3757–3771
147. Kumar, P., Sokolik, I.N., and Nenes, A. (2011) Measurements of Cloud Condensation Nuclei Activity and Droplet Activation Kinetics of Fresh Unprocessed Regional Dust Samples and Minerals, *Atmos.Chem.Phys.*, **11**, 3527-3541
148. Brock, C.A., Cozic, J., Bahreini, R., Froyd, K.D., Middlebrook, A.M., McComiskey, A., Brioude, J., Cooper, O.R., Stohl, A., Aikin, K.C., de Gouw, J.A., Fahey, D.W., Ferrare, R.A., Gao, R.-S., Gore, W., Holloway, J.S., Hübler, G., Jefferson, A., Lack, D.A., Lance, S., Moore, R.H., Murphy, D.M., Nenes, A., Novelli, P.C., Nowak, J.B., Ogren, J.A., Peischl, J., Pierce, R.B., Pilewskie, P., Quinn, P.K., Ryerson, T.B., Schmidt, K.S., Schwarz, J.P., Sodemann, H., Spackman, J.R., Stark, H., Thomson, D.S., Thornberry, T., Veres, P., Watts, L.A., Warneke, C., and Wollny, A.G. (2011) Characteristics, Sources, and Transport of Aerosols Measured in Spring 2008 During the Aerosol, Radiation, and Cloud Processes Affecting Arctic Climate (ARCPAC) Project, *Atmos.Chem.Phys.*, **11**, 2423-2453
149. Latham, T.L and Nenes, A. (2011) Water vapor depletion in the DMT Continuous Flow CCN Chamber: effects on supersaturation and droplet growth, *Aeros.Sci.Tech.*, **45**, 604–615, doi: 10.1080/02786826.2010.551146
150. Solomos, S., Kallos, G., Kushta, J., Astitha, M., Tremback, C., Nenes, A., and Levin, Z. (2011) An integrated modeling study on the effects of mineral dust and sea salt particles on clouds and precipitation, *Atmos.Chem.Phys.*, **11**, 873-892
151. Engelhart, G.J., Moore R.H., Nenes, A., and Pandis, S.N. (2011) CCN Activity of Isoprene Secondary

- Organic Aerosol, *J.Geophys.Res.*, **116**, D02207, doi:10.1029/2010JD014706
- 152.Moya, M., Madronich, S., Retama, A., Weber, R., Baumann, K., Nenes, A., Castillejos, M., Ponce de León, C. (2011) Identification of chemistry-dependent artifacts on gravimetric PM fine readings at the T1 site during the MILAGRO field campaign., *Atmos.Env.*, **45**, 244-252
 - 153.Barahona, D., Rodriguez, J., and Nenes, A.(2010) Sensitivity of the global distribution of cirrus ice crystal concentration to heterogeneous freezing, *J.Geophys.Res.*, **115**, D23213, doi:10.1029/2010JD014273
 - 154.Morales, R., Nenes, A. (2010) Characteristic updrafts for computing distribution-averaged cloud droplet number, autoconversion rate and effective radius, *J.Geophys.Res.*, **115**, D18220, doi:10.1029/2009JD013233
 - 155.Pringle, K.J., Tost, H., Metzger, S., Steil, B., Giannadaki, D., Nenes, A., Fountoukis, C., Stier, P., Vignati, E., and Lelieveld, J. (2010) GMXe: a new module for global and regional aerosol simulations, *Geoph.Model.Devel.*, **3**, 391-412
 - 156.Moore, R.H., Nenes, A., Medina, J. (2010) Scanning Mobility CCN Analysis - A method for fast measurements of size-resolved CCN distributions and activation kinetics, *Aeros.Sci.Tech.*, **44**, 861-871, doi:10.1080/02786826.2010.498715
 - 157.Meskhidze, N., and Nenes, A. (2010) Effects of ocean ecosystem on marine aerosol-cloud interactions, *Adv.Meteor.*, D239808, doi:10.1155/2010/239808
 - 158.Chen, W.T., Nenes, A., Liao, H., Adams, P., Seinfeld, J.H. (2010) Global Climate Response to Anthropogenic Aerosol Indirect Effects: Present Day and Year 2100, *J.Geophys.Res.*, **115**, D12207, doi:10.1029/2008JD011619
 - 159.Padró, L.T., Tkacik, D., Latham, T., Hennigan, C., Sullivan, A.P., Weber, R.J., Huey, L.G., and Nenes, A. (2010) Investigation of cloud condensation nuclei properties and droplet growth kinetics of the water-soluble aerosol fraction in Mexico City, *J.Geophys.Res.*, **115**, D09204, doi:10.1029/2009JD013195
 - 160.Chen W.T., Lee, Y., Adams, P., Nenes, A., Seinfeld, J.H. (2010) Will black carbon mitigation dampen aerosol indirect forcing?, *Geophys.Res.Let.*, **37**, L09801, doi:10.1029/2010GL042886
 - 161.Barahona, D., West, R.E.L., Stier, P., Romakkaniemi, S., Kokkola, H., and A. Nenes (2010) Comprehensively Accounting for the Effect of Giant CCN in Cloud Activation Parameterizations, *Atmos.Chem.Phys.*, **10**, 2467-2473
 - 162.Asa-Awuku, A., Nenes, A., Gao, S., Flagan, R.C., and Seinfeld, J.H. (2010) Water-soluble SOA from Alkene ozonolysis: composition and droplet activation kinetics inferences from analysis of CCN activity, *Atmos.Chem.Phys.*, **10**, 1585-1597
 - 163.Ruehl, C., Chuang, P.Y. and Nenes, A. (2010) Aerosol hygroscopicity at high (99 to 100%) relative humidities, *Atmos.Chem.Phys.*, **10**, 1329-1344
 - 164.Karydis, V.A., Tsimpidi, A.P., Fountoukis, C., Nenes, A., Zavala, M., Lei, W., Molina, L.T. and Pandis, S.N. (2010) Simulating the fine and coarse inorganic particulate matter concentrations in a polluted Megacity, *Atmos.Env.*, **44**, 608-620
 - 165.Kumar, P., Nenes, A. and Sokolik, I. (2009) The importance of adsorption for CCN activity and hygroscopic properties of mineral dust aerosol, *Geophys.Res.Let.*, **27**, L24804, doi:10.1029/2009GL040827
 - 166.Sud, Y.C., Lau, W., Wilcox, E., Walker, G.K., Liu, X.H., Nenes, A., Lee, D., Kim, K.M., Zhou, Y., and Bhattacharjee, P.S. (2009) Sensitivity of Boreal-Summer Circulation and Precipitation to Atmospheric Aerosols in selected Regions of Northern Tropics and Subtropics, *Ann.Geoph.*, **27**, 3989-4007
 - 167.Sorooshian, A., Padró, L.T., Nenes, A., Feingold, G., McComiskey, A., Hersey, S.P., Gates, H., Jonsson, H.H., Miller, S.D., Stephens, G.L., Flagan, R.C. and Seinfeld, J.H. (2009) On the Link Between Ocean Biota Emissions, Aerosol, and Maritime Clouds: Airborne, Ground, and Satellite Measurements off the Coast of California, *Glob.Biog.Cyc.*, **23**, GB4007, doi:10.1029/2009GB003464
 - 168.Moore, R.H. and Nenes, A. (2009) Scanning Flow CCN Analysis - A Method for Fast Measurements of CCN Spectra, *Aeros.Sci.Tech.*, **43**, 1192-1207
 - 169.Bougiatioti, A., Fountoukis, C., Kalivitis, N., Pandis, S.N., Nenes, A. and Mihalopoulos, N. (2009) Cloud Condensation Nuclei Measurements in the Marine Boundary Layer of the Eastern Mediterranean: CCN closure and droplet growth kinetics, *Atmos.Chem.Phys.*, **9**, 7053–7066

