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Education

National Central University, Institute of Atmospheric physics, **PhD** (Fall 1992 - Summer 1996).

Advisor: Ching Sen Chen

Appointments

Chief Executive Officer, Air Quality Research Center/RCEC, Academia Sinica (02/2024–present)

Research Fellow, Research Center for Environmental Changes (RCEC), Academia Sinica, Taipei, Taiwan (07/2015 – present)

Adjunct Professor, TIGP program, AS-NCU-NTU, Taiwan (02/2024-present)

Adjunct Professor, Dep. of Atmos. Sci., National Central Uni., Taiwan (09/2015-present)

Associate Research Fellow, RCEC, Academia Sinica (2010-2015)

Adjunct Associate Professor, Dep. of Atmos. Sci., National Central Uni., Taiwan (2010 – 2015)

Assistant Research Fellow, RCEC, Academia Sinica (2006-2010)

Adjunct Assistant Professor, Dep. of Atmos. Sci., National Central Uni., Taiwan (2006- 2010)

Honors & Awards

- 2024: Annual Research Highlight in 2023, RCEC, Academia Sinica
- 2023: Invited talk, International symposium on Grids and Clouds (ISGC)-Joint DMCC, UMD & Environmental Computing Workshop 19-24 March 2023, Taipei, Taiwan
- 2022: Annual Research Highlight in 2021, RCEC, Academia Sinica
- 2020: Invited talk: 3rd Training Workshop of UND (Deeper Understanding of Natural Disaster – Instrumental for Disaster Mitigation). 15-17 January, Kuala Lumpur, Malaysia
- 2019: **Keynote speaker**, International Symposium on Grids and Cloud (ISGC)-Disaster Mitigation 31 March, 2019, Taiwan. (<http://event.twgrid.org/isgc2019/keynote-speakers.html>)
- 2019: **Invited talk**, Application of numerical model on extreme weather and regional climate changes studies, 18-22, Feb., 2019, APAN (Asia Pacific Advance Network) 47th , Daejon, Korea.
- 2018: **Keynote speaker**: The 5th international conference on Information and Communication Technologies for Disaster Management (ICTDM), Tohoku University, Sendai, Japan. 4-7 December, 2018, (<http://ict-dm2018.net/program/keynotes/>)
- 2017: Annual Research Highlight, RCEC, Academia Sinica

- 2014: Best Article Award, 26th The Chinese Institute of Environmental Engineering conference, 2014
- 2012: Ministry of Science and Technology, Short-term overseas visiting Award
- 2009: Best article Award, 10th Aerosol conference, China & 6th Cross-Strait aerosol conference
- 2009: Most Cited Article Award (2004-2008), Journal: Terrestrial, Atmospheric & Oceanic Sciences
- 2006: Annual Research Highlight, RCEC, Academia Sinica
- 1996: Honorary member of the Phi Tau Phi Scholastic Society of the Republic of China,

Other Activities

- 2022-May.~2023-Apr. International Journal: “Frontiers in Environmental Science” special issue Guest Editor”
- 2020-Mar.~present, Editorial Board Members, International Journal: “Atmosphere”
- 2021-Jan.~Dec. 2021, Co-Chair of Atmospheric Science review committee, Department of Natural Sciences and sustainable development, Ministry of Science of Technology (MOST)
- 2019-Jan.~Dec.2021, Panel of Atmospheric Science review committee, Department of Natural Sciences and sustainable development, MOST
- 2020-Nov.~ 2022-Oct., Advisory Board, Department of Information Technology Services, Academia Sinica,
- 2020-Jan.~Dec. 2021, Panel of review committee, Earth Science Research Promotion Center, MOST
- 2016-Jan. ~present, Chair of the Academic Affairs Committee for Earth System Science Program, Taiwan International Graduate Program (TIGP-ESS), Academia Sinica
- 2017-Aug.~2020-July, Associate Editors, Journal: Terrestrial, Atmospheric and Oceanic Sciences (TAO)
- 2015-May~2017 Apr., Secretary General, Meteorological Society of the Republic of China
- 2014-Jan~2014 Nov.,Member, Admission Committee for Earth System Science Program, Taiwan International Graduate Program (TIGP-ESS), Academia Sinica,
- 2010-2016 , Board member, Taiwan Group on Earth Observation
- 2011-2017, Board member, Environmental Protection, Taiwan
- 2015 , External Examiner for Doctoral Thesis, Earth System and GeoInformation Science, The Chinese University of Hong Kong Graduate School

