

Chak Keung CHAN
School of Energy and Environment
School of Energy and Environment
Visiting address:
YEUNG-G5718
Email: Chak.K.Chan@cityu.edu.hk
Phone: +852 34425593



Biography

Professor Chan obtained BSc in Chemical Engineering from the University of Texas at Austin in 1986 and PhD in Chemical Engineering from the California Institute of Technology in 1992. He is currently Dean and Chair Professor in School of Energy and Environment at City University of Hong Kong. He joined the Hong Kong University of Science and Technology (HKUST) as Assistant Professor in 1992 and rose to the rank of Professor in 2006. In 2010, he was appointed Founding Head of Division of Environment. He was Professor of Division of Environment and Professor of Chemical and Biomolecular Engineering at HKUST.

Professor Chan has over 30 years of research experience in air pollution and aerosol science. He specializes in aerosol water uptake and phase transformation, gas-aerosol interactions, the formation of secondary aerosols in the atmosphere, and laser spectroscopy of aerosols. Professor Chan received Haagen Smit Award of Atmospheric Environment in 2015, Second Prize of the State Natural Science Award in 2010, and First Prize of the Natural Science Award in 2007. He was the first winner of the Asian Young Aerosol Scientists Award. He was Science Advisor to Secretary of Environment, during his sabbatical at the HKSAR Environment Bureau in 2014. He was an Editor-in-Chief of *Atmospheric Environment* in 2008-2019.

Employment

School of Energy and Environment

City University of Hong Kong
28 Dec 2015 → present

School of Energy and Environment

City University of Hong Kong
28 Dec 2015 → present

Research outputs

Primary emissions and secondary production of organic aerosols from heated animal fats

Zhou, L., Liu, T., Yao, D., Guo, H., Cheng, C. & Chan, C. K., 10 Nov 2021, In: *Science of the Total Environment*. 794, 148638.

Emissions and Secondary Formation of Air Pollutants from Modern Heavy-Duty Trucks in Real-World Traffic—Chemical Characteristics Using On-Line Mass Spectrometry

Zhou, L., Salvador, C. M., Priestley, M., Hallquist, M., Liu, Q., Chan, C. K. & Hallquist, Å. M., 2 Nov 2021, In: *Environmental Science and Technology*. 55, 21, p. 14515–14525

Investigation into the Phase–Activity Relationship of MnO₂ Nanomaterials toward Ozone-Assisted Catalytic Oxidation of Toluene

Yang, R., Guo, Z., Cai, L., Zhu, R., Fan, Y., Zhang, Y., Han, P. & 6 others, Zhang, W., Zhu, X., Zhao, Q., Zhu, Z., Chan, C. K. & Zeng, Z., 31 Oct 2021, (Online published) In: *Small*. 2103052.

Biotechnology of Plastic Waste Degradation, Recycling, and Valorization: Current Advances and Future Perspectives

Qin, Z., Mou, J., Chao, C. Y. H., Chopra, S. S., Daoud, W., Leu, S., Ning, Z. & 7 others, Tso, C. Y., Chan, C. K., Tang, S., Hathi, Z. J., Haque, M. A., Wang, X. & Lin, C. S. K., 5 Oct 2021, In: *ChemSusChem*. 14, 19, p. 4103-4114 Scopus citations : 2

Biotechnology of Plastic Waste Degradation, Recycling, and Valorization: Current Advances and Future Perspectives

Qin, Z., Mou, J., Chao, C. Y. H., Chopra, S. S., Daoud, W., Leu, S., Ning, Z. & 7 others, Tso, C. Y., Chan, C. K., Tang, S., Hathi, Z. J., Haque, M. A., Wang, X. & Lin, C. S. K., 5 Oct 2021, In: *ChemSusChem*. 14, 19, p. 3981

Estimating organic aerosol emissions from cooking in winter over the Pearl River Delta region, China

Xing, L., Fu, T., Liu, T., Qin, Y., Zhou, L., Chan, C. K., Guo, H. & 2 others, Yao, D. & Duan, K., 1 Jan 2022, In: Environmental Pollution. 292, Part A, 118266.

Disentangling the contribution of the transboundary out-flow from the Asian continent to Tokyo, Japan

Shimada, K., Mizukoshi, M., Chan, C. K., Kim, Y. P., Lin, N., Matsuda, K., Itahashi, S. & 3 others, Nakashima, Y., Kato, S. & Hatakeyama, S., 1 Oct 2021, In: Environmental Pollution. 286, 117280.

Long-term measurements of carbonaceous aerosol at Cape Hedo, Okinawa, Japan: Effects of changes in emissions in East Asia

Shimada, K., Takami, A., Ishida, T., Taniguchi, Y., Hasegawa, S., Chan, C. K., Kim, Y. P. & 2 others, Lin, N. & Hatakeyama, S., Sep 2021, In: Aerosol and Air Quality Research. 21, 9, 2000505.

Fast-track Negative Pressure Isolation System for Respiratory Infectious Disease Control

CHAN, C. K., DENG, W., LING, C., WANG, S. & WANG, Z., 6 Jul 2021, (Accepted/In press/Filed) Priority No. 63/218,512

Nitrate Photolysis in Mixed Sucrose-Nitrate-Sulfate Particles at Different Relative Humidities

Liang, Z., Zhang, R., Gen, M., Chu, Y. & Chan, C. K., 6 May 2021, In: Journal of Physical Chemistry A. 125, 17, p. 3739-3747

Production of Formate via Oxidation of Glyoxal Promoted by Particulate Nitrate Photolysis

Zhang, R., Gen, M., Fu, T. & Chan, C. K., 4 May 2021, In: Environmental Science and Technology. 55, 9, p. 5711–5720
Scopus citations: 2

Characteristics, sources and evolution processes of atmospheric organic aerosols at a roadside site in Hong Kong

Yao, D., Lyu, X., Lu, H., Zeng, L., Liu, T., Chan, C. K. & Guo, H., 1 May 2021, In: Atmospheric Environment. 252, 118298.
Scopus citations: 4

General discussion: Sources, sinks and mitigation methods; Evaluation of health impacts

Rami Alfarra, M., Bloss, W. J., Chan, C., Chen, Y., Gani, S., Han, Y., Harrison, R. M. & 10 others, Khan, M. A. H., Kim, S., Lee, J., Pfrang, C., Pöschl, U., Shi, Z., Styring, P., van Pinxteren, D., Wallington, T. J. & Zhu, T., 1 Mar 2021, In: Faraday Discussions. 226, p. 607–616

General discussion: Aerosol formation and growth; VOC sources and secondary organic aerosols

Alam, M. S., Bloss, W., Brean, J., Brimblecombe, P., Chan, C., Chen, Y., Coe, H. & 21 others, Fu, P., Gani, S., Hamilton, J., Harrison, R., Jiang, J., Kulmala, M., Lugon, L., McFiggans, G., Mehra, A., Milsom, A., Nelson, B., Pfrang, C., Sartelet, K., Shi, Z., Srivastava, D., Stewart, G., Styring, P., Su, H., van Pinxteren, D., Velasco, E. & Yu, J. Z., 1 Mar 2021, In: Faraday Discussions. 226, p. 479-501
Scopus citations: 1

Concluding remarks: Faraday Discussion on air quality in megacities

Gen, M., Zhou, L., Zhang, R. & Chan, C. K., Mar 2021, In: Faraday Discussions. 226, p. 617-628

Single particle diversity and mixing state of carbonaceous aerosols in Guangzhou, China

Cheng, C., Chan, C. K., Lee, B. P., Gen, M., Li, M., Yang, S., Hao, F. & 8 others, Wu, C., Cheng, P., Wu, D., Li, L., Huang, Z., Gao, W., Fu, Z. & Zhou, Z., 1 Feb 2021, In: Science of the Total Environment. 754, 142182.
Scopus citations: 1

Sources and formation of nucleation mode particles in remote tropical marine atmospheres over the South China Sea and the Northwest Pacific Ocean

Shen, Y., Wang, J., Gao, Y., Chan, C. K., Zhu, Y., Gao, H., Petäjä, T. & 1 others, Yao, X., 15 Sep 2020, In: Science of the Total Environment. 735, 13 p., 139302.
Scopus citations: 4

Contribution of Particulate Nitrate Photolysis to Heterogeneous Sulfate Formation for Winter Haze in China

Zheng, H., Song, S., Sarwar, G., Gen, M., Wang, S., Ding, D., Chang, X. & 7 others, Zhang, S., Xing, J., Sun, Y., Ji, D., Chan, C. K., Gao, J. & McElroy, M. B., 8 Sep 2020, In: Environmental Science & Technology Letters. 7, 9, p. 632-638
Scopus citations: 15

Multiphase Photochemistry of Iron-Chloride Containing Particles as a Source of Aqueous Chlorine Radicals and Its Effect on Sulfate Production

Gen, M., Zhang, R., Li, Y. & Chan, C. K., 18 Aug 2020, In: Environmental Science & Technology. 54, 16, p. 9862-9871
Scopus citations: 2

Relative Humidity History Affects Hygroscopicity of Mixed Particles of Glyoxal and Reduced Nitrogenous Species

Chen, X., Chu, Y., Lee, A. K. Y., Gen, M., Kasthuriarachchi, N. Y., Chan, C. K. & Li, Y. J., 16 Jun 2020, In: Environmental Science & Technology. 54, 12, p. 7097-7106
Scopus citations: 3

Effects of pretreatment temperature on the analysis of size-fractionated aerosol particles using ToF-SIMS

Li, J., Xie, W., Weng, L., Chan, C. K. & Chan, C., May 2020, In: Surface and Interface Analysis. 52, 5, p. 264-271

Reconciling Measurement and Prediction of Free and Solvated Water in Solution

Wexler, A. S., Patel, K., Gen, M. & Chan, C. K., 21 Apr 2020, In: ACS Omega. 5, 15, p. 8754–8765
Scopus citations: 1

Enhanced Sulfate Production by Nitrate Photolysis in the Presence of Halide Ions in Atmospheric Particles

Zhang, R., Gen, M., Huang, D., Li, Y. & Chan, C. K., 7 Apr 2020, In: Environmental Science & Technology. 54, 7, p. 3831-3839
Scopus citations: 11

Cleaning City Skies

Kurinji, S., Chan, C. K., Selin, N., Kandlikar, M., Pachauri, S., Harrison, R., Qin, Y. & 5 others, Lewis, A., Dolsak, N., Prakash, A., Badami, M. G. & Parrish, D., 21 Feb 2020, In: One Earth. 2, 2, p. 113-116

Source apportionment of secondary organic aerosols in the Pearl River Delta region: Contribution from the oxidation of semi-volatile and intermediate volatility primary organic aerosols