170. Ruehl, C.R., Chuang, P.Y. and Nenes, A. (2009) Distinct CCN activation kinetics above the marine boundary layer along the California coast, *Geoph.Res.Let.*, **36**, L15814, doi:10.1029/2009GL038839
171. Barahona, D. and Nenes, A. (2009) Parameterizing the Competition between Homogeneous and Heterogeneous Freezing in Ice Cloud Formation - Polydisperse Ice Nuclei, *Atmos.Chem.Phys.*, **9**, 5933-5948
172. Murphy, S.M., Agrawal, H., Sorooshian, A., Padró, L.T., Gates, H., Hersey, S., Welch, W.A., Jung, H., Miller, J.W., Cocker, D.R., Nenes, A., Jonsson, H., Flagan, R.C., and J.H. Seinfeld (2009) Comprehensive Simultaneous Shipboard and Airborne Characterization of Exhaust from a Modern Container Ship at Sea, *Env.Sci.Tech.*, **43**, 4626-4640
173. Lance, S., A.Nenes, C. Mazzoleni, M. Dubey, H. Gates, V. Varutbangkul, T. A. Rissman, S. M. Murphy, A. Sorooshian, F. Brechtel, R.C. Flagan, J.H. Seinfeld, G. Feingold, and H. Jonsson (2009) CCN Activity, Closure and Droplet Growth Kinetics of Houston Aerosol During the Gulf of Mexico Atmospheric Composition and Climate Study (GoMACCS), *J.Geoph.Res.*, **114**, D00F15, doi:10.1029/2008JD011699
174. Hsieh, W.C., Nenes, A., Flagan, R. C., Seinfeld, J.H., Buzorius, G., and Jonsson, H. (2009) Parameterization of cloud droplet size distributions: comparison with parcel models and observations, *J.Geoph.Res.*, **114**, D11205, doi:10.1029/2008JD011387
175. Hennigan, C., Bergin, M., Russell, A., Nenes, A., and Weber, R. (2009) The gas/particle partitioning of water-soluble organic aerosol in Atlanta, *Atmos.Chem.Phys.*, **9**, 3613–3628
176. Kumar, P., Sokolik, I.N., and Nenes, A. (2009) Parameterization of Cloud Droplet Formation for Global and Regional models: Including Adsorption Activation from Insoluble CCN, *Atmos.Chem.Phys.*, **9**, 2517-2532
177. Hsieh, W.C., H. Jonsson, L.-P. Wang, G. Buzorius, R. C. Flagan, J. H. Seinfeld, and A. Nenes (2009) On the representation of droplet coalescence and autoconversion: Evaluation using ambient cloud droplet size distributions, *J.Geoph.Res.* , **114**, D07201, doi:10.1029/2008JD010502
178. Fountoukis, C., Nenes, A., Sullivan, A., Weber, R., VanReken, T. , Fischer, M., Matías, E., Moya, M. Farmer, D., and Cohen, R. (2009) Thermodynamic characterization of Mexico City Aerosol during MILAGRO 2006, *Atmos.Chem.Phys.*, **9**, 2141-2156
179. Asa-Awuku, A., Engelhart, G.J., Lee, B.H., Pandis, S.N., and Nenes, A. (2009) Relating CCN activity, volatility, and droplet growth kinetics of β -caryophyllene secondary organic aerosol, *Atmos.Chem.Phys.*, **9**, 795–812
180. VanReken, T.M. and Nenes, A. (2009) Cloud Formation in the Plumes of Solar Chimney Power Generation Facilities: A Modeling Study, *J.Sol.En.Eng.*, **131**, 011009
181. Barahona, D. and A. Nenes (2009) Parameterizing the competition between homogeneous and heterogeneous freezing in cirrus cloud formation. Part I: Monodisperse ice nuclei, *Atmos.Chem.Phys.*, **9**, 369-381
182. Sorooshian, A., Murphy, S., Hersey, S., Gates, H., Padro, L., Nenes, A., Brechtel, F., Jonsson, H., Flagan, R., and J. Seinfeld (2008) Comprehensive airborne characterization of aerosol from a major bovine source, *Atmos.Chem.Phys.*, **8**, 5489-5520
183. Engelhart, G.J., Asa-Awuku, A., Nenes, A., and Pandis, S.N. (2008) CCN activity and droplet growth kinetics of fresh and aged monoterpene secondary organic aerosol, *Atmos.Chem.Phys.*, **8**, 3937-3949
184. Hennigan, C.J., Sullivan, A.P., Fountoukis, C.I., Nenes, A., Hecobian, A., Vargas, O., Case, A.T., Hanks, L., Huey, G., Lefer, B.L., and Weber, R.J. (2008) On the Volatility and Production Mechanisms of Newly Formed Nitrate and Water Soluble Organic Aerosol in Mexico City, *Atmos.Chem.Phys.*, **8**, 3761-3768
185. Barahona, D. and Nenes, A. (2008) Parameterization of Cirrus Cloud Formation in Large Scale Models: Homogeneous Nucleation., *J. Geoph.Res.*, **112**, D16206, doi:10.1029/2007JD008473
186. Moore, R.H, Ingall, E.D., Sorooshian, A., and Nenes, A. (2008) Molar Mass, Surface Tension, and Droplet Growth Kinetics of Marine Organics from Measurements of CCN Activity, *Geoph.Res.Let.*, **35**, doi:10.1029/2008GL033350
187. Ruehl, C.R., Chuang, P.Y., and Nenes, A. (2008) How quickly do cloud droplets form on atmospheric particles, *Atmos.Chem.Phys.*, **8**, 1043-1055

