Academician Pao-Kuan Wang 王寶貫院士

Distinguished Visiting Chair
Research Center for Environmental Changes, Academia Sinica
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EDUCATION

Ph.D.(Atmospheric Sciences), 1978 -- University of California-Los Angeles
M.S.(Atmospheric Sciences), 1975 -- University of California-Los Angeles
B.S.(Atmospheric Sciences), 1971 -- National Taiwan University

PROFESSIONAL SOCIETY MEMBERSHIP

American Meteorological Society
American Geophysical Union
European Geophysical Union

EMPLOYMENT

2020-Date	Distinguished Visiting Chair
2013-2019	Director and Distinguished Research Fellow, Research Center for Environmental Changes, Academia Sinica
1988-2016	Professor, University of Wisconsin-Madison
1984-1988	Associate Professor, University of Wisconsin-Madison
1980-1984	Assistant Professor, University of Wisconsin-Madison
1980	Adjunct Assistant Professor, UCLA
1978-1980	Research Atmospheric Physicist, UCLA
1973-1978	Graduate Research Meteorologist, UCLA

UNIVERSITY ADMINISTRATIVE POSITIONS

Chairman, Air Resources Management Program, UW-Madison (1998-2002)
Chairman, Fellowship Committee (Physical Sciences Division), UW-Madison (1997-2002)
Chairman, Dept. of Atmospheric and Oceanic sciences, UW-Madison (1994-1997)
Associate Chair, Undergrad. Affairs, Dept. of Meteorology, UW-Madison (1990-1992)
Associate Chair, Graduate Affairs, Dept. of Meteorology, UW-Madison (1986-1988)

Professional Associations

Advisory Committee, Research Center for Environmental Change, Academia Sinica
Principal Lecturer, EUMETSAT Deep Convective Storms Workshop, Istanbul, Turkey (May 2012)
Principal Lecturer, EUMETSAT Deep Convective Storms Workshop, Prague, Czech Republic (August 2010)
Research Chair Professor, National Taiwan University (summer 2005, 2007, 2008)
Chairman, Cloud Physics Committee, American Meteorological Society (1991-1993)
Visiting Professor, UCLA (Spring 1988)
Visiting Professor, J. Gutenberg University of Mainz-Germany (Spring 1993)
Visiting Professor, National Taiwan University (Fall 1993)
Visiting Professor, MIT (Fall 1997)
Visiting Professor, University of Ferrara-Italy (2001)
Visiting Professor, Max-Planck Institute for Chemistry-Germany (2003)
Advisory Committee, Interactions in Cosmic and Atmospheric Particle Systems (ICAPS), European Space Agency
Advisory Committee, Research Center of Ocean Margin (RCOM), University of Bremen, Germany
Advisory Committee, Center for Marine Environmental Sciences (MARUM), University of Bremen, Germany
Panelist, NSF Major Research Instrumentation Program
Panelist, EPA Scientific Review Panel - Atmospheric Physics & Chemistry (since 1982)
U.S. delegation, US-China Cooperation Program for Climate Studies, 1987.
NOAA Review Panel for Weather Modification Program
Technical Consultant (filtration technology), Nelson Industries/Fleetguard-Cummins Filtration

Editorship

Associate Editor, *Atmospheric Research*
Editor, *European Physical Journal Plus*
Editor (Geophysics), *Il Nuovo Cimento C*
International Advisory Board, *Terrestrial, Atmospheric and Oceanic Sciences*
Editorial advisory board, Versita Publishing (*Environmental Studies*), UK
Consulting Editor, McGraw-Hill *Encyclopedia of Science and Technology*

Awards and Honors

Samuel C. Johnson Distinguished Fellowship, 1992
Teaching Excellence, Dept. of Meteorology, UW-Madison, 1992
Alexander von Humboldt Senior Research Award (Germany), 1993