A. Major Achievements and Contributions (2020-present)

Over the past few years, my major research has focused on studying urban pollution and long-range transport issues, such as biomass burning in IndoChina and the transport of pollutants following the Asian continental outflow. I have conducted several projects under the support of

Academia Sinica (AS) and the National Science and Technology Council (NSTC) in the last few years. The major research accomplishments also related to those fields, including (1) Impact of aerosols on fog/clouds microphysics and precipitation over western Taiwan (NSTC, 2023-2026) (2) Improvement of a numerical model simulation on air pollutants formation and transportation over western Taiwan (NSTC, 2021-2024) (3) Trend-and-Variation Analyses on the Changes of Water Resources and the Eco-sociology Functions in Taiwan Watershed Ecosystem (AS, 2022-2024) (4) Joint Academia Sinica Grand Challenge Program (AS, 2021-2026): Diagnosis and Attribution of Air Pollution in Central-Western Taiwan: From Physical and Chemical Mechanism to Mitigation Strategy.

(1) Temporal coherence in particulate matter in East Asian outflow regions: fingerprints of ENSO and Asian dust

Understanding temporal coherence in particulate matter (PM) pollution across East Asian outflow regions is crucial for collaborative efforts in addressing air pollution challenges. In this study, we analyze daily PM exceedance patterns using ground-based measurements over the past two decades, focusing on the influence of El Niño-Southern Oscillation (ENSO) and Asian dust activity. ENSO-related coherent PM exceedance shows lower occurrence during El Niño compared to La Niña in spring, due to weakened continental outflows and increased precipitation. Temporal distribution of dust-related coherent PM exceedance closely mirrors springtime dust activity in source regions, indicating significant dust emission impact on outflow regions. Our findings have implications for climate variability and the assessment of multi-decade model simulations. **(Kueh et al. 2023)**

(2) Effects of transport on a biomass burning plume from Indochina during EMeRGe-Asia

The Indochina biomass burning (BB) season in springtime has a substantial environmental impact on the surrounding areas in Asia. In this study, we evaluated the environmental impact of a major long-range BB transport event on 19 March 2018 preceded by a minor event on 17 March 2018. Aircraft data obtained during the campaign in Asia of the Effect of Megacities on the transport and transformation of pollutants on the Regional to Global scales (EMeRGe) were available between 12 March and 7 April 2018. At the BB plume transport layer, the contribution of the long-range transported BB plume was as high as 30–80 % for most of the species (NO_y, NO_x, PM_{2.5}, BC, OH, O₃, and CO) over South China (SC), Taiwan, and the ECS. The combination of BB aerosol enhancement with cloud water resulted in a reduction of incoming shortwave radiation at the surface in the SC and ECS by 5-7% and 2-4%, respectively, which potentially has significant regional climate implications. **(Lin et al. 2023a)**

(3) Explore the mechanism of Air quality deterioration event over western Taiwan

Air pollution is typically at its lowest in Taiwan during summer. However, frequent episodes of air quality deterioration occur over the western plains of Taiwan when an easterly typhoon circulation interacts with the complex topographic structure of the island. We explored an episode of air quality deterioration that was associated with a typhoon between 15 and 17 July 2018, by using WRF-Chem model. The interaction between the typhoon's easterly flow and Taiwan's Central Mountain Range (CMR) resulted in stable weather conditions, weak wind speed, and a lee side vortex easily formed. The dynamic process for the wind direction changed given a reasonable

explanation why the observed SO_4^{2-} became the major contributor to $\text{PM}_{2.5}$ during the episode. SO_4^{2-} contribution proportions (%) to $\text{PM}_{2.5}$ at the coastal, urban, and mountain sites were $9.4 \mu\text{g}/\text{m}^3$ (30.5%), $12.1 \mu\text{g}/\text{m}^3$ (29.9%), and $11.6 \mu\text{g}/\text{m}^3$ (29.7%), respectively. Moreover, the variation of the boundary layer height had a strong effect on the concentration level of both $\text{PM}_{2.5}$ and ozone. We identified the combination of the lee vortex and land-sea breeze, as well as the boundary layer development, were the key mechanisms in air pollutants accumulation and transport over western Taiwan. As typhoons frequently occur around Taiwan during summer and fall, their effects on the island's air quality merit further attention. This study has been highlighted by the annual report (2022) of Academia Sinica. (Lin et al. 2021)