Yao, T., Li, Y., Gao, J., Fung, J. C., Wang, S., Li, Y., Chan, C. K. & 1 others, Lau, A. K. H., 1 Feb 2020, In: Atmospheric Environment. 222, 117111.
Scopus citations: 5

Application of SERS on the chemical speciation of individual Aitken mode particles after condensational growth

Kunihisa, R., Iwata, A., Gen, M., Chan, C. K. & Matsuki, A., 2020, In: Aerosol Science and Technology. 54, 7, p. 826-836
Scopus citations: 1

A transition of atmospheric emissions of particles and gases from on-road heavy-duty trucks

Zhou, L., Hallquist, Å. M., Hallquist, M., Salvador, C. M., Gaita, S. M., Sjödin, Å., Jerksjö, M. & 6 others, Salberg, H., Wängberg, I., Mellqvist, J., Liu, Q., Lee, B. P. & Chan, C. K., 2020, In: Atmospheric Chemistry and Physics. 20, 3, p. 1701-1722
Scopus citations: 8

Differing toxicity of ambient particulate matter (PM) in global cities

Li, J., Chen, H., Li, X., Wang, M., Zhang, X., Cao, J., Shen, F. & 10 others, Wu, Y., Xu, S., Fan, H., Da, G., Huang, R., Wang, J., Chan, C. K., De Jesus, A. L., Morawska, L. & Yao, M., Sep 2019, In: Atmospheric Environment. 212, p. 305-315
Scopus citations: 25

Heterogeneous Oxidation of SO₂ in Sulfate Production during Nitrate Photolysis at 300 nm: Effect of pH, Relative Humidity, Irradiation Intensity, and the Presence of Organic Compounds

Gen, M., Zhang, R., Huang, D. D., Li, Y. & Chan, C. K., 6 Aug 2019, In: Environmental Science and Technology. 53, 15, p. 8757-8766
Scopus citations: 29

Effects of Phase State and Phase Separation on Dimethylamine Uptake of Ammonium Sulfate and Ammonium Sulfate-Sucrose Mixed Particles

Derieux, W. W., Lakey, P. S. J., Chu, Y., Chan, C. K., Glicker, H. S., Smith, J. N., Zuend, A. & 1 others, Shiraiwa, M., 18 Jul 2019, In: ACS Earth and Space Chemistry. 3, 7, p. 1268-1278
Scopus citations: 4

Roadside assessment of a modern city bus fleet: Gaseous and particle emissions

Liu, Q., Hallquist, Å. M., Fallgren, H., Jerksjö, M., Jutterström, S., Salberg, H., Hallquist, M. & 6 others, Le Breton, M., Pei, X., Pathak, R. K., Liu, T., Lee, B. & Chan, C. K., Jul 2019, In: Atmospheric Environment: X. 3, 100044.
Scopus citations: 12

Characterization of Aerosol Aging Potentials at Suburban Sites in Northern and Southern China Utilizing a Potential Aerosol Mass (Go:PAM) Reactor and an Aerosol Mass Spectrometer

Li, J., Liu, Q., Li, Y., Liu, T., Huang, D., Zheng, J., Zhu, W. & 11 others, Hu, M., Wu, Y., Lou, S., Hallquist, Å. M., Hallquist, M., Chan, C. K., Canonaco, F., Prévôt, A. S. H., Fung, J. C. H., Lau, A. K. H. & Yu, J. Z., 27 May 2019, In: *Journal of Geophysical Research: Atmospheres*. 124, 10, p. 5629-5649Scopus citations: 14

Effect of Ozone Concentration and Relative Humidity on the Heterogeneous Oxidation of Linoleic Acid Particles by Ozone: An Insight into the Interchangeability of Ozone Concentration and Time

Chu, Y., Cheng, T. F., Gen, M., Chan, C. K., Lee, A. K. Y. & Chan, M. N., 16 May 2019, In: *ACS Earth and Space Chemistry*. 3, 5, p. 779-788Scopus citations: 5

Reactive Uptake of Glyoxal by Methylammonium-Containing Salts as a Function of Relative Humidity

Mabato, B. R., Gen, M., Chu, Y. & Chan, C., Apr 2019, *Geophysical Research Abstracts (GRA)*. European Geosciences Union, Vol. 21. EGU2019-2701

Secondary Organic Aerosol Formation from Urban Roadside Air in Hong Kong

Liu, T., Zhou, L., Liu, Q., Lee, B. P., Yao, D., Lu, H., Lyu, X. & 2 others, Guo, H. & Chan, C. K., 19 Mar 2019, In: *Environmental Science and Technology*. 53, 6, p. 3001-3009Scopus citations: 25

Impacts of transboundary air pollution and local emissions on PM_{2.5} pollution in the Pearl River Delta region of China and the public health, and the policy implications

Hou, X., Chan, C. K., Dong, G. H. & Yim, S. H. L., Mar 2019, In: *Environmental Research Letters*. 14, 3, 034005.Scopus citations: 31

Reactive uptake of glyoxal by methylammonium-containing salts as a function of relative humidity

Mabato, B. R. G., Gen, M., Chu, Y. & Chan, C. K., 21 Feb 2019, In: *ACS Earth and Space Chemistry*. 3, 2, p. 150-157 Scopus citations: 7

Heterogeneous SO₂ Oxidation in Sulfate Formation by Photolysis of Particulate Nitrate

Gen, M., Zhang, R., Huang, D. D., Li, Y. & Chan, C. K., 12 Feb 2019, In: *Environmental Science & Technology Letters*. 6, 2, p. 86-91Scopus citations: 54

Potential exposure to fine particulate matter (PM_{2.5}) and black carbon on jogging trails in Macau

Liu, B., He, M. M., Wu, C., Li, J., Li, Y., Lau, N. T., Yu, J. Z. & 6 others, Lau, A. K. H., Fung, J. C. H., Hoi, K. I., Mok, K. M., Chan, C. K. & Li, Y. J., 1 Feb 2019, In: *Atmospheric Environment*. 198, p. 23-33Scopus citations: 12

Real time analysis of lead-containing atmospheric particles in Guangzhou during wintertime using single particle aerosol mass spectrometry

Lu, J., Ma, L., Cheng, C., Pei, C., Chan, C. K., Bi, X., Qin, Y. & 7 others, Tan, H., Zhou, J., Chen, M., Li, L., Huang, B., Li, M. & Zhou, Z., 30 Jan 2019, In: *Ecotoxicology and Environmental Safety*. 168, p. 53-63Scopus citations: 9

Positive matrix factorization: A data preprocessing strategy for direct mass spectrometry-based breath analysis

Li, X., Huang, D., Zeng, J., Chan, C. K. & Zhou, Z., 15 Jan 2019, In: *Talanta*. 192, p. 32-39Scopus citations: 2

A review of experimental techniques for aerosol hygroscopicity studies

Tang, M., Chan, C. K., Li, Y. J., Su, H., Ma, Q., Wu, Z., Zhang, G. & 5 others, Wang, Z., Ge, M., Hu, M., He, H. & Wang, X., 2019, In: *Atmospheric Chemistry and Physics*. 19, 19, p. 12631-12686Scopus citations: 35

Electrospray surface-enhanced Raman spectroscopy (ES-SERS) for studying organic coatings of atmospheric aerosol particles

Gen, M., Kuniyoshi, R., Matsuki, A. & Chan, C. K., 2019, In: *Aerosol Science and Technology*. 53, 7, 11 p.Scopus citations: 7

Exploring the impacts of anthropogenic emission sectors on PM_{2.5} and human health in South and East Asia

Reddington, C. L., Conibear, L., Knote, C., Silver, B. J., Li, Y. J., Chan, C. K., Arnold, S. R. & 1 others, Spracklen, D. V., 2019, In: Atmospheric Chemistry and Physics. 19, 18, p. 11887-11910Scopus citations: 29

Light absorption properties and potential sources of particulate brown carbon in the Pearl River Delta region of China

Li, Z., Tan, H., Zheng, J., Liu, L., Qin, Y., Wang, N., Li, F. & 4 others, Li, Y., Cai, M., Ma, Y. & Chan, C. K., 2019, In: Atmospheric Chemistry and Physics. 19, 18, p. 11669-11685Scopus citations: 15

Seasonal and annual changes in PAH concentrations in a remote site in the Pacific Ocean

Miura, K., Shimada, K., Sugiyama, T., Sato, K., Takami, A., Chan, C. K., Kim, I. S. & 3 others, Kim, Y. P., Lin, N. & Hatakeyama, S., 2019, In: Scientific Reports. 9, 12591.Scopus citations: 12

Size-resolved effective density of submicron particles during summertime in the rural atmosphere of Beijing, China

Qiao, K., Wu, Z., Pei, X., Liu, Q., Shang, D., Zheng, J., Du, Z. & 8 others, Zhu, W., Wu, Y., Lou, S., Guo, S., Chan, C. K., Pathak, R. K., Hallquist, M. & Hu, M., Nov 2018, In: Journal of Environmental Sciences (China). 73, p. 69-77Scopus citations: 15

Global Survey of Antibiotic Resistance Genes in Air

Li, J., Cao, J., Zhu, Y., Chen, Q., Shen, F., Wu, Y., Xu, S. & 9 others, Fan, H., Da, G., Huang, R., Wang, J., De Jesus, A. L., Morawska, L., Chan, C. K., Peccia, J. & Yao, M., 2 Oct 2018, In: Environmental Science and Technology. 52, 19, p. 10975-10984Scopus citations: 113

Chlorine oxidation of VOCs at a semi-rural site in Beijing: Significant chlorine liberation from ClNO₂ and subsequent gas- and particle-phase Cl-VOC production

Le Breton, M., Hallquist, Å. M., Kant Pathak, R., Simpson, D., Wang, Y., Johansson, J., Zheng, J. & 14 others, Yang, Y., Shang, D., Wang, H., Liu, Q., Chan, C., Wang, T., Bannan, T. J., Priestley, M., Percival, C. J., Shallcross, D. E., Lu, K., Guo, S., Hu, M. & Hallquist, M., 11 Sep 2018, In: Atmospheric Chemistry and Physics. 18, 17, p. 13013-13030Scopus citations: 28

Formation and Evolution of aqSOA from Aqueous-Phase Reactions of Phenolic Carbonyls: Comparison between Ammonium Sulfate and Ammonium Nitrate Solutions

Huang, D. D., Zhang, Q., Cheung, H. H. Y., Yu, L., Zhou, S., Anastasio, C., Smith, J. D. & 1 others, Chan, C. K., 21 Aug 2018, In: Environmental Science and Technology. 52, 16, p. 9215-9224Scopus citations: 36

Characteristics and mixing state of amine-containing particles at a rural site in the Pearl River Delta, China