188. Asa-Awuku, A., Nenes, A., Sullivan, A.P., Hennigan, C.J. and Weber, R.J. (2008) Investigation of molar volume and surfactant characteristics of water-soluble organic compounds in biomass burning aerosol, *Atmos.Chem.Phys.*, **8**, 799-812
189. Asa-Awuku, A., and Nenes, A. (2007) The Effect of Solute Dissolution Kinetics on Cloud Droplet Formation: Extended Köhler theory, *J.Geoph.Res.*, **112**, D22201, doi:10.1029/2005JD006934
190. Padró, L.T., Asa-Awuku, A., Morrison, R., and A. Nenes (2007) Inferring thermodynamic properties from CCN activation experiments: single-component and binary aerosols, *Atmos.Chem.Phys.*, **7**, 5263-5274
191. Fountoukis, C. and Nenes, A. (2007) ISORROPIA II: A Computationally Efficient Aerosol Thermodynamic Equilibrium Model for $K^+ - Ca^{2+} - Mg^{2+} - NH_4^+ - Na^+ - SO_4^{2-} - NO_3^- - Cl^- - H_2O$ Aerosols, *Atmos.Chem.Phys.*, **7**, 4639–4659
192. Barahona, D. and Nenes, A. (2007) Parameterization of cloud droplet formation in large scale models: including effects of entrainment, *J.Geoph.Res.*, **112**(D16), D16206, doi:10.1029/2007JD008473
193. Sotiropoulou, R.E.P, Nenes A., Adams, P.J., and Seinfeld, J.H. (2007) Cloud condensation nuclei prediction error from application of Köhler theory: Importance for the aerosol indirect effect, *J.Geoph.Res.*, **112**(D12), D12202, doi:10.1029/2006JD007834
194. Meskhidze, N., Nenes, A., Chameides, W.L., Luo, C., Mahowald, N. (2007) Southern Ocean Productivity: Iron Fertilization From Below, *Global Biog.Cycle*, **21**(2), 10.1029/2006GB002711
195. Fountoukis, C., Nenes, A., Meskhidze, N., Bahreini, R., Brechtel, F., Conant, W.C., Jonsson, H., Murphy, S., Sorooshian, A., Varutbangkul, V., Flagan, R.C. and J.H. Seinfeld (2007) Aerosol–cloud drop concentration closure for clouds sampled during ICARTT, *J.Geoph.Res.*, **112**, D10S30, doi:10.1029/2006JD007272
196. Medina, J., Nenes, A., Sotiropoulou, R.E., Cottrell, L.D., Ziemba, L.D., Beckman, P.J., and Griffin, R.J. (2007) Cloud Condensation Nuclei (CCN) closure during the ICARTT 2004 campaign: a) effects of size-resolved composition, *J. Geoph.Res.*, **112**, D10S31, doi:10.1029/2006JD007588
197. Ervens, B., Cubison, M., Andrews, B., Feingold, G., Ogren, J.A., Jimenez, J.L., and Nenes, A. (2007) Prediction of CCN number concentration using Measurements of Aerosol Size Distributions and Composition and Light Scattering Enhancement due to Humidity, *J.Geoph.Res.*, **112**, D10S32, doi:10.1029/2006JD007426
198. Stroud, C.A., Nenes, A., Jimenez, J.L, DeCarlo, P.F., Huffman, J.A., Bruintjes, R., Nemitz, E., Delia, A.E., Toohey, D.W., Guenther, A.B., Nandi, S., (2007) Cloud Activating Properties of Aerosol Observed during CELTIC, *J.Atmos.Sci.*, **64**, 441-459
199. Meskhidze, N., R. E. P. Sotiropoulou, A. Nenes, J. Kouatchou, B. Das, and J. M. Rodriguez (2007) Aerosol-cloud interactions in the NASA GMI: Model development and indirect forcing assessments, *Atmos.Chem.Phys.Disc.*, **7**, 14295-14330
200. Moya, M., C. Fountoukis, A. Nenes, E. Matias and M. Grutter (2007) Predicting diurnal variability of fine inorganic aerosols and their gas-phase precursors near downtown Mexico City, *Atmos. Chem. Phys. Disc.*, **7**, 11257-11294
201. Padró, L.T. and Nenes, A. (2007) Cloud droplet activation: solubility revisited, *Atmos. Chem. Phys. Disc.*, **7**, 2325-2355
202. Meskhidze, N. and Nenes, A., (2006) Phytoplankton and Cloudiness in the Southern Ocean, *Science*, **314**, 1419-1423
203. J.B. Nowak, L.G. Huey, A.G. Russell, J. A. Neuman, D. Orsini, S.J. Sjostedt, A.P. Sullivan, D.J. Tanner, R.J. Weber, A. Nenes, E. Edgerton, and F.C. Fehsenfeld, (2006) Analysis of Urban Gas-phase Ammonia Measurements from the 2002 Atlanta Aerosol Nucleation and Real-time Characterization Experiment (ANARChE), *J.Geoph.Res.*, **111**, D17308, doi:10.1029/2006JD007113.
204. Lance, S., Medina, J., Smith, J.N., Nenes, A., (2006) Mapping the Operation of the DMT Continuous Flow CCN Counter, *Aeros.Sci.Tech.*, **40**, 242–254
205. Zhu, L., Nenes, A., Wine, P., Nicovich, J.M., (2006) Effects of Aqueous Organo-Sulfur Chemistry on Speciation and Particulate MS-to-NSS Ratios, *J.Geoph.Res.*, **111**, D05316, doi:10.1029/2005JD006326
206. Sotiropoulou, R.E.P, Medina, J., Nenes A., (2006) CCN predictions: is theory sufficient for assessments of the indirect effect?, *Geoph.Res.Lett.*, **33**, L05816, doi:10.1029/2005GL025148