(4) Impacts of offshore wind farms on the atmospheric environment

Wind is one of the cleanest renewable energy resources. Through the “Thousand Wind Turbines Project”, Taiwan is planning to increase the proportion of power generation from renewable energy and has set a target of 5.7 GW for offshore wind by 2025. **However, the effects of future offshore wind farms (OWFs) over the Taiwan Strait on the atmospheric environment have not been evaluated.** This study is firstly examined the potential effects of proposed OWFs on the atmospheric environment if the OWFs had existed during Tropical Storm Haitang (2017) by using Weather Research and Forecasting (WRF) model. A small set of ensemble simulations was conducted to study the sensitivity of the ambient conditions in the region to the wind farm locations, the number and density of the turbines, and the initial time of simulations. Following the landfall and northward movement of Tropical Storm Haitang, a series of complex interactions between the typhoon circulation and the wind farm emerged, including small time slots of wake effect and mountain blocking effect. The combination of these rapidly changing OWFs-related effects contributed to a weak reduction in precipitation (-1.08 mm) and hub-height wind speed (-0.25 m s^{-1}), as well as minimal warming near the surface ($+0.13 \text{ }^\circ\text{C}$) over southern Taiwan. (Lee et al. 2022)

B: Publications (“*” corresponding author)

1. Kueh, Mien-Tze, **Chuan-Yao Lin***, Yi-Yun Chien, 2023: Temporal coherence in particulate matter in East Asian outflow regions: fingerprints of ENSO and Asian dust, *npj Climate and Atmospheric Science*, 6,201; <https://doi.org/10.1038/s41612-023-00530-z>
2. Ruiqing Du, Chun-Ho Liu, Xianxiang Li, **Chuan-Yao Lin**, 2023: Interaction among local flows, UHI, coastal winds, and complex terrain: Effect on urban-scale temperature and building energy consumption during heatwaves, *Energy & Buildings*, 303, 11376. <https://doi.org/10.1016/j.enbuild.2023.113763>
3. **Lin, Chuan-Yao***, Wan-Chin Chen, Yi-Yun Chien, Charles C. K. Chou, Chian-Yi Liu, Helmut Ziereis, Hans Schlager, Eric Förster, Florian Obsersteiner, Ovid O. Krüger, Bruna A. Holanda, Mira L. Pöhlker, Katharina Kaiser, Johannes Schneider, Birger Bohn, Klaus Pfeilsticker, Benjamin Weyland, Maria Dolores Andrés Hernández, John P. Burrows, 2023a: Effects of transport on a biomass burning plume from Indochina during EMERGE-Asia identified by WRF-Chem. *Atmos. Chem. Phys.*, 23, 2627–2647, 2023.