Fellow, American Meteorological Society, 2005

Fellow, Taiwan (ROC) Meteorological Society, 2008

Academician, Academia Sinica, Taiwan (ROC), 2018

中國時報 1996 開卷十大好書（天與地，牛頓出版）, 1996

第一屆吳大猷科普著作獎佳作（洞察，天下文化）, 2002

行政院新聞局金鼎獎佳作（洞察，天下文化）, 2002

行政院新聞局金鼎獎佳作（微塵大千，經典雜誌）, 2005

PUBLICATIONS

BOOKS AND BOOK CHAPTERS

1. Wang, P. K., 1985: Air Pollutant Measurements. Chap. 22 in *Handbook of Applied Meteorology*, D. D. Houghton, ed., Wiley Interscience, 667-678.
2. Wang, P. K., and De'er Zhang, 1991: Reconstruction of the 18th century precipitation of Nanjing, Suzhou, and Hangzhou using the Clear and rain Records. in *Climate Since 1500 AD*, R. S. Bradley and P. D. Jones, Eds., Routledge, London, 184-209.
3. Winkler, M., and P. K. Wang, 1994: The late Pleistocene and Holocene climate of China: A review of biogeologic evidence and a comparison with GCM climate simulations. in *Global Climates Since Last Glacial Maximum*, Wright et al., eds, Univ. of Minnesota Press, 221-264.
4. Wang, Pao K., 2002: *Ice Microdynamics*. Academic Press, 273pp.
5. Wang, Pao K., 2003: Acid Rain and Precipitation Chemistry. *Encyclopedia of Water Science*, Marcel-Dekker.
6. Wang, Pao K., 2004: Atmospheric water vapor. McGraw-Hill Y*ear Book of Science & Technology 2004*, 14-16. McGraw-Hill.
7. Wang, Pao K., 2005: Isentropic Modeling of Atmospheric Motions. in *2005 Yearbook of Science and Technology,* McGraw-Hill (in press)
8. Wang, Pao K., 2007: The Wisconsin Dynamical/Microphysical Model (WISCDYMM) and the use of it to interpret satellite-observed storm dynamics, in *Measuring Precipitation from Space EURAINSAT and the Future.* Edited by V. Levizzani, Peter Bauer, and F. J. Turk, Springer, 435-446.
9. Wang, Pao K., 2009: Jumping cirrus above severe storms. In *2009 Yearbook of Science and Technology,* McGraw-Hill, 187-190.
10. Wang, Pao K., Hsinmu Lin, Hui-Chun Liu, Mihai Chiruta, and Robert E. Schlesinger, 2009: Recent advances in research on micro- to storm-scale ice microphysical processes in clouds. In *Recent Progress in Atmospheric Sciences*, K. N. Liou and M. D. Chou, Ed., 419-437.
11. Wang, Pao K., 2013: *Physics and Dynamics of Clouds and Precipitation*. Cambridge University Press, 467 pp.
12. **Wang, Pao K., 2021: *Motions of Ice Hydrometeors in the Atmosphere Numerical Studies and Implications.* Springer Nature Press (Germany), 176 pp. (ISBN 978-981-334-431-0)**

Papers Published in Refereed Journals

Cloud Physics and Dynamics

1. Wang, P. K., and H. R. Pruppacher, 1977a: Acceleration to terminal velocity of cloud and rain drops. *J. Appl. Meteor., 16*, 275-280.
2. Martin, J. J., P. K. Wang, H. R. Pruppacher, and R. L. Pitter, 1981: A numerical study of the effect of electric charges on the efficiency with which planar ice crystals collect super cooled water drops. *J. Atmos. Sci., 38*, 2462-2469.
3. Wang, P. K., 1982: Mathematical description of the shape of conical hydrometeors. *J. Atmos. Sci.*, *39*, 2615-2622.
4. Wang, P. K., and S. M. Denzer, 1983: Mathematical description of the shape of plane hexagonal snow crystals. *J. Atmos. Sci., 40*, 1024-1028.
5. Wang, P. K., 1983a: On the definition of collision efficiency of atmospheric particles. *J. Atmos. Sci., 40*, 1051-1052.
6. Wang, P. K., C. H. Chuang, and N. L. Miller, 1985: Electrostatic, temperature, and vapor density fields surrounding stationary columnar ice crystals. *J. Atmos. Sci., 42*, 2371-2379.
7. Rasmussen, R., C. Walcek, H. R. Pruppacher, S. Mitra, J. Lew, V. Levizzani, P. K. Wang, and U. Barth, 1985: A wind tunnel investigation of the effect of an external, vertical electric field on the shape of electrically uncharged rain drops. *J. Atmos. Sci., 42*, 1647-1652.
8. Wang, P. K., 1987: Two dimensional characterizations of polygonally symmetric particles. *J. Colloid Interf. Sci., 117*, 271-281.
9. Wang, P. K., T. J. Greenwald, and Jianlu Wang, 1987: A three parameter representation of the shape and size distributions of hailstones - A case study. *J. Atmos. Sci., 44*, 1062-1070.
10. Wang, P. K., 1988: A convective diffusion model for the scavenging of submicron particles by snow crystals of arbitrary shapes- some comments and corrections. *Atmos. Res. 23*, 195-198.
11. Ji, Wusheng, and P. K. Wang, 1989: Numerical simulation of three dimensional unsteady viscous flow past hexagonal ice crystals in the air - Preliminary results. *Atmos. Res. 25,* 539-557
12. Ji, W., and P. K. Wang, 1991: Numerical simulation of three-dimensional unsteady viscous flow past finite cylinders in an unbounded fluid at low intermediate Reynolds numbers. *Theor. Compu. Fluid Dynam.*, *3,* 43-59.
13. Wang, P. K., 1992: Theoretical studies on the convective diffusion around two- and three-dimensional objects. *Trends in Heat and Mass Transfer*, 2, J. Menon, ed., 173-186.
14. Johnson, D. E., P. K. Wang, and J. M. Straka, 1993: Numerical simulation of the 2 August 1981 CCOPE supercell storm with and without ice microphysics. *J. Appl. Meteor., 32*, 745-759.
15. Johnson, D. E., P. K. Wang, and J. M. Straka, 1995: A study of microphysical processes in the 2 August 1981 CCOPE supercell storm. *Atmos. Res. 33*, 93-123.
16. Magradze, G. J., and P. K. Wang, 1995: A note on the closed-form mathematical description of the volume of conical hydrometeors. *Atmos. Res. 39*, 275-278.