207. Barth, M., McFadden, J., Sun, J., Wiedinmyer, C., Chuang, P., Collins, D., Griffin, R., Hannigan, M., Karl, T., Kim, S., Lasher-Trapp, S., Levis, S., Litvak, M., Mahowald, N., Moore, K., Nandi, S., Nemitz, E., Nenes, A., Potosnak, M., Raymond, T.M., Smith, J., Stroud, C. and Still, C., (2005) The coupling between land ecosystems and the atmospheric hydrological cycle, *BAMS*, **86**(12), 1738-1742
208. Meskhidze, N., Nenes, A., Conant, W., and Seinfeld, J.H. (2005) Evaluation of a new cloud droplet activation parameterization with in-situ data from CRYSTAL-FACE and CSTRIFE, *J.Geoph.Res*, **110**, D16202, doi:10.1029/2004JD005703
209. Fountoukis, C., and Nenes, A. (2005) Continued Development of a Cloud Droplet Formation Parameterization for Global Climate Models, *J.Geoph.Res.*, **110**, D11212, doi:10.1029/2004JD005591
210. Roberts, G., and Nenes, A. (2005) A Continuous-Flow Longitudinal Thermal-Gradient CCN Chamber for Atmospheric Measurements, *Aeros.Sci.Tech.*, **39**, 206–221, doi:10.1080/027868290913988
211. M. Kanakidou, J. H. Seinfeld, S. Pandis, I. Barnes, F. J. Dentener, M. C. Facchini, R. van Dingenen, B. Ervens, A. Nenes, C. J. Nielsen, E. Swietlicki, J.P. Putaud, Y. Balkanski, C. E., Lund Myhre, K. Tsigaridis, E. Vignatti, E. Stephanou, J. Wilson (2005) Organic aerosol and climate modelling: A review, *Atmos.Chem.Phys.*, 1053-1123, SRef-ID: 1680-7324/acp/2005-5-1053
212. Yu, S., Dennis, R., Roselle, S., Nenes, A., Walker, J.T., Eder, B., Schere, K., Swall, J. and Robarge, W. (2005) An assessment of the ability of 3-D air quality models with current thermodynamic equilibrium models to predict aerosol NO₃, *J.Geoph.Res.*, **110**, D07S13, doi:10.1029/2004JD004718
213. Meskhidze, N, Chameides, W., Nenes, A. (2005) Dust and pollution: A Recipe for Ocean Fertilization?, *J.Geoph.Res.*, **110**, D03301, doi:10.1029/2004JD005082
214. Lance, S., Nenes, A. and Rissman, T. (2004) Chemical and Dynamical Effects on Cloud Droplet Number: Implications for Current and Future Estimates of Aerosol Indirect Forcing, *J.Geoph.Res.*, **109**, D22208, doi:10.1029/2004JD004596
215. Gao, S., Nga L. N., Keywood, M., Varutbangkul, V., Bahreini, R., Nenes, A., He, J., Kee Y., Beauchamp, J.L., Hodyss, R.P., Flagan, R.C., Seinfeld, J.H. (2004) Particle Phase Acidity and Oligomer Formation in Secondary Organic Aerosol, *Env.Sci.Tech.*, **38**, 6582-6589, doi: 10.1021/es049125k
216. Medina, J. and Nenes, A. (2004) Effects of Film Forming Compounds on the growth of Giant CCN: Implications for cloud microphysics and the aerosol indirect effect., *J.Geoph.Res.*, **109**, D20207, doi:10.1029/2004JD004666
217. Conant, W., Vanreken, T., Rissman, T., Varutbangkul, V., Jimenez, J., Delia, A., Bahreini, R., Roberts, G., Nenes, A., Jonsson, H., Flagan, R.C., Seinfeld, J.H. (2004) Aerosol-cloud drop concentration closure in warm cumulus, *J.Geoph.Res.*, **109**, D13204, doi:10.1029/2003JD004324
218. VanReken T., Nenes, A., Flagan, R.C. and Seinfeld, J.H. (2004) Design for a New Cloud Condensation Nucleus (CCN) Spectrometer, *Aeros.Sci.Tech.*, **38**, 639-654
219. Rissman, T., Nenes, A. and Seinfeld, J.H. (2004) Chemical amplification (or dampening) of the Twomey effect: Conditions derived from droplet activation theory, *J.Atmos.Sci.*, **61**(8), 919-930
220. Zhang, Y., Pun, B., Vijayaraghavan, K., Wu, S., Seigneur, C., Pandis, S., Jacobson, M., Nenes, A., Seinfeld, J.H. (2004) Development and Application of the Model of Aerosol Dynamics, Reaction, Ionization and Dissolution (MADRID), *J.Geoph.Res.*, **109**, doi: 10.1029/2003JD003501
221. Meskhidze, N, Chameides, W., Nenes, A., and Chen, G (2003) Iron Mobilization in Mineral Dust: Can Anthropogenic SO₂ Emissions Affect Ocean Productivity?, *Geoph.Res.Let.*, **30**(21), 2085, doi:10.1029/2003GL018035
222. Nenes, A. and Seinfeld, J.H. (2003) Parameterization of cloud droplet formation in global climate models, *J.Geoph.Res.*, **108**, 4415, doi: 10.1029/2002JD002911
223. Makar, P.A., Bouchet, V.S., and Nenes, A. (2003) Inorganic Chemistry Calculations using HETV – A Vectorized Solver for the SO₄-NO₃-NH₄ System Based on the ISORROPIA Algorithms, *Atmos.Env.*, **37**, 2279-2294
224. Kreidenweis, S.M., Walcek, C.J., Feingold, G., Gong, W., Jacobson, M.Z., Kim, C., Liu, X, Penner, J.E., Nenes, A. and Seinfeld, J.H. (2003) Modification of Aerosol Mass and Size Distribution Due to Aqueous Phase SO₂ Oxidation in Clouds: Comparisons of Several Models. *J.Geoph.Res.*, **108**, 4213, doi:10.1029/2002JD002697
225. Roberts, G., Nenes, A., Andreae, M.O., Seinfeld, J.H. (2003) Impact of CCN Spectra on Cloud Properties in the Amazon Basin, *J. Geophys. Res.*, **108**, doi: 10.1029/2001JD000985.