<https://doi.org/10.5194/acp-23-2627-2023>

4. **Lin, Chuan-Yao***, Wen-Mei Chen, Yang-Fan Sheng, Wei-Nai Chen, Chian-Yi Liu, **2023b**: Exploration of the Downward Transport Mechanisms of Biomass Burning Emissions from Indochina at the Low Boundary Layer in East Asia, *Atmospheric Environment*, **314**,120117 <https://doi.org/10.1016/j.atmosenv.2023.120117>
5. Lin Hao-Hsuan, Chau-Ren Jung, **Chuan-Yao Lin***, Ya-Chu Chang, Chia-Yun Hsieh, Pei-Chuan Hsu, Bao-Ru Chuang, Bing-Fang Hwang*, **2023**: Prenatal and Postnatal Exposure to Heavy Metals in PM2.5 and Autism Spectrum Disorder, *Environmental Research*, **237**,116874. <https://doi.org/10.1016/j.envres.2023.116874>
6. Du Ruiqing, Chung-Ho Liu, Xianxian Li and **Chuan-Yao Lin**, **2023**: Effect of Local Climate Zone (LCZ) and Building Category (BC) Classification on the Simulation of Urban Climate and Air-Conditioning Load in Hong Kong , *Energy*, **271**, 127004. <https://doi.org/10.1016/j.energy.2023.127004>
7. Tsung-Yu Lee, Chi-Cheng Chiu, Chia-Jeng Chen, **Chuan-Yao Lin**, Fuh-Kwo Shiah, **2023**: Assessing Future Availability of Water Resources in Taiwan based on the Budyko Framework. *Ecological Indicators*, 146, 109808. <https://doi.org/10.1016/j.ecolind.2022.109808>
8. Chuang, M.-T.; Chou, C.C.-K.; **Lin, C.-Y.**; Lee, J.-H.; Lin, W.-C.; Chen, W.-N.; Liu, C.-Y.; Chang, C.-C. 2023: Probing air pollution in the Taichung metropolitan area, Taiwan.Part 1: Comprehensive model evaluation and the spatial-temporal evolution of a PM2.5 pollution event. *Atmospheric Research*, 287, 106713. <https://doi.org/10.1016/j.atmosres.2023.106713>
9. Tsung-Yu Lee, Yu-Ting Wu, Mien-Tze Kueh, **Chuan-Yao Lin***, Yi-Ying Lin, and Yang-Fan Sheng, **2022**: Impacts of offshore wind farms on the atmospheric environment over Taiwan Strait during an extreme weather typhoon event. *Scientific Reports*,12:823. <https://doi.org/10.1038/s41598-022-04807-w>
10. Chih-Ying Chen, Nan-Ching Yeh, **Chuan-Yao Lin***,**2022**: Data Assimilation of Doppler Wind Lidar for the Extreme Rainfall Event Prediction over Northern Taiwan: A Case Study. *Atmosphere*, 13,987. <https://doi.org/10.3390/atmos13060987>
11. Jung Chien-Cheng, Charles, C. K. Chou, Y.-T. Huang, S.-Y.Chang, C.T. Lee, **C.-Y. Lin**, H.-C Cheung, W.-C., Kuo, C.-W. Chang, S.-C. Chang, **2022**: Isotopic signatures and source apportionment of Pb in ambient PM2.5. *Scientific Reports*.12:4343. <https://doi.org/10.1038/s41598-022-08096-1>
12. Cheng-Ku Yu, Wei-Fan Liu, Lin-Wen Cheng and **Chuan-Yao Lin**, **2022**: Mechanisms of Valley Precipitation Enhancement over Da-Tun Mountain, *Monthly Weather Review.*, **150**,1851-1871. <https://doi.org/10.1175/MWR-D-21-0195.1>
13. Zhang Nan, Daigee Shaw and **Chuan-Yao Lin**, **2022**: Implicit prices of job risk, climate, and air pollution: Evidence from Taiwan. *Climate Change Economics*, **225007**, DOI: [10.1142/S2010007822500075](https://doi.org/10.1142/S2010007822500075)
14. Yu-Lin Tsai, Tso-Ren Wu, Eric Yen, **Chuan-Yao Lin**, Simon C. Lin,**2022**: Parallel-Computing Two-Way Grid-Nested Storm Surge Model with Moving Boundary Scheme and Case Study of 2013 Super Typhoon Haiyan. *Water*, **14**,547, <https://doi.org/10.3390/w14040547>