17. Wang, P. K., and Wusheng Ji, 1997: Simulation of three-dimensional unsteady flow past ice crystals *J. Atmos. Sci., 54*, 2261-2274.
18. Wang, P. K., 1997: characterization of ice particles in clouds by simple mathematical expressions based on successive modification of simple shapes. *J. Atmos. Sci. 54*, 2035-2041.
19. Lin, Hsin-Mu, and Pao K. Wang, 1997: A numerical study of microphysical processes in the 21 June 1991 Northern Taiwan mesoscale precipitation system. *Terres. Atmos. Oceanic Sci*., 8, 385-404.
20. Ji, Wusheng, and Pao K. Wang, 1998: On the ventilation coefficients of falling ice crystals at low-intermediate Reynolds numbers. *J. Atmos. Sci*., 56, 829-836.
21. Wang, P. K., 1999: Three-dimensional representations of hexagonal ice crystals and hail particles of elliptical cross-sections, *J. Atmos. Sci*., 56, 1089-1093.
22. Wang, P. K., and Wusheng Ji, 2000: Collision Efficiencies of Ice Crystals at Low-Intermediate Reynolds Numbers Colliding with Supercooled Cloud Droplets: A Numerical Study. *J. Atmos. Sci*., 57, 1001-1009.
23. Wang, P. K., 2002: The Kansas Green Thunderstorm of 4 October 1998. . *Bull. Amer. Meteor. Soc*., *83*, 355-357.
24. Wang, P. K., 2002: Shape and Microdynamics of Ice Particles and Their Effects in Cirrus Clouds. Invited monograph in *Advances in Geophysics*, Vol. *45*, Academic Press, 1-265.
25. Liu, H. C., P. K. Wang, and R. E. Schlesinger, 2003a: A Numerical Study of Cirrus Clouds. Part I: Model Description. *J. Atmos. Sci*., *60,* 1075-1084.
26. Liu, H. C., P. K. Wang, and R. E. Schlesinger, 2003b: A Numerical Study of Cirrus Clouds. Part II: Effects of Ambient Temperature and Stability on Cirrus Evolution. *J. Atmos. Sci*., *60*, 1097-1119.
27. Chiruta, M., and P. K. Wang, 2003: On the capacitance of bullet rosette crystals. *J. Atmos. Sci*., *60*, 836-846.
28. Wang, P. K., 2003: Moisture Plumes above Thunderstorm Anvils and Their Contributions to Cross Tropopause Transport of Water Vapor in Midlatitudes. *J. Geophys. Res., 108*(D6), 4194, doi: 10.1029/2003JD002581, 2003.
29. Wang, P. K. 2004: A cloud model interpretation of jumping cirrus above storm top, *Geophys. Res. Lett.*, *31,* L18106, doi:10.1029/2004GL020787
30. Chiruta, M., and P. K. Wang, 2005: The capacitance of solid and hollow hexagonal ice columns. *Geophys. Res. Lett.,* VOL. *32*, L05803, doi:10.1029/2004GL021771, 2005.
31. Wang, Pao K., 2005: The Wisconsin Dynamical/Microphysical Model (WISCDYMM) and the use of it to interpret satellite-observed storm dynamics, in *MEASURING PRECIPITATION FROM SPACE EURAINSAT AND THE FUTURE. Edited by V. Levizzani, et al.,* bibl. (in press by Kluwer Academic Publishers)
32. Setvak, M., R. M. Robin and P. K. Wang, 2007: Contribution of MODIS instrument to the observations of deep convective storms and stratospheric moisture detection in GOES and MSG imagery (accepted for publication in *Atmospheric Research*)
33. Lin, Hsin-mu, Pao K. Wang, and Robert E. Schlesinger, 2005: Three-Dimensional Nonhydrostatic Simulations of Summer Thunderstorms in the Humid Subtropics versus High Plains. *Atmos. Res., 78,* 103-145.