226. Nenes, A., Conant, W., and Seinfeld, J.H. (2002) Black Carbon Radiative Heating Effects on Cloud Microphysics and Implications for the Aerosol Indirect Effect: 2. Cloud Microphysics, *J. Geophys. Res.*, **107**, doi: 10.1029/2002JD002101.
227. Conant, W., Nenes, A., and Seinfeld, J.H. (2002) Black Carbon Radiative Heating Effects on Cloud Microphysics and Implications for the Aerosol Indirect Effect: 1. Extended Köhler theory, *J. Geophys. Res.*, **107**, doi: 10.1029/2002JD002094.
228. Nenes, A., Charlson, R. J., Facchini, M. C., Kulmala, M., Laaksonen, A., Seinfeld, J.H. (2002) Can Chemical Effects on Cloud Droplet Number Rival the First Indirect Effect?, *Geoph.Res.Lett.*, **29**(17), 1848, doi: 10.1029/2002GL015295
229. R. J. Charlson, J. H. Seinfeld, A. Nenes, M. Kulmala, A. Laaksonen, M. C. Facchini (2001) Reshaping the Theory of Cloud Formation, *Science*, **292**, 2025-2026
230. Nenes, A., Chuang, P.Y., Flagan, R., and Seinfeld, J.H. (2001) A Theoretical Analysis of Cloud Condensation Nucleus (CCN) Instruments, *J. Geophys. Res.*, 106 (D4), **3449-3474**
231. Nenes, A., Ghan, S., Abdul-Razzak, H., Chuang, P.Y., Seinfeld, J.H. (2001) Kinetic Limitations on Cloud Droplet Formation and Impact on Cloud Albedo, *Tellus*, **53B**, 133-149
232. Collins, D.R., Nenes, A., Flagan, R.C., and Seinfeld, J.H. (2000) The Scanning Flow DMA, *J. Aerosol. Sci.*, **31**, 1129-1144
233. Chuang, P.Y., Nenes, A., Smith, J.N., Flagan, R., and Seinfeld, J.H. (2000) Design of a CCN Spectrometer for Airborne Measurement, *J. Atmosph. Ocean. Tech.*, **17**, 1005-1019
234. Pilinis, C., Capaldo, K.P., Nenes, A., Pandis, S.N. (2000) MADM - A New Multicomponent Aerosol Dynamics Model, *Aerosol Sci. Tech.*, **32**(5), 482-502
235. Katoshevski, D., Nenes, A., Seinfeld, J.H. (1999) A Study of Processes that Govern the Maintenance of Aerosols in the Marine Boundary Layer, *J. Aeros. Sci.*, **30**, 503-532
236. Nenes, A., Pilinis, C., Pandis, S.N. (1999) Continued Development and Testing of a New Thermodynamic Aerosol Module for Urban and Regional Air Quality Models, *Atmos. Environ.*, **33**, 1553-1560
237. Nenes, A., Pilinis, C., Pandis, S.N. (1998) ISORROPIA: A New Thermodynamic Model for Multiphase Multicomponent Inorganic Aerosols, *Aquat. Geochem.*, **4**, 123-152
238. West, J.J., Pilinis, C., Nenes, A., Pandis, S.N. (1998) Marginal Direct Climate Forcing by Atmospheric Aerosols, *Atmos. Environ.*, **32** (14-15), 2531-2542
239. Koloutsou-Vakakis, S., Rood, M.J., Nenes, A., Pilinis, C. (1998) Modeling of Aerosol Properties Related to Direct Climate Forcing, *J. Geophys. Res.*, **103** (D14), 17009-17032
240. Nenes, A., Assimacopoulos, D., Markatos, N., Mitsoulis, E. (1996) Simulation of Airlift Pumps for Deep Water Wells, *Can. J. Chem. Eng.*, **74**, 448-456
241. Nenes, A., Assimacopoulos, D., Markatos, N., Karidakis, G. (1996) Simulation of Airlift Pumps for Moderate-Depth Water Wells, *Technika Chronika*, **14**, 1-20