15. Pu-Yun Kow, Li-Chiu Chang, **Chuan-Yao Lin**, Charles C.-K. Chou, Fi-John Chang, **2022**: Deep neural networks for spatiotemporal 1 PM2.5 forecasts based on atmospheric chemical transport model output and monitoring data. *Environmental Pollution*, **306**, 119348. <https://doi.org/10.1016/j.envpol.2022.119348>
16. Nai-Tzu Chen, Lai-Man Tam, Jer-Horng Wu, Ngok-Song Cheong, **Chuan-Yao Lin**, Chun-Chieh Tseng, Huey-Jen Su *, **2022**: Changes in Ambient Bacterial Community in Northern Taiwan During Long-Range Transport: Asian Dust Storm and Frontal Pollution. *Atmosphere*, **13**,841. <https://doi.org/10.3390/atmos13050841>
17. Ming-Thuang, Chuang, Charles, C.K. Chou, **Chuan-Yao Lin**, Ja-Huai Lee, Wei-Che Lin, Chih-chung Chang, Chung-Te Lee, Steven Soon-Kai Kong, Tang-Huang Lin, **2022**: A numerical study of reducing the concentration of O3 and PM2.5 simultaneously in Taiwan, *Journal of Environmental Management*, 318, 115614. <https://doi.org/10.1016/j.jenvman.2022.115614>
18. Chuang M.-T., C. F. Wu, **C.-Y. Lin**, W.C. Lin, C. C.-K, Chou, C.T. Lee, T. -H. Lin, J. S. Fu, S. S. -K., Kong, **2022**: Simulating nitrate formation mechanisms during PM2.5 events in Taiwan and their implications for the controlling direction. *Atmospheric Environment. AEA* **118856**, <https://doi.org/10.1016/j.atmosenv.2021.118856>.
19. **Lin, Chuan-Yao***, Yang-Fan Sheng, Wan-Chin Chen, Charles, C. K. Chou, Yi-Yun Chien, Wen-Mei Chen, **2021**: Air quality deterioration episode associated with typhoon over the complex topographic environment in central Taiwan. *Atmos. Chem. Phys.*, **21**, 16839-16910. <https://doi.org/10.5194/acp-21-16893-2021>
20. Hsieh,C.-Y., C.-R. Jung, **Chuan-Yao Lin***, Bing-Fang Hwang*, **2021**, Combined exposure to heavy metals in PM2.5 and pediatric asthma, *The Journal of Allergy and Clinical Immunology*. **147**, 2171-2180. <https://doi.org/10.1016/j.jaci.2020.12.634>
21. Chen N.-T., N.-S. Cheong, **Chuan-Yao Lin**, C-C. Tseng, H-J. Su, **2021**, Ambient viral and bacterial distribution during long-range transport in northern Taiwan, *Environmental Pollution*, **270**, 116231, <https://doi.org/10.1016/j.envpol.2020.116231>
22. Jie Yang, **Chuan-Yao Lin**, Haijiang Liu, Linlin Li, Tso-ren Wu, Peitao Wang, Benxia Li, and Philip L-F. Liu, **2021**: Effects of island topography on storm surge in Taiwan Strait during Typhoon Maria, *Journal of Waterway, Port, Coastal, and Ocean Engineering*. **147** (2), <https://ascelibrary.org/doi/abs/10.1061/%28ASCE%29WW.1943-5460.0000619>
23. Daigee Shaw, J.-C., Huang, **Chuan-Yao Lin**, Ting-Yu Hsu, Mingche Tsai, **2021**: Estimating Demand for Good Climate and Air Quality in Taiwan, *Climate Change Economics*, **V12**, No.1, 215003 <https://doi.org/10.1142/S2010007821500032>
24. Kueh, M-T., and **Chuan-Yao Lin***, **2020**: The 2018 summer heatwaves over northwestern Europe and its extended-range prediction. *Scientific Report*,(2020) **10**:19283 <https://doi.org/10.1038/s41598-020-76181-4>
25. Chen N.-T., N.-S. Cheong, **Chuan-Yao Lin**, C-C. Tseng, H-J. Su, **2020**, Ambient viral and bacterial distribution during long-range transport in northern Taiwan, *Environmental Pollution*, **116231**, <https://doi.org/10.1016/j.envpol.2020.116231>
26. Yu-Ting Wu, **Chuan-Yao Lin**, Tsang-Jung Chang, **2020**: Effects of inflow turbulence intensity and turbine arrangements on the power generation efficiency of large wind farms, *Wind Energy*, **23**: 1640-1655. <https://doi.org/10.1002/we.2507>