Cheng, C., Huang, Z., Chan, C. K., Chu, Y., Li, M., Zhang, T., Ou, Y. & 8 others, Chen, D., Cheng, P., Li, L., Gao, W., Huang, Z., Huang, B., Fu, Z. & Zhou, Z., 29 Jun 2018, In: Atmospheric Chemistry and Physics. 18, 12, p. 9147-9159Scopus citations: 15

Reactive Uptake of Glyoxal by Ammonium-Containing Salt Particles as a Function of Relative Humidity

Gen, M., Huang, D. D. & Chan, C. K., 19 Jun 2018, In: Environmental Science and Technology. 52, 12, p. 6903-6911Scopus citations: 23

Reactions of SO₂ and NH₃ with epoxy groups on the surface of graphite oxide powder

Xie, W., Weng, L., Chan, C., Yeung, K. L. & Chan, C., 7 Mar 2018, In: Physical Chemistry Chemical Physics. 20, 9, p. 6431-6439Scopus citations: 10

Significant Production of Secondary Organic Aerosol from Emissions of Heated Cooking Oils

Liu, T., Wang, Z., Huang, D. D., Wang, X. & Chan, C. K., 9 Jan 2018, In: Environmental Science & Technology Letters. 5, 1, p. 32-37Scopus citations: 36

Chemical characteristics of brown carbon in atmospheric particles at a suburban site near Guangzhou, China

Qin, Y. M., Bo Tan, H., Li, Y. J., Jie Li, Z., Schurman, M. I., Liu, L., Wu, C. & 1 others, Chan, C. K., 2018, In: Atmospheric Chemistry and Physics. 18, 22, p. 16409-16418Scopus citations: 39

Comparison of secondary organic aerosol formation from toluene on initially wet and dry ammonium sulfate particles at moderate relative humidity

Liu, T., Dan Huang, D., Li, Z., Liu, Q., Chan, M. & Chan, C. K., 2018, In: Atmospheric Chemistry and Physics. 18, 8, p. 5677-5689Scopus citations: 15

Online gas- and particle-phase measurements of organosulfates, organosulfonates and nitrooxy organosulfates in Beijing utilizing a FIGAERO ToF-CIMS

Le Breton, M., Wang, Y., Hallquist, A. M., Kant Pathak, R., Zheng, J., Yang, Y., Shang, D. & 14 others, Glasius, M., Bannan, T. J., Liu, Q., Chan, C. K., Percival, C. J., Zhu, W., Lou, S., Topping, D., Wang, Y., Yu, J., Lu, K., Guo, S., Hu, M. & Hallquist, M., 2018, In: Atmospheric Chemistry and Physics. 18, 14, p. 10355-10371Scopus citations: 38

Primary and secondary organic aerosol from heated cooking oil emissions

Liu, T., Wang, Z., Wang, X. & Chan, C. K., 2018, In: Atmospheric Chemistry and Physics. 18, 15, p. 11363-11374Scopus citations: 19

Real-time breath analysis by using secondary nanoelectrospray ionization coupled to high resolution mass spectrometry

Li, X., Huang, D. D., Du, R., Zhang, Z. J., Chan, C. K., Huang, Z. X. & Zhou, Z., 2018, In: Journal of Visualized Experiments. 2018, 133, e56465.Scopus citations: 5

The size-resolved cloud condensation nuclei (CCN) activity and its prediction based on aerosol hygroscopicity and composition in the Pearl Delta River (PRD) region during wintertime 2014

Cai, M., Tan, H., Chan, C. K., Qin, Y., Xu, H., Li, F., Schurman, M. I. & 2 others, Liu, L. & Zhao, J., 2018, In: Atmospheric Chemistry and Physics. 18, 22, p. 16419-16437Scopus citations: 16

Viscosity of erythritol and erythritol-water particles as a function of water activity: new results and an intercomparison of techniques for measuring the viscosity of particles

Chu, Y., Evoy, E., Kamal, S., Song, Y. C., Reid, J. P., Chan, C. K. & Bertram, A. K., 2018, In: Atmospheric Measurement Techniques. 11, 8, p. 4809-4822Scopus citations: 3

Emission of volatile organic compounds and production of secondary organic aerosol from stir-frying spices

Liu, T., Liu, Q., Li, Z., Huo, L., Chan, M., Li, X., Zhou, Z. & 1 others, Chan, C. K., 1 Dec 2017, In: Science of the Total Environment. 599-600, p. 1614-1621Scopus citations: 30

Comparison of aerosol hygroscopicity, volatility, and chemical composition between a suburban site in the Pearl River Delta region and a marine site in Okinawa

Cai, M., Tan, H., Chan, C. K., Mochida, M., Hatakeyama, S., Kondo, Y., Schurman, M. I. & 9 others, Xu, H., Li, F., Shimada, K., Li, L., Deng, Y., Yai, H., Matsuki, A., Qin, Y. & Zhao, J., Dec 2017, In: Aerosol and Air Quality Research. 17, 12, p. 3194-3208Scopus citations: 15

Contributions of long-range transported and locally emitted nitrate in size-segregated aerosols in Japan at Kyushu and Okinawa

Tatsuta, S., Shimada, K., Chan, C. K., Kim, Y. P., Lin, N., Takami, A. & Hatakeyama, S., Dec 2017, In: Aerosol and Air Quality Research. 17, 12, p. 3119-3127Scopus citations: 11

Measurement of ambient PAHs in Kumamoto: Differentiating local and transboundary air pollution

Sugiyama, T., Shimada, K., Miura, K., Lin, N., Kim, Y. P., Chan, C. K., Takami, A. & 1 others, Hatakeyama, S., Dec 2017, In: Aerosol and Air Quality Research. 17, 12, p. 3106-3118Scopus citations: 7

Model estimation of sulfate aerosol sources collected at Cape Hedo during an intensive campaign in October–November, 2015

Itahashi, S., Hatakeyama, S., Shimada, K., Tatsuta, S., Taniguchi, Y., Chan, C. K., Kim, Y. P. & 2 others, Lin, N. & Takami, A., Dec 2017, In: Aerosol and Air Quality Research. 17, 12, p. 3079-3090Scopus citations: 11

Transboundary and local air pollutants in Western Japan distinguished on the basis of ratios of metallic elements in size-segregated aerosols

Taniguchi, Y., Shimada, K., Takami, A., Lin, N., Chan, C. K., Kim, Y. P. & Hatakeyama, S., Dec 2017, In: Aerosol and Air Quality Research. 17, 12, p. 3141-3150Scopus citations: 15

Electrospray surface-enhanced Raman spectroscopy (ES-SERS) for probing surface chemical compositions of atmospherically relevant particles

Gen, M. & Chan, C. K., 24 Nov 2017, In: Atmospheric Chemistry and Physics. 17, 22, p. 14025-14037Scopus citations: 17

Diurnal and day-to-day characteristics of ambient particle mass size distributions from HR-ToF-AMS measurements at an urban site and a suburban site in Hong Kong

Lee, B. P., Wang, H. & Chan, C. K., 15 Nov 2017, In: Atmospheric Chemistry and Physics. 17, 22, p. 13605-13624
Scopus citations: 4

Impacts of traffic emissions on atmospheric particulate nitrate and organics at a downwind site on the periphery of Guangzhou, China

Ming Qin, Y., Bo Tan, H., Jie Li, Y., Schurman, M. I., Li, F., Canonaco, F., Prévôt, A. S. H. & 1 others, Chan, C. K., 1 Sep 2017, In: Atmospheric Chemistry and Physics. 17, 17, p. 10245-10258Scopus citations: 36

Role of oleic acid coating in the heterogeneous uptake of dimethylamine by ammonium sulfate particles

Chu, Y. & Chan, C. K., 3 Aug 2017, In: Aerosol Science and Technology. 51, 8, p. 988-997Scopus citations: 11

Mixing state of oxalic acid containing particles in the rural area of Pearl River Delta, China: implications for the formation mechanism of oxalic acid

Cheng, C., Li, M., Chan, C. K., Tong, H., Chen, C., Chen, D., Wu, D. & 10 others, Li, L., Wu, C., Cheng, P., Gao, W., Huang, Z., Li, X., Zhang, Z., Fu, Z., Bi, Y. & Zhou, Z., Aug 2017, In: Atmospheric Chemistry and Physics. 17, 15, p. 9519-9533Scopus citations: 26

The effect of hydroxyl functional groups and molar mass on the viscosity of non-crystalline organic and organic-water particles

Grayson, J. W., Evoy, E., Song, M., Chu, Y., Maclean, A., Nguyen, A., Upshur, M. A. & 5 others, Ebrahimi, M., Chan, C. K., Geiger, F. M., Thomson, R. J. & Bertram, A. K., 13 Jul 2017, In: Atmospheric Chemistry and Physics. 17, 13, p. 8509-8524Scopus citations: 21

Nanoscale spectroscopic and mechanical characterization of individual aerosol particles using peak force infrared microscopy

Wang, L., Huang, D., Chan, C. K., Li, Y. J. & Xu, X. G., Jul 2017, In: Chemical Communications. 53, 53, p. 7397-7400
Scopus citations: 8

Formation of secondary organic aerosols from gas-phase emissions of heated cooking oils

Liu, T., Li, Z., Chan, M. & Chan, C. K., 20 Jun 2017, In: Atmospheric Chemistry and Physics. 17, 12, p. 7333-7344Scopus citations: 41

Atmospheric particle composition-hygroscopic growth measurements using an in-series hybrid tandem differential mobility analyzer and aerosol mass spectrometer

Schurman, M. I., Kim, J. Y., Cheung, H. H. Y. & Chan, C. K., 3 Jun 2017, In: Aerosol Science and Technology. 51, 6, p. 694-703Scopus citations: 2

Real-time chemical characterization of atmospheric particulate matter in China: A review

Li, Y. J., Sun, Y., Zhang, Q., Li, X., Li, M., Zhou, Z. & Chan, C. K., 1 Jun 2017, In: Atmospheric Environment. 158, p. 270-304Scopus citations: 133

Heterogeneous uptake of ammonia and dimethylamine into sulfuric and oxalic acid particles

Sauerwein, M. & Keung Chan, C., 23 May 2017, In: Atmospheric Chemistry and Physics. 17, 10, p. 6323-6339Scopus citations: 12

Defects of clean graphene and sputtered graphite surfaces characterized by time-of-flight secondary ion mass spectrometry and X-ray photoelectron spectroscopy

Xie, W., Weng, L., Ng, K. M., Chan, C. K. & Chan, C., 1 Feb 2017, In: Carbon. 112, p. 192-200Scopus citations: 26

Reactive Uptake of Dimethylamine by Ammonium Sulfate and Ammonium Sulfate-Sucrose Mixed Particles