34. Wang, Pao K. 2007: The Thermodynamic Structure atop a Penetrating Convective Thunderstorm. *Atmospheric Research*, *83,* 254-262.

35. Setvak, M., D. T. Lindsey, R. Rabin, and P. K. Wang, 2008: Indication of water vapor transport into the lower stratosphere above midlatitude convective storms: Meteosat Second Generation satellite observations and radiative transfer model simulations, *Atmos. Res., 89,* 170-180.

36. Chiou-Jiu Chen and Pao K. Wang, 2009: Diffusion growth of solid and hollow hexagonal ice columns. *Il Nuovo Cimento, 124,* 87-97.

37. Wang, Pao K., M. Setvak, W. Lyons, W. Schmid, and H. Lin, 2009: Further evidence of deep convective vertical transport of water vapor through the tropopause, *Atmos. Res*., *94,* 400-408.

38. Martin Setvák, Daniel T. Lindsey, Petr Novák, Pao K. Wang, Michaela Radová, Jochen Kerkmann[5], Louie Grasso[2], Shih-Hao Su[3], Robert M. Rabin[6,7], Jindich Šástka, Zdenêk Charvat, Hana Kyznarová, 2010: Cold-ring-shaped cloud top features atop convective storms, *Atmospherci Research*, *97,* 80-96.

39. Wang, P. K., M. Setvak, R. M. Rabin, H. M. Lin and S. H. Su, 2010: Ship wave signature at the cloud top of deep convective storms. *Atmos. Res*., *97,* 294-302.

40. Flossmann, A. I., V. Levizzani, and P. K. Wang, 2010: On the fundamental role of Hans Pruppacher for cloud physics and cloud chemistry. *Atmos. Res.*, *97,* 393-395.

41. Wang, P. K., Hsin-Mu Lin; Shih-Hao Su., 2010: The Impact of Ice Microphysical Processes on the Life Span of a Midlatitude Supercell Storm, *Atmos. Res*. *97,* 450-461.

42. Wang, P. K., S, H. Su, Z. Charvat, J. Stastka, and H. M. Lin, 2011: Cross tropopause transport of water by mid-latitude deep convective storms: A review. Terr. *Atmos, Ocean. Sci.*, *22,* 447-462.

43. Kubicek, A., and P. K. Wang, 2012: A numerical study of the flow fields around a typical conical graupel fallin at various inclination angles. *Atmos. Res., 118,* 15-26.

44. Setvak, M., K. Bedka, D. T. Lindsey, A. Sokol, Z. Charvat, J. Stastka, and P. K. Wang, 2013: A-Train observations of deep convective storm tops. *Atmos. Res., 123,* 229-248.

45. Wang, P. K., and A. Kubicek, 2013: Flow fields of graupel falling in air. *Atmos. Res., 124,* 158-169.

46. Cheng, K. Y., and P. K. Wang, 2013: A numerical study of the flow fields around falling hails. *Atmos. Res., 132-133,* 253-263.

47. Cheng, K. Y., Wang, Pao K., and Wang, Chen-Kang, 2014: A Numerical Study on the Ventilation Coefficients of Falling Hailstones. *J. Atmos. Sci., 71,* 2625-2634.