Refereed Publications – In review

1. Laaksonen, A., Malila, J. and Nenes, A., Unifying the heterogeneous nucleation of water and ice
2. Guo, H., Nenes, A., Weber, R.J., The underappreciated role of nonvolatile cations on aerosol ammonium-sulfate molar ratios, *Atmos. Chem. Phys.*
3. Bougiatioti, A., Nenes, A., Paraskevopoulou, D., Fourtziou, L., Stavroulas, I., Liakakou, E., Myriokefalitakis, S., Daskalakis, N., Weber, R., Kanakidou, M., Gerasopoulos, E., and Mihalopoulos, N., The unappreciated effects of biomass burning on fine aerosol acidity
4. Waters, S., Purdue, S., DeLeon, N., Armstrong, R., Detres, Y., Nenes, A., and Konstantinidis, K. T., Metagenomic Investigation of African Dust Events in the Caribbean, *Appl. Env. Microb.*
5. Vasilakos, P., Kim, Y.H., Pierce, J., Yiacoymi, S., Tsouris, C., and Nenes, A., Studying the Impact of Radioactive Charging on the Microphysical Evolution and Transport of Radioactive Aerosols with the TOMAS-RC v1 framework, *J. Env. Rad.*
6. Vasilakos, P., Russell, A., Weber, R., and Nenes, A., Understanding nitrate formation in a world with less sulfate, *Env. Sci. Tech.*
7. Kostenidou, E., Karnezi, E., Hite, J. R., Bougiatioti, A., Cerully, K., Xu, L., Ng, N. L., Nenes, A. and Pandis, S. N., Organic aerosol in the summertime Southeastern United States: Components and their link to volatility distribution, oxidation state and hygroscopicity, *Atmos. Chem. Phys.*

8. Wang, H., Ding, J., Xu, J., Wen, J., Han, J., Wang, K., Shi, G., Feng, Y., Ivey, C.E., Wang, Y., Nenes, A., and Russell, A.G., Effects of Aerosol Acidity, Gaseous Precursors, and Meteorological Conditions on the Formation of Secondary Inorganic Aerosol in an Arid Atmosphere, *Atmos.Chem.Phys.*
9. Liu, J., Russell, L.M., Ruggeri, G., Takahama, S., Claflin, M.S., Ziemann, P.J., Pye, H.O.T., Murphy, B.N., Xu, L., Ng, N.L., McKinney, K.A., Budisulistiorini, S.H., Bertram, T.H., Nenes, A. and Surratt, J.D., Regional Similarities and NO_x-related Increases in Biogenic Secondary Organic Aerosol in Summertime Southeastern U.S., *J.Geoph.Res.*
10. Qin, M., Hu, Y., Wang, X., Vasilakos, P., Boyd, C.M., Xu, L., Song, Y., Ng, N.L., Nenes, A., Russell, A.G., Modeling biogenic secondary organic aerosol (BSOA) formation from monoterpene reactions with NO₃: A case study of the SOAS campaign using CMAQ, *Atmos.Env.*

Other Publications:

- Roberts, G., and Nenes, A., "Stream-Wise Thermal Gradient Cloud Condensation Nuclei Chamber.", US Patent No. 7,656,510 (issued 2 February, 2010).
- Nenes, A. and Moore, R., "Scanning Flow CCN Analysis (SFCA)", US Provisional Patent No. 61/242,601 (filed September 15, 2009).

PhD students graduated: Fountoukis, Christos (2007); Lance, Sara (2007); Asa-Awuku, Akua-Asabea (2008); Hsieh, Wei-Chun (2009); Padro, Luz-Tereza (2009); Barahona, Donifan (2010); Kumar, Prashant (2011); Moore, Richard (2011); Lathem, Terry (2012); Capps, Shannon (2012); Morales Betancourt, Ricardo (2013); Cerully, Kate (2013); Liu, Peng (2015); Lin, Jack (2016); Sullivan, Sylvia (2017); Vasilakos, Petros (2018)

MSc students graduated: Williams, Robyn (2005); Sheyko, Benjamin (2014); Negron, Arnaldo (2016); Purdue, Sara (2016), Forrister, Haviland (2017)

Membership in Professional and Honor Societies

American Chemical Society, American Institute of Chemical Engineers, American Meteorological Society, American Association for Aerosol Research, American Geophysical Union, European Geophysical Union, Hellenic Association for Aerosol Research, Earth System Scholars Forum, Technical Chamber of Engineers (Greece)

Committees - Service

- | | |
|------------|---|
| 2018-pres. | Science Board, Greek Institute for Research and Development |
| 2013-pres. | Committee on Nucleation and Atmospheric Aerosols, Member. |
| 2014-pres. | BACCHUS Scientific Advisory Board |
| 2004-pres. | Editor, Atmospheric Chemistry and Physics |
| 2017-pres. | Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) – Working Group 38 (Atmospheric input of chemicals to the ocean) |
| 2014-2016 | National Research Council, Committee on the Future of Atmospheric Chemistry Research, National Academy of Sciences |
| 2012-2016 | Secretary of Aerosols & Clouds, Atmospheric Sciences, American Geophysical Union. |
| 2018- | President of Atmospheric Sciences Section, European Geophysical Union. |
| 2014-2017 | Board of Directors, American Association for Aerosol Research |
| 2014 | Conference Chair, American Association for Aerosol Research Annual Conference |
| 2011 | Conference Chair, International Aerosol Modeling Algorithms (IAMA) Conference |
| 2013 | Conference co-Chair, International Aerosol Modeling Algorithms (IAMA) Conference |
| 2011-2015 | Conference Organization Committee, American Association for Aerosol Research |
| 2009 | Student Liason Chair, American Association for Aerosol Research |
| 2009 | Tutorial Chair, American Association for Aerosol Research |
| 2010 | Education Outreach Chair, American Association for Aerosol Research |
| 2006-2009 | Student Liason Committee, American Association for Aerosol Research |
| 2007-2010 | Education Outreach Committee, American Association for Aerosol Research |