Chu, Y. & Chan, C. K., 12 Jan 2017, In: Journal of Physical Chemistry A. 121, 1, p. 206-215Scopus citations: 15

Evaluation of traffic exhaust contributions to ambient carbonaceous submicron particulate matter in an urban roadside environment in Hong Kong

Lee, B. P., Louie, P. K. K., Luk, C. & Chan, C. K., 2017, In: Atmospheric Chemistry and Physics. 17, 24, p. 15121-15135 Scopus citations: 12

Photochemical smog in China: Scientific challenges and implications for air-quality policies

Hallquist, M., Munthe, J., Hu, M., Wang, T., Chan, C. K., Gao, J., Boman, J. & 9 others, Guo, S., Hallquist, A. M., Mellqvist, J., Moldanova, J., Pathak, R. K., Pettersson, J. B. C., Pleijel, H., Simpson, D. & Thynell, M., Dec 2016, In: National Science Review. 3, 4, p. 401-403Scopus citations: 35

Particulate matter (PM) episodes at a suburban site in Hong Kong: Evolution of PM characteristics and role of photochemistry in secondary aerosol formation

Qin, Y. M., Li, Y. J., Wang, H., Lee, B. P. Y. L., Huang, D. D. & Chan, C. K., 15 Nov 2016, In: Atmospheric Chemistry and Physics. 16, 22, p. 14131-14145Scopus citations: 22

A note on the effects of inorganic seed aerosol on the oxidation state of secondary organic aerosol— α -Pinene ozonolysis

Huang, D. D., Zhang, X., Dalleska, N. F., Lignell, H., Coggon, M. M., Chan, C., Flagan, R. C. & 2 others, Seinfeld, J. H. & Chan, C. K., 27 Oct 2016, In: Journal of Geophysical Research: Atmospheres. 121, 20, p. 12,476-12,483Scopus citations: 9

A field measurement based scaling approach for quantification of major ions, organic carbon, and elemental carbon using a single particle aerosol mass spectrometer

Zhou, Y., Huang, X. H., Griffith, S. M., Li, M., Li, L., Zhou, Z., Wu, C. & 4 others, Meng, J., Chan, C. K., Louie, P. K. K. & Yu, J. Z., 1 Oct 2016, In: Atmospheric Environment. 143, p. 300-312Scopus citations: 21

Characteristics of carbonaceous aerosols in large-scale Asian wintertime outflows at Cape Hedo, Okinawa, Japan

Shimada, K., Takami, A., Kato, S., Kajii, Y., Hasegawa, S., Fushimi, A., Shimizu, A. & 5 others, Sugimoto, N., Chan, C. K., Kim, Y. P., Lin, N. H. & Hatakeyama, S., 1 Oct 2016, In: Journal of Aerosol Science. 100, p. 97-107Scopus citations: 14

Characterization of HOPG, Sputtered HPOG and Graphene by ToF-SIMS and XPS

Chan, C., Xie, W., Weng, L., Ng, K. M. & Chan, C. K., Apr 2016, *Proceedings of the World Congress on Recent Advances in Nanotechnology (RAN 2016)*. Avestia Publishing, (World Congress on Recent Advances in Nanotechnology).Scopus citations: 1

Continuous measurements at the urban roadside in an Asian megacity by Aerosol Chemical Speciation Monitor (ACSM): Particulate matter characteristics during fall and winter seasons in Hong Kong

Sun, C., Lee, B. P., Huang, D., Jie Li, Y., Schurman, M. I., Louie, P. K. K., Luk, C. & 1 others, Chan, C. K., 15 Feb 2016, In: Atmospheric Chemistry and Physics. 16, 3, p. 1713-1728Scopus citations: 26

Measurements of non-volatile aerosols with a VTDMA and their correlations with carbonaceous aerosols in Guangzhou, China

Cheung, H. H. Y., Tan, H., Xu, H., Li, F., Wu, C., Yu, J. Z. & Chan, C. K., 2016, In: Atmospheric Chemistry and Physics. 16, 13, p. 8431-8446Scopus citations: 18

Clean graphene surface through high temperature annealing

Xie, W., Weng, L., Ng, K. M., Chan, C. K. & Chan, C., 29 Aug 2015, In: Carbon. 94, p. 740-748Scopus citations: 48

Hygroscopic and phase transition properties of alkyl aminium sulfates at low relative humidities

Chu, Y., Sauerwein, M. & Chan, C. K., 14 Aug 2015, In: Physical Chemistry Chemical Physics. 17, 30, p. 19789-19796 Scopus citations: 17

Relative Humidity-Dependent HTDMA Measurements of Ambient Aerosols at the HKUST Supersite in Hong Kong, China
Cheung, H. H. Y., Yeung, M. C., Li, Y. J., Lee, B. P. & Chan, C. K., 3 Aug 2015, In: *Aerosol Science and Technology*. 49, 8, p. 643-654Scopus citations: 17

Water Activities and Osmotic Coefficients of Aqueous Solutions of Five Alkylammonium Sulfates and Their Mixtures with H₂SO₄ at 25° C
Sauerwein, M., Clegg, S. L. & Chan, C. K., 3 Aug 2015, In: *Aerosol Science and Technology*. 49, 8, p. 566-579

Characteristics of submicron particulate matter at the urban roadside in downtown Hong Kong - Overview of 4 months of continuous high-resolution aerosol mass spectrometer measurements
Lee, B. P., Li, Y. J., Yu, J. Z., Louie, P. K. K. & Chan, C. K., 27 Jul 2015, In: *Journal of Geophysical Research Atmospheres*. 120, 14, p. 7040-7058Scopus citations: 46

Comparison of Daytime and Nighttime New Particle Growth at the HKUST Supersite in Hong Kong
Man, H., Zhu, Y., Ji, F., Yao, X., Lau, N. T., Li, Y., Lee, B. P. & 1 others, Chan, C. K., 16 Jun 2015, In: *Environmental Science and Technology*. 49, 12, p. 7170-7178Scopus citations: 22

Analysis of organic sulfur compounds in atmospheric aerosols at the HKUST supersite in Hong Kong using HR-ToF-AMS
Huang, D. D., Li, Y. J., Lee, B. P. & Chan, C. K., 17 Mar 2015, In: *Environmental Science and Technology*. 49, 6, p. 3672-3679Scopus citations: 36

Characterization and source identification of sub-micron particles at the HKUST Supersite in Hong Kong
Cheung, K., Ling, Z. H., Wang, D. W., Wang, Y., Guo, H., Lee, B., Li, Y. J. & 1 others, Chan, C. K., 2015, In: *Science of the Total Environment*. 527-528, p. 287-296Scopus citations: 7

Seasonal characteristics of fine particulate matter (PM) based on high-resolution time-of-flight aerosol mass spectrometric (HR-ToF-AMS) measurements at the HKUST Supersite in Hong Kong
Li, Y. J., Lee, B. P., Su, L., Fung, J. C. H. & Chan, C. K., 2015, In: *Atmospheric Chemistry and Physics*. 15, 1, p. 37-53
Scopus citations: 71

Diffusion sampler for measurement of acidic ultrafine particles in the atmosphere
Wang, D., Guo, H. & Chan, C. K., 2 Dec 2014, In: *Aerosol Science and Technology*. 48, 12, p. 1236-1246Scopus citations : 2

Simultaneous HTDMA and HR-ToF-AMS measurements at the HKUST supersite in Hong Kong in 2011
Yeung, M. C., Lee, B. P., Li, Y. J. & CHAN, C. K., 27 Aug 2014, In: *Journal of Geophysical Research*. 119, 16, p. 9864-9883Scopus citations: 38

Characterization of size-segregated aerosols using ToF-SIMS imaging and depth profiling
Cheng, W., Weng, L., Li, Y., Lau, A., Chan, C. & Chan, C., Jul 2014, In: *Surface and Interface Analysis*. 46, 7, p. 480-488
Scopus citations: 11

Aqueous-phase photochemical oxidation and direct photolysis of vanillin - A model compound of methoxy phenols from biomass burning
Li, Y. J., Huang, D. D., Cheung, H. Y., Lee, A. K. Y. & Chan, C. K., 2014, In: *Atmospheric Chemistry and Physics*. 14, 6, p. 2871-2885Scopus citations: 52

Performance evaluation of the Brechtel Mfg. Humidified Tandem Differential Mobility Analyzer (BMI HTDMA) for studying hygroscopic properties of aerosol particles
Lopez-Yglesias, X. F., Yeung, M. C., Dey, S. E., Brechtel, F. J. & Chan, C. K., 2014, In: *Aerosol Science and Technology*. 48, 9, p. 969-980Scopus citations: 23

Size-resolved cloud condensation nuclei (CCN) activity and closure analysis at the HKUST Supersite in Hong Kong
Meng, J. W., Yeung, M. C., Li, Y. J., Lee, B. Y. L. & Chan, C. K., 2014, In: *Atmospheric Chemistry and Physics*. 14, 18, p. 10267-10282Scopus citations: 55

Physical and chemical characterization of ambient aerosol by HR-ToF-AMS at a suburban site in Hong Kong during springtime 2011

Lee, B. P., Li, Y. J., Yu, J. Z., Louie, P. K. K. & Chan, C. K., 16 Aug 2013, In: Journal of Geophysical Research Atmospheres. 118, 15, p. 8625-8639Scopus citations: 42

Role of the aerosol phase state in ammonia/amines exchange reactions

Chan, L. P. & Chan, C. K., 4 Jun 2013, In: Environmental Science and Technology. 47, 11, p. 5755-5762Scopus citations: 37

Evaluating the degree of oxygenation of organic aerosol during foggy and hazy days in Hong Kong using high-resolution time-of-flight aerosol mass spectrometry (HR-ToF-AMS)

Li, Y. J., Lee, B. Y. L., Yu, J. Z., Ng, N. L. & Chan, C. K., 2013, In: Atmospheric Chemistry and Physics. 13, 17, p. 8739-8753Scopus citations: 48

Oligomeric products and formation mechanisms from acid-catalyzed reactions of methyl vinyl ketone on acidic sulfate particles

Chan, K. M., Huang, D. D., Li, Y. J., Chan, M. N., Seinfeld, J. H. & Chan, C. K., 2013, In: Journal of Atmospheric Chemistry. 70, 1, p. 1-18Scopus citations: 12

Sizing characterization of the Fast-Mobility Particle Sizer (FMPS) Against SMPS and HR-ToF-AMS

Lee, B. P., Li, Y. J., Flagan, R. C., Lo, C. & Chan, C. K., 2013, In: Aerosol Science and Technology. 47, 9, p. 1030-1037Scopus citations: 30

Surface chemical composition of size-fractionated urban walkway aerosols determined by x-ray photoelectron spectroscopy