48. Hashino, Tempei, Chiruta, Mihai, Polzin, Dierk, Kubicek, Alexander, and Wang, Pao K., 2014: Numerical simulation of the flow fields around falling ice crystals with inclined orientation and the hydrodynamic torque. *Atmos. Res., 150,* 79-96.

49. Panda J., H. Singh, P. K. Wang, R. K. Giri and A. Routray, 2015: A qualitative study of some of the meteorological features during tropical cyclone PHET using satellite observations and WRF modeling system. *J. Indian Soc. Remote Sensing,* 11 July 2014, DOI: 10.1007/s12524-014-0386-4

50. Hashino, T., M. Chiruta, D. Polzin, A. Kubicek and P. K. Wang, 2014: Numerical simulation of the flow fields around falling ice crystals with inclined orientation and the hydrodynamic torque. Atmos. Res., 150, 79-96.

51. Chueh, Chi-Cheh and P. K. Wang, 2015: A numerical study of flow fields of lobed hailstones falling in air. *Atmos. Res.*, *160*, 1-14.
52. Wang, P. K., K. Y. Cheng, M. Setvak and C. K. Wang, 2015: The origin of the gullwing-shaped cirrus above an Argentinian thunderstorm as seen in CALIPSO images. (Submitted to *J. Geophys. Res*.,)
53. Cheng, K. Y., P. K. Wang and T. Hashino, 2015: A Numerical Study on the Attitudes and Aerodynamics of Freely Falling Hexagonal Ice Plates. *J. Atmos. Sci*., *72*, 3685-3698.
54. Hashino, T., K. Y. Cheng, C. C. Chueh and P. K. Wang, 2016: Numerical Study of Motion and Stability of Falling Columnar Crystals. *J. Atmos. Sci., 73,* 1923-1942.
55. Fernandez-Gonzalez, S., P. K. Wang, E. Gascon, F. Valero, and J. L. San Chez, 2016: Latent cooling and microphysics effects in deep convection. *Atmos. Res., 180,* 189-199.
56. Wang, P. K., K. Y. Cheng, M. Setvak and C. K. Wang, 2016: The origin of the gullwing-shaped cirrus above an Argentinian thunderstorm as seen in CALIPSO images. *J. Geophys. Res. Atmos.,121*, doi:10.1002/2015JD024111
57. Hernandez-Gonzalez, S., P. K. Wang, E. Gascon, F. Valero, and J. L. Sanchez, 2016: Latent cooling and microphysics effects in deep convection, Atmos. Res., 180, 189-199.
58. Huang, Y.-C., and Pao K. Wang, 2017: The hydrometeor partitioning and microphysical processes over the Pacific Warm Pool in numerical modeling. Atmos. Res., 183, 308-321.
59. Chueh, C.-C., Wang, Pao K. and Hashino, T., 2017: A preliminary numerical study on the time-varying fall attitudes and aerodynamics of freely falling conical graupel particles. Atmos. Res., 183, 58-72
60. Sunny Kant, Jagabandhu Panda, Ritesh Gautam, Pao K. Wang and S. P. Singh, 2017: Significance of Aerosols Influencing Weather and Climate over Indian Region. Int. J. Earth and Atmos. Sci., 4, 1-20.
61. Seela, Balaji Kumar, Jayalakshmi Janapati, Pay-Liam Lin, K. Krishna Reddy, Ryuichi Shirooka, and Pao K. Wang, 2017: A comparison study of summer season raindrop size distribution between Palau and Taiwan, two islands in Western Pacific. J. Geophys. Res., 122, 11787-11805.
62. Chueh, C.-C., Wang, Pao K. and Hashino, T., 2018: Numerical Study of Motion of Falling Conical Graupel. Atmos. Res., 199, 82-92.
63. Sunny Kant, Jagabandhu Panda, Shantanu Kumar Pani and Pao K. Wang, 2018: Long-term study of aerosol-cloud-precipitation interaction over the eastern part of India using satellite observations during pre-monsoon season. Theoretical and Applied Climatology., pp 1-22, https://doi.org/10.1007/s00704-018-2509-2
64. Nettesheim, J., and P. K. Wang, 2018: A Numerical Study on the Aerodynamics of Freely Falling Planar Ice Crystals. Journal of the Atmospheric Science (accepted June 2018)
65. Wang, P. K., and C. C. Chueh: A numerical study on the ventilation coefficients of falling lobed hailstones. Atmos. Res. 234 (2020), 104737. https://doi.org/10.1016/j.atmosres.2019.104737