Invited Seminars

- Dow Chemical Company Keynote Address, 39th Annual ChEGSA Symposium, Carnegie Mellon University, Pittsburgh, PA, 26 October, 2017
- Environmental Science & Engineering, Harvard University, Boston, MA, 15 September, 2017

Department of Chemistry, University of Crete, Heraklion, Greece, 19 July, 2017
 Plenary Lecture, 28th International Lidar and Radar Conference, Bucharest, Romania, 26 June 2017
 Department of Environmental Engineering, Ecole Polytechnique Federale de Lausanne, Switzerland, 24 June 2017
 National Observatory of Athens, Palea Penteli, Greece, 8 June 2017
 Summer School Lecturer on Atmospheric Aerosols and Clouds, Hellenic Association for Aerosol Research, Pylos, Greece, May 24, 2017
 GESAMP Workshop on the impacts of changing Atmospheric and Oceanic Acidity, Norwich, UK, February 27, 2017
 Meteorological Institute, Stockholm University, Sweden, January 12, 2017
 Institute for Atmospheric and Climate Science, ETH Zurich, January 9, 2017
 Tutorial Speaker, American Association for Aerosol Research, Portland, OR, October 25, 2016.
 35th ITM on Air Pollution Modelling and Applications, Chania, Greece, October 3, 2016
 Department of Physics, Aristotelian University of Thessaloniki, Greece, June 2, 2016
 Hellenic Association for Aerosol Research, Annual Assembly, Pylos, Greece, May 16, 2016
 European Geophysical Union, General Assembly, Vienna, Austria, April 20, 2016
 WMO workshop on reactive nitrogen deposition, York, UK, April 14, 2016
 ESA-ACTRIS General Assembly, Rome, Italy, March 2, 2016
 University of West Macedonia, Department of Env. Engineering, Kozani, Greece, January 19, 2016
 Stockholm University, Department of Meteorology, Stockholm, Sweden, January 12, 2016
 University of Patras, Department of Chemical Engineering, Patras, Greece, December 15, 2015
 University of Athens, Department of Physics, Athens, Greece, December 11, 2015
 Secondary Ice Multiplication Symposium, Manchester, UK, November 3, 2015
 American Association of Aerosol Research, Annual Assembly, Minneapolis, MN, October 14, 2015
 Department of Chemical Engineering, University of California, Berkeley, CA, October 13, 2015
 Nutrient Cycling on the Modern and Ancient Earth, Plenary Speaker, University of Leeds, July 7, 2015
 National Academy of Sciences, Sackler Symposium on Improving Our Fundamental Understanding of the Role of Aerosol-Cloud Interactions in the Climate System, Irvine, CA, June 23, 2015
 ENV-VISION Conference, Crystal City, VA, May 14, 2015
 Climate@Emory Day of Scholarship, Atlanta, GA, April 24, 2015
 NOSA-FAAR Annual Assembly Plenary Speaker, Kuopio, Finland, March 12, 2015.
 Electrical Power Research Institute, Env.Advisory Program Mtg, Charleston, SC, February 10, 2015.
 Institute for Atmospheric and Climate Science in Zurich, Switzerland, January 14, 2015.
 European Research Council, Brussels, Belgium, November 18, 2014.
 Initial Training for Atmospheric Remote Sensing (ITARS Summer School), September 12, 2014.
 Department of Chemical Engineering, National Technical University of Athens, Greece, June 10, 2014.
 Plenary Talk, 12th International Conference on Meteorology, Climatology and Atmospheric Physics, Heraklion, Crete, Greece, May 29, 2014.
 Vaughan Lectureship in Chemical Engineering, Division of Chemistry and Chemical Engineering, California Institute of Technology, Pasadena, CA, May 8, 2014
 Physical Chemistry seminar, Department of Chemistry, University of Georgia, Athens, GA, April 8, 2014
 American Meteorological Society, Annual Assembly, Atlanta, GA, February 7, 2014
 NOAA Geophysical Research Laboratory, Princeton University, Princeton, NJ, December 5, 2013
 NSF Workshop on the hydrometeorological implications of extensive urbanization, Department of Civil and Environmental Engineering, Princeton University, December 3, 2013
 Tutorial Speaker, American Association for Aerosol Research, Portland, OR, September 30, 2013
 Initial Training for Atmospheric Remote Sensing (ITARS Summer School), September 24, 2013.
 Goldschmidt Conference, Florence, Italy, August 30, 2013.
 Pacific Northwest National Laboratory, Global Change Frontiers Seminar, Richland, WA, August 1, 2013
 NASA Headquarters, Brownbag Seminar Series, Washington DC, March 21, 2013.
 Environmental Sciences PhD program, Ball State University, Muncie, IN, March 12, 2013.
 IGAC Open Science Conference "Atmospheric Chemistry in the Anthropocene", Beijing, China, September 20, 2012
 Gordon Research Conference on Biogenic Hydrocarbons & the Atmosphere, Lewiston, ME, June 27, 2012.
 Alpine Summer School on Climate, Aerosols and the Cryosphere, Valsavarenche, Italy, June 20-29, 2012.

7th Chemical Engineering Conference for Collaborative Research in Eastern Mediterranean Countries, Corfu, Greece, April 30, 2012.

84th Meeting of the Petroleum Environmental Research Forum, Bartlesville, OK, November 10, 2011.

International Aerosol Modeling Algorithms Conference, Davis, CA, December 2, 2011.

American Chemical Society, Fall SERMACS Assembly, Richmond, VI, October 26, 2011.

American Institute of Chemical Engineers, Annual Assembly, Minneapolis, MN, October 17, 2011.

Tutorial Speaker, American Association for Aerosol Research, Orlando, FL, October 4, 2011.

American Chemical Society, Fall General Assembly, Denver, CO, August 30, 2011.

Goldschmidt Conference, Prague Czech Republic, August 16, 2011.

Karlsruhe Institute of Technology, Germany, August 12, 2011.

Department of Physics, University of Athens, Greece, June 23, 2011.