Cheng, W., Weng, L., Li, Y., Lau, A., Chan, C. K. & Chan, C., 2013, In: Aerosol Science and Technology. 47, 10, p. 1118-1124Scopus citations: 27

Roles of the phase state and water content in ozonolysis of internal mixtures of maleic acid and ammonium sulfate particles

Chan, L. P. & Chan, C. K., 1 Jul 2012, In: Aerosol Science and Technology. 46, 7, p. 781-793Scopus citations: 7

Characterization of organic particles from incense burning using an aerodyne high-resolution time-of-flight aerosol mass spectrometer

Li, Y. J., Yeung, J. W. T., Leung, T. P. I., Lau, A. P. S. & Chan, C. K., 1 Jun 2012, In: Aerosol Science and Technology. 46, 6, p. 654-665Scopus citations: 19

Measuring ambient acidic ultrafine particles using iron nanofilm detectors: Method development

Wang, D., Guo, H. & Chan, C. K., 1 May 2012, In: Aerosol Science and Technology. 46, 5, p. 521-532Scopus citations: 8

Displacement of ammonium from aerosol particles by uptake of triethylamine

Chan, L. P. & Chan, C. K., Feb 2012, In: Aerosol Science and Technology. 46, 2, p. 236-247Scopus citations: 33

Observation of aerosol size distribution and new particle formation at a mountain site in subtropical Hong Kong

Guo, H., Wang, D. W., Cheung, K., Ling, Z. H., Chan, C. K. & Yao, X. H., 2012, In: Atmospheric Chemistry and Physics. 12, 20, p. 9923-9939Scopus citations: 49

Source and formation of secondary particulate matter in PM_{2.5} in Asian continental outflow

Feng, J. L., Guo, Z. G., Zhang, T. R., Yao, X. H., Chan, C. K. & Fang, M., 2012, In: Journal of Geophysical Research Atmospheres. 117, 3, D03302.

Enhanced reactive uptake of nonanal by acidic aerosols in the presence of particle-phase organics

Chan, L. P. & Chan, C. K., Jul 2011, In: Aerosol Science and Technology. 45, 7, p. 872-883Scopus citations: 11

Quantification of airborne elemental carbon by digital imaging

Cheng, J. Y. W., Chan, C. K. & Lau, A. P. S., May 2011, In: *Aerosol Science and Technology*. 45, 5, p. 581-586 Scopus citations: 8

Evidence of high PM_{2.5} strong acidity in ammonia-rich atmosphere of Guangzhou, China: Transition in pathways of ambient ammonia to form aerosol ammonium at $[\text{NH}_4^+]/[\text{SO}_4^{2-}]=1.5$

Huang, X., Qiu, R., Chan, C. K. & Ravi Kant, P., Mar 2011, In: *Atmospheric Research*. 99, 3-4, p. 488-495 Scopus citations : 65

Second-generation products contribute substantially to the particle-phase organic material produced by β -caryophyllene ozonolysis

Li, Y. J., Chen, Q., Guzman, M. I., Chan, C. K. & Martin, S. T., 2011, In: *Atmospheric Chemistry and Physics*. 11, 1, p. 121-132 Scopus citations: 41

Growth and shrinkage of new particles in the atmosphere in Hong Kong

Yao, X., Choi, M. Y., Lau, N. T., Lau, A. P. S., Chan, C. K. & Fang, M., Aug 2010, In: *Aerosol Science and Technology*. 44, 8, p. 639-650 Scopus citations: 42

Acid-catalyzed condensed-phase reactions of limonene and terpineol and their impacts on gas-to-particle partitioning in the formation of organic aerosols

Li, Y. J., Cheong, G. Y. L., Lau, A. P. S. & Chan, C. K., 15 Jul 2010, In: *Environmental Science and Technology*. 44, 14, p. 5483-5489 Scopus citations: 11

Process-induced phase transformation of berberine chloride hydrates

Tong, H. H. Y., Chow, A. S. F., Chan, H. M., Chow, A. H. L., Wan, Y. K. Y., Williams, I. D., Shek, F. L. Y. & 1 others, Chan, C. K., Apr 2010, In: *Journal of Pharmaceutical Sciences*. 99, 4, p. 1942-1954 Scopus citations: 31

Water content and phase transitions in particles of inorganic and organic species and their mixtures using micro-Raman spectroscopy

Yeung, M. C. & Chan, C. K., Apr 2010, In: *Aerosol Science and Technology*. 44, 4, p. 269-280 Scopus citations: 50

Effects of the polymorphic transformation of glutaric acid particles on their deliquescence and hygroscopic properties

Yeung, M. C., Ling, T. Y. & Chan, C. K., 21 Jan 2010, In: *Journal of Physical Chemistry A*. 114, 2, p. 898-903 Scopus citations: 19

Gas-particle partitioning of alcohol vapors on organic aerosols

Chan, L. P., Lee, A. K. Y. & Chan, C. K., 1 Jan 2010, In: *Environmental Science and Technology*. 44, 1, p. 257-262 Scopus citations: 6

Carbon content of common airborne fungal species and fungal contribution to aerosol organic carbon in a subtropical city

Cheng, J. Y. W., Chan, C. K., Lee, C. T. & Lau, A. P. S., Jun 2009, In: *Atmospheric Environment*. 43, 17, p. 2781-2787 Scopus citations: 9

Phase transition and hygroscopic properties of internally mixed ammonium sulfate and adipic acid (AS-AA) particles by optical microscopic imaging and Raman spectroscopy

Yeung, M. C., Lee, A. K. Y. & Chan, C. K., May 2009, In: *Aerosol Science and Technology*. 43, 5, p. 387-399 Scopus citations: 40

Managing air quality in a rapidly developing nation: China

Fang, M., Chan, C. K. & Yao, X., Jan 2009, In: *Atmospheric Environment*. 43, 1, p. 79-86 Scopus citations: 207

Formulation development and bioavailability evaluation of a self-nanoemulsified drug delivery system of oleanolic acid

Xi, J., Chang, Q., Chan, C. K., Meng, Z. Y., Wang, G. N., Sun, J. B., Wang, Y. T. & 2 others, Tong, H. H. Y. & Zheng, Y., 2009, In: *AAPS PharmSciTech*. 10, 1, p. 172-182 Scopus citations: 135

A re-evaluation on the atmospheric significance of octanal vapor uptake by acidic particles: Roles of particle acidity and gas-phase octanal concentration

Lee, A. K. Y., Li, Y. J., Lau, A. P. S. & Chan, C. K., Dec 2008, In: *Aerosol Science and Technology*. 42, 12, p. 992-1000
Scopus citations: 8

Accretion reactions of octanal catalyzed by sulfuric acid: Product identification, reaction pathways, and atmospheric implications

Yong, J. L., Lee, A. K. Y., Lau, A. P. S. & Chan, C. K., 1 Oct 2008, In: *Environmental Science and Technology*. 42, 19, p. 7138-7145
Scopus citations: 12

A microscopic study of the effects of particle size and composition of atmospheric aerosols on the corrosion of mild steel

Lau, N. T., Chan, C. K., Chan, L. I. & Fang, M., Oct 2008, In: *Corrosion Science*. 50, 10, p. 2927-2933
Scopus citations: 16

Coupling and evaluating gas/particle mass transfer treatments for aerosol simulation and forecast

Hu, X., Zhang, Y., Jacobson, M. Z. & Chan, C. K., 16 Jun 2008, In: *Journal of Geophysical Research Atmospheres*. 113, 11, D11208.
Scopus citations: 41

Measurements of the hygroscopic and deliquescence properties of organic compounds of different solubilities in water and their relationship with cloud condensation nuclei activities

Man, N. C., Kreidenweis, S. M. & Chan, C. K., 15 May 2008, In: *Environmental Science and Technology*. 42, 10, p. 3602-3608
Scopus citations: 63

Physical characterization of oleanolic acid nonsolvate and solvates prepared by solvent recrystallization

Tong, H. H. Y., Wu, H. B., Zheng, Y., Xi, J., Chow, A. H. L. & Chan, C. K., 1 May 2008, In: *International Journal of Pharmaceutics*. 355, 1-2, p. 195-202
Scopus citations: 30

Aerosol thermodynamics of potassium salts, double salts, and water content near the eutectic

Kelly, J. T., Wexler, A. S., Chan, C. K. & Chan, M. N., May 2008, In: *Atmospheric Environment*. 42, 16, p. 3717-3728
Scopus citations: 15

The effect of H₂O on the reduction of SO₂ and NO by CO on La₂O₂S

Lau, N. T., Fang, M. & Chan, C. K., 28 Feb 2008, In: *Applied Catalysis B: Environmental*. 79, 2, p. 110-116
Scopus citations: 16

Aerodynamic properties of biohazardous aerosols in hospitals

Fang, M., Lau, A. P. S., Chan, C. K., Hung, C. T. & Lee, T. W., 1 Feb 2008, In: *Hong Kong Medical Journal*. 14, 1, p. 26-28
Scopus citations: 8

Air pollution in mega cities in China

Chan, C. K. & Yao, X., Jan 2008, In: *Atmospheric Environment*. 42, 1, p. 1-42
Scopus citations: 1941

Effects of potassium nitrate on the solid phase transitions of ammonium nitrate particles

Wu, H. B. & Chan, C. K., Jan 2008, In: *Atmospheric Environment*. 42, 2, p. 313-322
Scopus citations: 40

Partial crystallization and deliquescence of particles containing ammonium sulfate and dicarboxylic acids

Ling, T. Y. & Chan, C. K., 2008, In: *Journal of Geophysical Research Atmospheres*. 113, 14, D14205.
Scopus citations: 62

Formation and transformation of metastable double salts from the crystallization of mixed ammonium nitrate and ammonium sulfate particles

Tsk, Y. L. & Chan, C. K., 1 Dec 2007, In: *Environmental Science and Technology*. 41, 23, p. 8077-8083
Scopus citations: 22

Heterogeneous reactions of linoleic acid and linolenic acid particles with ozone: Reaction pathways and changes in particle mass, hygroscopicity, and morphology

Lee, A. K. Y. & Chan, C. K., 19 Jul 2007, In: Journal of Physical Chemistry A. 111, 28, p. 6285-6295Scopus citations: 33

Correlations of ambient temperature and relative humidity with submicron particle number concentration size distributions in on-road vehicle plumes

Yao, X., Lau, N. T., Fang, M. & Chan, C. K., Jul 2007, In: Aerosol Science and Technology. 41, 7, p. 692-700Scopus citations: 13

Mass transfer effects on the hygroscopic growth of ammonium sulfate particles with a water-insoluble coating

Chan, M. N. & Chan, C. K., Jul 2007, In: Atmospheric Environment. 41, 21, p. 4423-4433Scopus citations: 36