Aerosol Physics and Chemistry

1. Wang, P. K., and H. R. Pruppacher, 1977b: An experimental determination of the efficiency with which aerosol particles are collected by water drops in subsaturated air. *J. Atmos. Sci., 34*, 1664-1669.
2. Wang, P. K., S. N. Grover, and H. R. Pruppacher, 1978: On the effect of electric charges on the scavenging of aerosol particles by cloud and small rain drops. *J. Atmos. Sci., 35*, 1735-1743.
3. Wang, P. K., 1979a: Particular solutions to the steady-state diffusion equation and their application to aerosol scavenging problems. *Papers Meteor. Res., 2,* 37-42.
4. Wang, P. K., and H. R. Pruppacher, 1980a: The effect of an external electric field on the scavenging of aerosol particles by clouds and small rain drops. *J. Coll. Interf. Sci., 75*, 286-297.
5. Wang, P. K., and H. R. Pruppacher, 1980b: On the efficiency with which aerosol particles of radius less than one micron are collected by columnar ice crystals. *Pure Appl. Geophys., 118*, 1090-1108.
6. Martin, J. J., P. K. Wang, and H. R. Pruppacher, 1980a: On the efficiency with which aerosol particles of radius larger than 0.1 micron are collected by simple ice plates. *Pure Appl. Geophys., 118*, 1109-1129.
7. Martin, J. J., P. K. Wang, and H. R. Pruppacher, 1980b: A theoretical determination of the efficiency with which aerosol particles are collected by simple ice plates. *J. Atmos. Sci., 37*, 1628-1638.
8. Martin, J. J., P. K. Wang, and H. R. Pruppacher, 1980c: A theoretical study of the effect of electric charges on the efficiency with which aerosol particles are collected by ice crystal plates. *J Colloid Interf. Sci., 78*, 44-56.
9. Walcek, C., P. K. Wang, J. H. Topalian, S. K. Mitra, and H. R. Pruppacher, 1981: An experimental test of a theoretical model designed to determine the rate at which freely falling water drops scavenge SO_2 in air. *J. Atmos. Sci., 38*, 871-876.
10. Wang, P. K., 1983b: Collection of aerosol particles by conducting spheres in an external electric field - continuum regime approximation. *J. Coll. Interf. Sci., 94*, 301-318.
11. Wang, P. K., 1984: An investigation of the relationship between climatic conditions and the occurrence of flying locusts infestation in China in historical time. *Abst. 10th Int. Congress Biometeor.,* Tokyo, Japan, July 26-30, 1984, 246.
12. Wang, P. K., 1985: Air pollutant measurements. in *Handbook of Applied Meteorology*, D. D. Houghton, Ed., Chap.22, 667-678. Wiley Interscience, New York.
13. Wang, P. K., 1985b: A convective diffusion model for the scavenging of submicron particles by snow crystals of arbitrary shapes. *J. de Rech. Atmos., 19*, 185-191.
14. Wang, P. K., 1985c: Brownian diffusion of charged fine particles surrounding a conducting cylinder in the presence of an external electric field. *J. Aerosol Sci., 17*, 201-209.
15. Miller, N. L., and P. K. Wang, 1989: A theoretical determination of the efficiency with which aerosol particles are collected by falling columnar ice crystals. *J. Atmos. Sci., 46*, 1656-1663.
16. Sauter, D. P., and P. K. Wang, 1989: An experimental study of the scavenging of aerosol particles by natural snow crystals. *J. Atmos. Sci., 46,* 1650-1655.