Demokritos National Center of Scientific Research, Athens, Greece, June 24, 2011.

Plenary Lecture, DOE ASR Annual Science Meeting, San Antonio, TX, March 31, 2011.

American Geophysical Union, Fall Meeting, San Francisco, CA, December 15, 2010.

Department of Physics, University of Oxford, United Kingdom, November 23, 2010.

Institute of Climate and Atmospheric Science, University of Leeds, United Kingdom, November 17, 2010.

School of the Environment, University of Leeds, United Kingdom, November 15, 2010.

Tutorial Speaker, American Association for Aerosol Research, Portland, OR, October 25, 2010.

Earth and Atmospheric Sciences, Georgia Institute of Technology, Atlanta, GA, September 17, 2010.

Telluride Workshop on Cloud Physics, Telluride, CO, 2010.

Jet Propulsion Laboratory, Pasadena, CA, May 6, 2010.

Dean's Distinguished Lecture, College of Engineering, Columbia University, April 20, 2010.

Forum on Aerosols and Climate, Yale University, March 26, 2010.

American Meteorological Society, January 19, 2010.

International Aerosol Modeling Algorithms Conference, Davis, CA, December 12, 2009.

International Aerosol Modeling Algorithms Conference, Davis, CA, December 11, 2009.

University of Kuopio, Finland, Department of Physics, December 3, 2009.

University of Copenhagen, Denmark, Department of Chemistry, November 25, 2009.

National Academy of Engineering, Japan-America Frontiers of Engineering, Irvine, 11 November, 2009.

American Association for Aerosol Research, Minneapolis, MN, October 25, 2009.

Georgia Air Policy Symposium, Atlanta, GA, August 4, 2009.

Goldschmidt Conference, Davos Switzerland, 26 June 2009.

Georgia Institute of Technology, School of Chemical and Biomolecular Engineering, 2 April, 2009.

University of Manchester, UK, School of Earth, Atmospheric & Environmental Sciences, 8 January, 2009.

Columbia University, Department of Chemical Engineering, 25 November, 2008.

3rd International Dust Workshop, Leipzig, Germany, 17 September, 2008.

Telluride Summer Research Workshop on Organic Particles in the Atmosphere: Formation, Properties, Processing, and Impact, Telluride, CO, 5 August, 2008.

American Physical Society, Annual Meeting, New Orleans, LA, 13 March 2008.

Department of Chemical Engineering, Bucknell University, Lewisburgh, PA, March 25, 2008.

NASA Ames Research Center, Moffett Field, CA, February 27, 2008.

Atmospheric Sciences Center Seminar, UC-Berkeley, Berkeley, CA, February 26, 2008.

American Association for the Advancement of Science, Annual Meeting, Boston, MA, 2008.

NASA CERES Workshop on aerosol-cloud interactions, Victoria, BC, Canada, November 14, 2007.

American Geophysical Union, Fall Meeting, San Francisco, CA, December 12, 2007.

International Aerosol Modeling Algorithms Conference, Davis, CA, December, 2007

Tutorial Speaker, American Association for Aerosol Research, Reno, NV, September, 2007.

Gordon Research Conference in Atmospheric Chemistry, Big Sky, MT, August 2007

School of Earth and Atmospheric Sciences, Georgia Institute of Technology, GA, August, 2007

Gordon Research Conference in Radiation in Climate, Colby Sawyer College, NH, August 2007

Institute of Chemical Engineering-University of Patras, Patras, Greece, June 2007

NASA Goddard Institute of Space Studies, New York, May, 2007.

INTROP/ESF meeting, Heraklion, Crete, Greece, April 2007

American Chemical Society, Annual Meeting, Chicago, IL, 2007

Atmospheric Sciences Seminar, Massachusetts Institute of Technology, Boston, MA, December 18, 2006.

Southeastern Regional Meeting of the American Chemical Society, Augusta, GA, November 1, 2006.
Department of Chemical Engineering, Carnegie Mellon University, Pittsburgh, PA, October 8, 2006.
Annual Congress of the Mexican Chemical Society, Mexico City, Mexico, September 28, 2006.
Tutorial Speaker, International Aerosol Conference, Saint Paul, MN, September 10, 2006.
2nd International Conference On Global Warming And The Next Ice Age And Aerosol Workshop On
Climate Prediction Uncertainties, Santa Fe, NM, July 20, 2006.
NASA-Goddard Space Flight Center, Greenbelt, MD, April 10, 2006.
Universidad Autonoma de Aguascalientes, Aguascalientes, Mexico, March 27, 2006
American Geophysical Union, Fall Meeting, San Francisco, CA, December 7, 2005.
Department of Earth Sciences, University of California at Santa Cruz, CA, November 8, 2005.
ACD Seminar, National Center for Atmospheric Research, Boulder, CO, June 25, 2005.
NASA Jet Propulsion Laboratory, Pasadena, CA, February 18, 2005
CDSNS Colloquium, School of Mathematics, Georgia Institute of Technology, January 10, 2005.
American Geophysical Union, Fall Meeting, San Francisco, CA, December 17, 2004.
Department of Earth and Atmospheric Sciences, Harvard University, December 10, 2004.
Aspen Global Change Institute, "Aerosols and the Hydrological Cycle", 17 July 2004.
NASA-Goddard Space Flight Center, Greenbelt, MD, June 9, 2004.
Department of Chemical Engineering, National Technical University of Athens, Greece, May 13, 2004.
Department of Marine, Earth and Atmospheric Sciences, North Carolina State University, April 26, 2004.
Department of Chemistry, University of Crete, Greece, December 19, 2003.
NOAA-Aeronomy Laboratory, Boulder, CO, May 28, 2003.
NASA-Goddard Institute of Space Studies, New York City, NY, March 7, 2003.
Center for Integrated Study of the Human Dimensions of Global Change, Carnegie Mellon University,
Pittsburgh, PA, November 20, 2002.

Last updated: March 14, 2018