Single particle Raman spectroscopy for investigating atmospheric heterogeneous reactions of organic aerosols

Lee, A. K. Y. & Chan, C. K., Jul 2007, In: Atmospheric Environment. 41, 22, p. 4611-4621Scopus citations: 52

FTIR characterization of polymorphic transformation of ammonium nitrate

Wu, H. B., Chan, M. N. & Chan, C. K., Jun 2007, In: Aerosol Science and Technology. 41, 6, p. 581-588Scopus citations: 85

Size distributions and condensation growth of submicron particles in on-road vehicle plumes in Hong Kong

Yao, X., Lau, N. T., Chan, C. K. & Fang, M., May 2007, In: Atmospheric Environment. 41, 16, p. 3328-3338Scopus citations: 17

Source identification analysis for the airborne bacteria and fungi using a biomarker approach

Lee, A. K. Y., Lau, A. P. S., Cheng, J. Y. W., Fang, M. & Chan, C. K., Apr 2007, In: Atmospheric Environment. 41, 13, p. 2831-2843Scopus citations: 39

Properties of organic matter in PM_{2.5} at Changdao Island, China-A rural site in the transport path of the Asian continental outflow

Feng, J., Guo, Z., Chan, C. K. & Fang, M., Mar 2007, In: Atmospheric Environment. 41, 9, p. 1924-1935Scopus citations: 88

The role of SO₂ in the reduction of NO by CO on La₂O₂S

Lau, N. T., Fang, M. & Chan, C. K., 25 Jan 2007, In: Journal of Catalysis. 245, 2, p. 301-307Scopus citations: 13

Size dependence of in situ pH in submicron atmospheric particles in Hong Kong

Yao, X., Ling, T. Y., Fang, M. & Chan, C. K., Jan 2007, In: Atmospheric Environment. 41, 2, p. 382-393Scopus citations: 44

Understanding hygroscopic growth and phase transformation of aerosols using single particle Raman spectroscopy in an electrodynamic balance

Lee, A. K. Y., Ling, T. Y. & Chan, C. K., 2007, In: Faraday Discussions. 137, p. 245-263Scopus citations: 66

Possible sampling artifact in real time particle size distributions related to sampling rate

Yao, X., Chan, C. K., Lau, N. T., Lau, P. S. & Fang, M., 1 Dec 2006, In: Aerosol Science and Technology. 40, 12, p. 1080-1089Scopus citations: 6

Responses of ammonium sulfate particles coated with glutaric acid to cyclic changes in relative humidity: Hygroscopicity and Raman characterization

Chan, M. N., Lee, A. K. Y. & Chan, C. K., 15 Nov 2006, In: Environmental Science and Technology. 40, 22, p. 6983-6989Scopus citations: 40

Source apportionment of PM_{2.5} in urban area of Hong Kong

Ho, K. F., Cao, J. J., Lee, S. C. & Chan, C. K., 2 Nov 2006, In: Journal of Hazardous Materials. 138, 1, p. 73-85Scopus citations: 91

Characteristics of organic matter in PM2.5 in Shanghai

Feng, J., Chan, C. K., Fang, M., Hu, M., He, L. & Tang, X., Aug 2006, In: Chemosphere. 64, 8, p. 1393-1400Scopus citations: 135

A comparative study of the organic matter in PM2.5 from three Chinese megacities in three different climatic zones

Feng, J., Hu, M., Chan, C. K., Lau, P. S., Fang, M., He, L. & Tang, X., Jul 2006, In: Atmospheric Environment. 40, 21, p. 3983-3994Scopus citations: 142

Erratum: Relating hygroscopic properties of magnesium nitrate to the formation of contact ion pairs (Journal of Physical Chemistry A (2004) 108A (1712))

Zhang, Y., Choi, M. Y. & Chan, C. K., 1 Jun 2006, In: Journal of Physical Chemistry A. 110, 23, p. 7516Scopus citations: 4

Comparison of thermodynamic predictions for in situ pH in PM2.5

Yao, X., Yan Ling, T., Fang, M. & Chan, C. K., May 2006, In: Atmospheric Environment. 40, 16, p. 2835-2844Scopus citations: 67

Seasonal variations and mass closure analysis of particulate matter in Hong Kong

Ho, K. F., Lee, S. C., Cao, J. J., Chow, J. C., Watson, J. G. & Chan, C. K., 15 Feb 2006, In: Science of the Total Environment. 355, 1-3, p. 276-287Scopus citations: 94

Cloud condensation nuclei activation of limited solubility organic aerosol

Huff Hartz, K. E., Tischuk, J. E., Chan, M. N., Chan, C. K., Donahue, N. M. & Pandis, S. N., Feb 2006, In: Atmospheric Environment. 40, 4, p. 605-617Scopus citations: 83

Use of stationary and mobile measurements to study power plant emissions

Yao, X., Lau, N. T., Fang, M. & Chan, C. K., Feb 2006, In: Journal of the Air and Waste Management Association. 56, 2, p. 144-151Scopus citations: 12

Ergosterol as a biomarker for the quantification of the fungal biomass in atmospheric aerosols

Lau, A. P. S., Lee, A. K. Y., Chan, C. K. & Fang, M., Jan 2006, In: Atmospheric Environment. 40, 2, p. 249-259Scopus citations: 70

On the time-averaging of ultrafine particle number size spectra in vehicular plumes

Yao, X. H., Lau, N. T., Fang, M. & Chan, C. K., 2006, In: Atmospheric Chemistry and Physics. 6, 12, p. 4801-4807Scopus citations: 20

Impact of meteorology and energy structure on solvent extractable organic compounds of PM2.5 in Beijing, China

Feng, J., Chan, C. K., Fang, M., Hu, M., He, L. & Tang, X., Nov 2005, In: Chemosphere. 61, 5, p. 623-632Scopus citations : 57

Real-time observation of the transformation of ultrafine atmospheric particle modes

Yao, X., Lau, N. T., Fang, M. & Chan, C. K., Sep 2005, In: Aerosol Science and Technology. 39, 9, p. 831-841Scopus citations: 34

Mass size distribution of Beijing particulate matters and its inorganic water-soluble ions in winter and summer

Hu, M., Zhao, Y., He, L., Huang, X., Tang, X., Yao, X. & Chan, C. K., Jul 2005, In: Huanjing Kexue/Environmental Science. 26, 4, p. 1-6Scopus citations: 30

Experimental determination of solid-liquid equilibrium phase diagrams for crystallization-based process synthesis

Kwok, K. S., Chan, H. C., Chan, C. K. & Ng, K. M., 11 May 2005, In: Industrial and Engineering Chemistry Research. 44, 10, p. 3788-3798Scopus citations: 28

Hygroscopicity of water-soluble organic compounds in atmospheric aerosols: Amino acids and biomass burning derived organic species

Chan, M. N., Choi, M. Y., Ng, N. L. & Chan, C. K., 15 Mar 2005, In: Environmental Science and Technology. 39, 6, p. 1555-1562Scopus citations: 135

Inter-particle and gas-particle interactions in sampling artifacts of PM_{2.5} in filter-based samplers

Pathak, R. K. & Chan, C. K., Mar 2005, In: Atmospheric Environment. 39, 9, p. 1597-1607Scopus citations: 82

Investigation of efflorescence of inorganic aerosols using fluorescence spectroscopy

Choi, M. Y. & Chan, C. K., 17 Feb 2005, In: Journal of Physical Chemistry A. 109, 6, p. 1042-1048Scopus citations: 25

Mass transfer effects in hygroscopic measurements of aerosol particles

Chan, M. N. & Chan, C. K., 2005, In: Atmospheric Chemistry and Physics. 5, 10, p. 2703-2712Scopus citations: 80

The 3-hydroxy fatty acids as biomarkers for quantification and characterization of endotoxins and Gram-negative bacteria in atmospheric aerosols in Hong Kong

Lee, A. K. Y., Chan, C. K., Fang, M. & Lau, A. P. S., Dec 2004, In: Atmospheric Environment. 38, 37, p. 6307-6317Scopus citations: 51

Characteristics of aerosol acidity in Hong Kong

Pathak, R. K., Louie, P. K. K. & Chan, C. K., Jun 2004, In: Atmospheric Environment. 38, 19, p. 2965-2974Scopus citations: 86

Relating Hygroscopic Properties of Magnesium Nitrate to the Formation of Contact Ion Pairs

Zhang, Y., Choi, M. Y. & Chan, C. K., 11 Mar 2004, In: Journal of Physical Chemistry A. 108, 10, p. 1712-1718Scopus citations: 54

Characterization of dicarboxylic acids in PM_{2.5} in Hong Kong

Yao, X., Fang, M., Chan, C. K., Ho, K. F. & Lee, S. C., Mar 2004, In: Atmospheric Environment. 38, 7, p. 963-970Scopus citations: 101

New Directions: Polymorphic transformation of ammonium nitrate in atmospheric aerosols

Chan, C. K. & Chan, M. N., Mar 2004, In: Atmospheric Environment. 38, 9, p. 1387-1388Scopus citations: 12

Application of fluorescence spectroscopy to study the state of water in aerosols

Choi, M. Y., Chan, C. K. & Zhang, Y., 19 Feb 2004, In: Journal of Physical Chemistry A. 108, 7, p. 1133-1138Scopus citations: 22

Sampling Artifacts of Acidity and Ionic Species in PM_{2.5}

Pathak, R. K., Yao, X. & Chan, C. K., 1 Jan 2004, In: Environmental Science and Technology. 38, 1, p. 254-259Scopus citations: 97

Hygroscopic Properties of Two Model Humic-like Substances and Their Mixtures with Inorganics of Atmospheric Importance

Chan, M. N. & Chan, C. K., 15 Nov 2003, In: Environmental Science and Technology. 37, 22, p. 5109-5115Scopus citations: 115

Reduction of SO₂ by CO and COS over La₂O₃ - A mechanistic study

Lau, N. T., Fang, M. & Chan, C. K., 1 Sep 2003, In: Journal of Molecular Catalysis A: Chemical. 203, 1-2, p. 221-229Scopus citations: 21

Observations of water monomers in supersaturated NaClO₄, LiClO₄, and Mg(ClO₄)₂ droplets using Raman spectroscopy

Zhang, Y. & Chan, C. K., 7 Aug 2003, In: Journal of Physical Chemistry A. 107, 31, p. 5956-5962Scopus citations: 90

Size distributions and formation of ionic species in atmospheric particulate pollutants in Beijing, China: 1 - Inorganic ions

Yao, X., Lau, A. P. S., Fang, M., Chan, C. K. & Hu, M., Jul 2003, In: Atmospheric Environment. 37, 21, p. 2991-3000