17. Miller, N. L., and P. K. Wang, 1991: Comparison of the efficiencies with which aerosol particles are collected by planar and columnar ice crystals. *Atmos. Environ., 25A*, 2593-2606.
18. Wang, P. K., and T. Jaroszczyk, 1991: The grazing collision angle of aerosol particles colliding with infinitely long circular cylinders, *Aerosol Sci. Tech., 15,* 149-155.
19. Wang, P. K., and Ho Lin, 1995: Comparison between the collection efficiency of aerosol particles by individual water droplets and ice crystals in a subsaturated atmosphere. *Atmos. Res. 38*, 381-390.
20. Liu, G. Z., and P. K. Wang, 1996: Numerical investigation of viscous flow fields around multi-fiber filters. *Aerosol Sci. and Tech*., *25*, 375-391.
21. Liu, G. Z., and P. K. Wang, 1997: Pressure drop and interception efficiency of multi-fiber filters. *Aerosol Sci. and Tech*., *25*, 375-391.
22. Kant1, Sunny, Jagabandhu Panda, Ritesh Gautam, Pao K. Wang and S. P. Singh, 2017: Significance of aerosols influencing weather and climate over Indian region. Int. J. Earth and Atmos. Sci., 4, 1-20.
23. Seela, B. K., Janapati, J., Lin, P.-L., Wang, P. K., & Lee, M.-T., 2018: Raindrop size distribution characteristics of summer and winter season rainfall over north Taiwan. Journal of Geophysical Research: Atmospheres, 123, (20), 11, 602–11, 624. https://doi.org/10.1029/2018JD028307
24. Jayalakshmi Janapati, Balaji Kumar Seela, Pay-Liam Lin, Pao K.Wang and Utpal Kumar. An assessment of tropical cyclones rainfall erosivity for Taiwan Scientific Reports | (2019) 9:15862 | https://doi.org/10.1038/s41598-019-52028-5
25. Jayalakshmi Janapati, Balaji Kumar Seela, Pay-Liam Lin, Pao. K. Wang, Chie-Huei Tseng, K. Krishna Reddy, Hiroyuki Hashiguchi, Lei Feng, Subrata Kumar Das, and C. K. Unnikrishnan. Raindrop size distribution characteristics of Indian and Pacific Ocean tropical cyclones observed at India and Taiwan sites. *J. Meteor. Soc. Japan*. (2020-04)

Historical Climate and Geophysical Phenomena

1. Wang, P. K., 1979: Meteorological records from ancient chronicles of China. *Bull. Amer. Meteor. Soc., 60*, 313-317.
2. Wang, P.K., and G. L. Siscoe, 1980: The ancient Chinese observations on the physical phenomena attending total solar eclipse. *Solar Phys., 66*, 187-193.
3. Wang, P. K., 1980a: On the possible relationship between winter thunder and climatic changes in China over the past 2,200 years. *Climatic Change, 3*, 37-46.
4. Wang, P. K., and J. H. Chu, 1982: Some unusually lightning events reported in ancient Chinese literature. *Weatherwise, 35*, 119-122.
5. Wang, P. K., and De'er Zhang, 1988: An introduction of some historical governmental weather records in the 18thand 19th centuries of China. *Bull. Amer. Meteor. Soc., 69,* 753-758.
6. Wang, P. K., with COHMAP Members, 1988: Climatic changes of the last 18,000 years: Observations and model simulations. *Science, 241,* 1043-1052.
7. Zhang, De'er, and P. K. Wang, 1989: Reconstruction of the 18th century summer precipitation series of Nanjing, Suzhou, and Hangzhou using the Clear and Rain Records of Qing Dynasty. *Acta Meteor. Sinica, 3,* 261-278.

8. Peng, G., and P. K. Wang, 1989: Influence of the antarctic sea-ice on the Northwest Pacific Subtropical High and its ocean-atmosphere circulation background. *Kexue Tongbao, 1989*, No.1, 56-58.
9. Zhang, De'er, and P. K. Wang, 1991: A study on the reconstruction of the 18th century meiyu (plum rains)? Activity of Lower Changjiang (Yangtze) region of China. *Science in China (B), 34,* 1237-1245.
10. Wang, Pao K., and De'er Zhang, 1990: Use of historical documents of China to reconstruct past climate. *World Resource Rev., 2*, 1-14.
11. Wang, P. K., and De'er Zhang, 1991: Reconstruction of the 18th century precipitation of Nanjing, Suzhou, and Hangzhou using the Clear and rain Records in *Climate Since 1500 AD*, R. S. Bradley and P. D. Jones, Eds., Routledge, London, 184-209.
12. Wang, P. K., and De'er Zhang, 1992: Recent studies of the reconstruction of East Asian monsoon climate in the past using historical literature of China. *J. Meteor. Soc. Japan, 70*, 423-446.
13. Winkler, M., and P. K. Wang, 1994: The late Pleistocene and Holocene climate of China: A review of biogeologic evidence and a comparison with GCM climate simulations in Global Climates Since Last Glacial Maximum, Wright et al., eds, *Univ. of Minnesota Press*, 221-264.
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