Scopus citations: 170

Size distributions and formation of ionic species in atmospheric particulate pollutants in Beijing, China: 2 - Dicarboxylic acids

Yao, X., Lau, A. P. S., Fang, M., Chan, C. K. & Hu, M., Jul 2003, In: Atmospheric Environment. 37, 21, p. 3001-3007

Scopus citations: 81

Acidity and concentrations of ionic species of PM_{2.5} in Hong Kong

Pathak, R. K., Yao, X., Lau, A. K. H. & Chan, C. K., Mar 2003, In: Atmospheric Environment. 37, 8, p. 1113-1124

Scopus citations: 83

Solar photocatalytic thin film cascade reactor for treatment of benzoic acid containing wastewater

Chan, A. H. C., Chan, C. K., Barford, J. P. & Porter, J. F., Mar 2003, In: Water Research. 37, 5, p. 1125-1135

Scopus citations: 93

Concentration and chemical composition of PM_{2.5} in Shanghai for a 1-year period

Ye, B., Ji, X., Yang, H., Yao, X., Chan, C. K., Cadle, S. H., Chan, T. & 1 others, Mulawa, P. A., Feb 2003, In: Atmospheric Environment. 37, 4, p. 499-510

Scopus citations: 464

Performance of a membrane-catalyst for photocatalytic oxidation of volatile organic compounds

Maira, A. J., Lau, W. N., Lee, C. Y., Yue, P. L., Chan, C. K. & Yeung, K. L., Feb 2003, In: Chemical Engineering Science. 58, 3-6, p. 959-962

Scopus citations: 81

The size dependence of chloride depletion in fine and coarse sea-salt particles

Yao, X., Fang, M. & Chan, C. K., Feb 2003, In: Atmospheric Environment. 37, 6, p. 743-751

Scopus citations: 80

Characterization of chemical species in PM_{2.5} and PM₁₀ aerosols in Hong Kong

Ho, K. F., Lee, S. C., Chan, C. K., Yu, J. C., Chow, J. C. & Yao, X. H., Jan 2003, In: Atmospheric Environment. 37, 1, p. 31-39

Scopus citations: 296

Chemical characteristics of PM_{2.5} species in Beijing ambient air

Yang, F., He, K., Ma, Y., Zhang, Q., Yao, X., Chan, C. K., Cadle, S. & 2 others, Chan, T. & Mulawa, P., Dec 2002, In: Qinghua Daxue Xuebao/Journal of Tsinghua University. 42, 12, p. 1605-1608

Scopus citations: 19

Continuous measurements of the water activities of the Mg²⁺-Ca²⁺-Na⁺-Cl⁻-NO₃⁻-SO₄²⁻-H₂O system

Choi, M. Y. & Chan, C. K., Nov 2002, In: Journal of Chemical and Engineering Data. 47, 6, p. 1526-1531

Scopus citations: 14

The water-soluble ionic composition of PM_{2.5} in Shanghai and Beijing, China

Yao, X., Chan, C. K., Fang, M., Cadle, S., Chan, T., Mulawa, P., He, K. & 1 others, Ye, B., Sep 2002, In: Atmospheric Environment. 36, 26, p. 4223-4234

Scopus citations: 603

Characterization of PM_{2.5} Chemical Composition in the Ambient Air of Beijing, China

Yang, F., He, K., Ma, Y., Zhang, Q., Cadle, S., Chan, T., Mulawa, P. & 2 others, Chan, C. K. & Yao, X., Aug 2002, In: ACS Division of Fuel Chemistry, Preprints. 47, 2, p. 634-635

Scopus citations: 1

Source apportionment of PM_{2.5} in Beijing

He, K., Zhang, Q., Ma, Y., Yang, F., Cadle, S., Chan, T., Mulawa, P. & 2 others, Chan, C. K. & Yao, X., Aug 2002, In: ACS Division of Fuel Chemistry, Preprints. 47, 2, p. 677-678

Scopus citations: 7

Effect of thermal treatment on the photocatalytic activity of TiO₂ coatings for photocatalytic oxidation of benzoic acid
Chan, A. H. C., Porter, J. F., Barford, J. P. & Chan, C. K., Jul 2002, In: Journal of Materials Research. 17, 7, p. 1758-1765
Scopus citations: 43

The effects of organic species on the hygroscopic behaviors of inorganic aerosols
Choi, M. Y. & Chan, C. K., 1 Jun 2002, In: Environmental Science and Technology. 36, 11, p. 2422-2428
Scopus citations: 260

Continuous measurements of the water activities of aqueous droplets of water-soluble organic compounds
Choi, M. Y. & Chan, C. K., 9 May 2002, In: Journal of Physical Chemistry A. 106, 18, p. 4566-4572
Scopus citations: 90

Understanding the hygroscopic properties of supersaturated droplets of metal and ammonium sulfate solutions using Raman spectroscopy
Zhang, Y. & Chan, C. K., 17 Jan 2002, In: Journal of Physical Chemistry A. 106, 2, p. 285-292
Scopus citations: 102

Size distributions and formation of dicarboxylic acids in atmospheric particles
Yao, X., Fang, M. & Chan, C. K., 2002, In: Atmospheric Environment. 36, 13, p. 2099-2107
Scopus citations: 160

The hygroscopic properties of dicarboxylic and multifunctional acids: Measurements and UNIFAC predictions
Peng, C., Chan, M. N. & Chan, C. K., 15 Nov 2001, In: Environmental Science and Technology. 35, 22, p. 4495-4501
Scopus citations: 373

Flow induced chain alignment and disentanglement as the viscosity reduction mechanism within TLCP/HDPE blends
Chan, C. K., Whitehouse, C., Gao, P. & Chai, C. K., 31 May 2001, In: Polymer. 42, 18, p. 7847-7856
Scopus citations: 39

Combined diffusion model for the sorption of cadmium, copper, and zinc ions onto bone char
Cheung, C. W., Chan, C. K., Porter, J. F. & McKay, G., 1 Apr 2001, In: Environmental Science and Technology. 35, 7, p. 1511-1522
Scopus citations: 72

Film-pore diffusion control for the batch sorption of cadmium ions from effluent onto bone char
Cheung, C. W., Chan, C. K., Porter, J. F. & McKay, G., 15 Feb 2001, In: Journal of Colloid and Interface Science. 234, 2, p. 328-336
Scopus citations: 41

Experimental study of the sampling artifact of chloride depletion from collected sea salt aerosols
Yao, X., Fang, M. & Chan, C. K., 1 Feb 2001, In: Environmental Science and Technology. 35, 3, p. 600-605
Scopus citations: 40

Hygroscopic study of glucose, citric acid, and sorbitol using an electrodynamic balance: Comparison with UNIFAC predictions
Peng, C., Chow, A. H. L. & Chan, C. K., 2001, In: Aerosol Science and Technology. 35, 3, p. 753-758
Scopus citations: 54

Photocatalytic thin film cascade reactor for treatment of organic compounds in wastewater
Chan, A. H. C., Porter, J. F., Barford, J. P. & Chan, C. K., 2001, In: Water Science and Technology. 44, 5, p. 187-195
Scopus citations: 30

The characteristics of PM_{2.5} in Beijing, China
He, K., Yang, F., Ma, Y., Zhang, Q., Yao, X., Chan, C. K., Cadle, S. & 2 others, Chan, T. & Mulawa, P., 2001, In: Atmospheric Environment. 35, 29, p. 4959-4970
Scopus citations: 989

The water cycles of water-soluble organic salts of atmospheric importance
Peng, C. & Chan, C. K., 2001, In: Atmospheric Environment. 35, 7, p. 1183-1192
Scopus citations: 131

Study of contact ion pairs of supersaturated magnesium sulfate solutions using Raman scattering of levitated single droplets

Zhang, Y. & Chan, C. K., 12 Oct 2000, In: Journal of Physical Chemistry A. 104, 40, p. 9191-9196Scopus citations: 96

Study of water activities of aerosols of mixtures of sodium and magnesium salts

Chan, C. K., Ha, Z. & Choi, M. Y., Sep 2000, In: Atmospheric Environment. 34, 28, p. 4795-4803Scopus citations: 89

Study of water activities of supersaturated aerosols of sodium and ammonium salts

Ha, Z., Choy, L. & Chan, C. K., 16 May 2000, In: Journal of Geophysical Research Atmospheres. 105, D9, p. 11699-11709 1999JD901129.Scopus citations: 27

Size effects in gas-phase photo-oxidation of trichloroethylene using nanometer-sized TiO₂ catalysts

Maira, A. J., Yeung, K. L., Lee, C. Y., Yue, P. L. & Chan, C. K., 15 May 2000, In: Journal of Catalysis. 192, 1, p. 185-196 Scopus citations: 342

Catalyst preparation and reactor design for gas-phase photocatalytic oxidation of trichloroethylene (TCE) pollutant

Maira, A. J., Yeung, K. L., Chan, C. K., Porter, J. F. & Yue, P. L., 2000, In: Studies in Surface Science and Catalysis. 130 B, p. 1949-1954Scopus citations: 3

Comparison of chloride depletion of sea-salt aerosols in MOUDI and PMDS measurements

Yao, X., Fang, M. & Chan, C. K., 2000, In: Journal of Aerosol Science. 31, SUPPL.1

Observation of mass transfer limitation in evaporation of single levitated droplets

Chan, C. K., Choi, M. Y. & Zhang, Y., 2000, In: Journal of Aerosol Science. 31, SUPPL.1Scopus citations: 3

Study of the hygroscopic properties of selected pharmaceutical aerosols using single particle levitation

Peng, C., Chow, A. H. L. & Chan, C. K., 2000, In: Pharmaceutical Research. 17, 9, p. 1104-1109Scopus citations: 28

Formation of nitrate and non-sea-salt sulfate on coarse particles

Zhuang, H., Chan, C. K., Fang, M. & Wexler, A. S., Nov 1999, In: Atmospheric Environment. 33, 26, p. 4223-4233Scopus citations: 281

Application of positive matrix factorization in source apportionment of particulate pollutants in Hong Kong

Lee, E., Chan, C. K. & Paatero, P., Aug 1999, In: Atmospheric Environment. 33, 19, p. 3201-3212Scopus citations: 385

Size distributions of particulate sulfate, nitrate, and ammonium at a coastal site in Hong Kong

Zhuang, H., Chan, C. K., Fang, M. & Wexler, A. S., Mar 1999, In: Atmospheric Environment. 33, 6, p. 843-853Scopus citations: 226

A simple method to derive the water activities of highly supersaturated binary electrolyte solutions from ternary solution data

Chan, C. K., 1999, In: Journal of Geophysical Research Atmospheres. 104, D23, p. 30193-30200 1999JD900942.Scopus citations: 10

Effect of calcination on the microstructural characteristics and photoreactivity of Degussa P-25 TiO₂

Porter, J. F., Li, Y. & Chan, C. K., 1999, In: Journal of Materials Science. 34, 7, p. 1523-1531Scopus citations: 196

Effect of TLCP melt structure on the bulk viscosity of high molecular mass polyethylene

Chan, C. K., Whitehouse, C. & Gao, P., 1999, In: Polymer Engineering and Science. 39, 8, p. 1353-1364Scopus citations: 17

Effects of calcination on the microstructures and photocatalytic properties of nanosized titanium dioxide powders prepared by vapor hydrolysis

Chan, C. K., Porter, J. F., Li, Y., Guo, W. & Chan, C., 1999, In: Journal of the American Ceramic Society. 82, 3, p. 566-572 Scopus citations: 94

The water activities of $MgCl_2$, $Mg(NO_3)_2$, $MgSO_4$ and their mixtures

Ha, Z. & Chak Keung Chan, C. K., 1999, In: *Aerosol Science and Technology*. 31, 2-3, p. 154-169 Scopus citations: 83

An investigation on sulfate, nitrate size distribution and chloride depletion of coastal aerosols

Zhuang, H. & Chan, C. K., Sep 1998, In: *Journal of Aerosol Science*. 29, SUPPL 1

Micro-Raman spectroscopic characterization of nanosized TiO_2 powders prepared by vapor hydrolysis

Zhang, Y., Chan, C. K., Porter, J. F. & Guo, W., Sep 1998, In: *Journal of Materials Research*. 13, 9, p. 2602-2609 Scopus citations: 147

In situ study of single aqueous droplet solidification of ceramic precursors used for spray pyrolysis

Chan, C. K., Flagan, R. C. & Seinfeld, J. H., Mar 1998, In: *Journal of the American Ceramic Society*. 81, 3, p. 646-648 Scopus citations: 32

Characteristics of chemical compositions of atmospheric aerosols in Hong Kong: Spatial and seasonal distributions

Qin, Y., Chan, C. K. & Chan, L. Y., 27 Oct 1997, In: *Science of the Total Environment*. 206, 1, p. 25-37 Scopus citations: 86

Aerosol delivery to non-ventilated infants by metered dose inhaler: Should a valved spacer be used?

Fok, T. F., Lam, K., Chan, C. K., Ng, P. C., Zhuang, H., Wong, W. & Cheung, K. L., Sep 1997, In: *Pediatric Pulmonology*. 24, 3, p. 204-212 Scopus citations: 20

Characterization of ultrafine titanium dioxide powders produced by vapor phase hydrolysis of titanium tetraisopropoxide

Guo, W., Porter, J. F., Chan, C. & Chan, C., Sep 1997, In: *Journal of Aerosol Science*. 28, SUPPL. 1 Scopus citations: 2

Size distribution of inorganic aerosols at a coastal site

Zhuang, H. & Chan, C. K., Sep 1997, In: *Journal of Aerosol Science*. 28, SUPPL. 1 Scopus citations: 8

Thermodynamic properties of aqueous aerosols to high supersaturation: II-A model of the system $Na^+ - Cl^- NO_3^- / SO_4^{2-} / H_2O$ at 298.15 K

Clegg, S. L., Brimblecombe, P., Liang, Z. & Chan, C. K., Sep 1997, In: *Aerosol Science and Technology*. 27, 3, p. 345-366 Scopus citations: 44

Thermodynamic properties of aqueous aerosols to high supersaturation: I - Measurements of water activity of the system $Na^+ - Cl^- NO_3^- / SO_4^{2-} / H_2O$ at ~ 298.15 K

Chan, C. K., Liang, Z., Zheng, J., Clegg, S. L. & Brimblecombe, P., Sep 1997, In: *Aerosol Science and Technology*. 27, 3, p. 324-344 Scopus citations: 51

Water activity of mixed organic and inorganic aerosols

Chan, C. K., Kwok, C. S. & Chow, A. H. L., Sep 1997, In: *Journal of Aerosol Science*. 28, SUPPL. 1 Scopus citations: 2

Particulate matter exposures to commuters in Hong Kong

Zheng, J., Ma, H., Chan, C. K. & Cheng, L., Jul 1997, In: *Particulate Science and Technology*. 15, 3-4, p. 341-360 Scopus citations: 2

A fast technique for measuring water activity of atmospheric aerosols

Liang, Z. & Chan, C. K., Mar 1997, In: *Aerosol Science and Technology*. 26, 3, p. 255-268 Scopus citations: 31

Study of hygroscopic properties of aqueous mixtures of disodium fluorescein and sodium chloride using an electrodynamic balance

Chan, C. K., Kwok, C. S. & Chow, A. H. L., 1997, In: *Pharmaceutical Research*. 14, 9, p. 1171-1175 Scopus citations: 16

Thermodynamic properties of aqueous $(\text{NH}_4)_2\text{SO}_4$ to high supersaturation as a function of temperature

Clegg, S. L., Ho, S. S., Chan, C. K. & Brimblecombe, P., 1995, In: Journal of Chemical and Engineering Data. 40, 5, p. 1079-1090 Scopus citations: 59

Determination of water activity in ammonium sulfate and sulfuric acid mixtures using levitated single particles

Kim, Y. P., Pun, B. K., Chan, C. K., Flagan, R. C. & Seinfeld, J. H., 1994, In: Aerosol Science and Technology. 20, 3, p. 275-284 Scopus citations: 35

Water activities of $\text{NH}_4\text{NO}_3/(\text{NH}_4)_2\text{SO}_4$ solutions

Chan, C. K., Flagan, R. C. & Seinfeld, J. H., Jun 1992, In: Atmospheric Environment Part A, General Topics. 26, 9, p. 1661-1673 Scopus citations: 118

Resonance structures in elastic and raman scattering from microspheres

Chan, C. K., Flagan, R. C. & Seinfeld, J. H., 1 Feb 1991, In: Applied Optics. 30, 4, p. 459-467 Scopus citations: 24

Activities

Atmospheric Environment (Journal)

Chak K. Chan (Editor-in-Chief)

Oct 2008 → ...

Prizes

Asian Young Aerosol Scientist Award

CHAN, Chak Keung (Recipient), 2005

Best *ES&T Letters* Paper of 2019

CHAN, Chak Keung (Recipient), GEN, M. (Recipient) & ZHANG, Ruifeng (Recipient), 2020

First Prize of the Natural Science Award

CHAN, Chak Keung (Recipient), 2007

Haagen-Smit Award of Atmospheric Environment

CHAN, Chak Keung (Recipient), 2015

Second Prize of the State Natural Science Award

CHAN, Chak Keung (Recipient), 2010

Top 2% most highly cited scientists

CHAN, Chak Keung (Recipient), 2020

Press/Media

Advanced bioaerosol project to eliminate Covid-19 and other pathogens secures HK\$6.15m from Research Impact Fund

Chi Keung Alvin LAI, Chak Keung CHAN & Patrick Kwan Hon LEE

1/03/21

5 items of Media coverage

Berto and Chak interviewed by American Geophysical Union (AGU)

Chak Keung CHAN

13/08/15

1 Media contribution

New sulfate formation pathway provides more accurate haze prediction

Chak Keung CHAN, Masao GEN & Ruifeng ZHANG

13/07/20 → 14/07/20

3 items of Media coverage

Revealing the new formation mechanism of haze pollutants

Chak Keung CHAN

24/06/20

1 item of Media coverage

Grants

Projects

ECF: Application of Machine Learning Techniques in Predicting Primary and Secondary Organic Aerosols

CHAN, C. K.

1/03/21 → ...

GRF: Effects of Organic Phase States on the Amine-ammonium Exchange Reactions of Ammonium Sulfate Particles

CHAN, C. K., CHAN, M. N. & YU, J.

1/12/14 → 15/11/18

ECF: Formation of secondary particulate matter (PM) from on-road vehicle emissions in Hong Kong

CHAN, C. K., CHAN, M. N., GUO, H., LAU, A. P. S. & NING, Z.

1/04/17 → 29/10/19

ResCtrs: Guy Carpenter Asia-Pacific Climate Impact Centre

ZHOU, W., CHAN, C. L. J., CHAN, C. K., CHOPRA, S. S., NAH, E. M. T., WANG, X., YUAN, H. S., ZHANG, L. & ZHU, K.

1/03/08 → ...

GRF: Heterogeneous Reactions of Monoethanolamine with Atmospheric Acidic Aerosol Particles

CHAN, C. K. & SIT, P.

1/01/19 → ...

ITF: Integrated System of Advanced Thermal Nano Technologies (TNT) for Energy - Efficient Air - Conditioning and Clean Indoor Air: Part 1 - Energy Efficiency

LEUNG, K. H. M., CHAN, C. K., CHONG, C. Y., FENG, S. P., FONG, K. F. S., LAI, A. K., LEE, P. K. H., LEUNG, D. Y., LI, Y., NI, M., WANG, Z. & YANG, H.

1/11/17 → 31/10/21

RIF: Rapid Detection and Synergetic Disinfection of Bioaerosols Using Far UVC and Negative Air Ions: Mechanistic and Field Studies

LAI, C. K. A., CHAN, C. K., CHAN, C., GEN, M., LEE, P. K. H., LI, I. W. S. & TONG, J.

30/06/21 → ...

CRF: Reducing Transmission of Novel Coronavirus and Other Infectious Diseases using Food Waste-derived Medical Textiles via Electrospinning for Healthcare Apparel and Personal Protective Equipment

LIN, S. K. C., CHAN, C. K., CHAO, C. Y. H., CHOPRA, S. S., DAOUD, W., LEU, S. Y., NING, Z. & TSO, C. Y.

1/06/21 → ...

DON_RMG: Scanning Electron Microscopy (SEM) for Energy and Environmental Researches - RMGS

CHAN, C. K.

1/03/20 → ...

GRF: Sulfate Formation via Photosensitized Reactions of Biomass Burning Compounds

CHAN, C. K.

1/01/22 → ...

NSFC-SRI: 无机硝酸盐对液相反应生成棕碳的影响

CHAN, C. K.

1/01/19 → ...

SZGov-SRI: 机动车尾气二次有机气溶胶生成潜势的隧道测试研究

CHAN, C. K.

8/07/16 → ...

MainGov: 海-陸大氣物理化學相互作用及其對粵港澳大灣區空氣質量的影響研究

CHAN, C. K., NAH, E. M. T. & WANG, X.

1/01/20 → ...

NSFC-SRI: 硝酸盐光解反应在乙二醛水相氧化形成SOA中的影响

CHAN, C. K.

1/01/21 → ...

NSFC-SRI: 餐饮油烟二次有机气溶胶生成的模拟研究

CHAN, C. K.

1/01/17 → 31/12/20