27. Lei Kong, Xiao Tang, Jiang Zhu, Zifa Wang, Joshua S Fu, Xuemei Wang, Syuichi Itahashi, Kazuyo Yamaji, Tatsuya Nagashima, Hyo-Jung Lee, Cheol-Hee Kim, **Chuan-Yao Lin**, Lei Chen, Meigen Zhang, Zhining Tao, Jie Li, Mizuo Kajino, Hong Liao, Kengo Sudo, Yuesi Wang, Yuepeng Pan, Guiqian Tang, Meng Li, Qizhong Wu, Baozhu Ge, and Gregory R Carmichael, **2020**, Evaluation and uncertainty investigation of the NO₂, CO and NH₃ modeling over China under the framework of MICS-Asia III, *Atmos. Chem. Phys.* **20**, 181-202. <https://doi.org/10.5194/acp-20-181-2020>
28. Tan, J., Fu, J. S., Carmichael, G. R., Itahashi, S., Tao, Z., Huang, K., Dong, X., Yamaji, K., Nagashima, T., Wang, X., Liu, Y., Lee, H.-J., **Lin, C.-Y.**, Ge, B., Kajino, M., Zhu, J., Zhang, M., Hong, L., and Wang, Z.: Why do models perform differently on particulate matter over East Asia? – A multi-model intercomparison study for MICS-Asia III, *Atmos. Chem. Phys.*, **20**, 7393-7410, 2020, <https://doi.org/10.5194/acp-20-7393-2020>
29. Yu-Lin Tsai, Tso-Ren Wu *, **Chuan-Yao Lin**, Simon C. Lin, Eric Yen, Chun-Wei Lin, 2020: Discrepancies on Storm Surge Predictions by Parametric Wind Model and Numerical Weather Prediction Model in a Semi-Enclosed Bay: Case Study of Typhoon Haiyan, *Water*, **12(12)**, **3326**, [doi: 10.3390/w12123326](https://doi.org/10.3390/w12123326)
30. Kueh, M-T., W.-M., Chen, Y. F. Sheng, Simon C. Lin, T.-R. Wu, Eric Yen, Y. L Tsai, **C. Y. Lin***, **2019** : Effects of horizontal resolution and air–sea flux parameterization on the intensity and structure of simulated Typhoon Haiyan (2013), *Nat. Hazards Earth Syst. Sci.* **19**, 1509–1539, 2019. <https://doi.org/10.5194/nhess-19-1509-2019>
31. Chen, C.-C., **C.-Y. Lin**, K.-T. Chen, **2019**, Epidemiologic features of shigellosis and associated climatic factors in Taiwan, *Medicine*, **98(34)**:e16928. DOI: 10.1097/MD.00000000000016928
32. Koralegedara, S.B., **C.-Y. Lin***, Y.-F. Sheng, **2019**, Numerical Analysis of the Mesoscale Dynamics of an Extreme Rainfall and Flood Event in Sri Lanka in May 2016. *J. Meteor. Soc. Japan*, **97** (4), 821-839, <https://doi.org/10.2151/jmsj.2019-046>.
33. Lao X.Q., Cui Guo , Ly-yun Chang, Yacong Bo, Zilong Zhang, Yuan Chieh Chuang, Wun Kai Jiang, Changqing Lin, Tony Tam, Alexis K.H. Lau, **Chuan-Yao Lin**, Ta-Chien Chan, **2019**: Long-term exposure to ambient fine particulate matter (PM_{2.5}) and incident type 2 diabetes: a longitudinal cohort study. *62(5):759-769 Diabetologia*. DOI: 10.1007/s00125-019-4825-1
34. Bo Y., Ly-Yun Chang, Cui Guo, Zilong Zhang, Changqing Lin, Yuan Chieh Chuang, Wun Kai Jiang, Tony Tam, Ta-Chien Chan, **Chuan-Yao Lin**, Alexis KH Lau, Xiang Qian Lao*, Eng-Kiong Yeoh, **2019**, Association of Long-term Exposure to Fine Particulate Matter and Incident Dyslipidaemia: A Longitudinal Cohort Study. *Environmental Research*, **173:359-365**. doi: 10.1016/j.envres.2019.03.034
35. Jung C.-C., C.C.-K. Chou, **C.-Y. Lin**, Chuan Chou Shen, Yu-Chi Lin, Yi-Tang Huang, Chao-yang Tsai, Pei Hsuan Yao, Ci-Rong Huang, Wei-Ru Huang, Mei-June Chen, Shu-Hui Huang, Shuen-Chin Chang, **2019** C-Sr-Pb isotopic characteristics of PM_{2.5} transported on the East-Asian continental outflows, *Atmospheric Research*, **223**, 88-97, <https://doi.org/10.1016/j.atmosres.2019.03.011>
36. Jie Li, Tatsuya Nagashima, Lei Kong, Baozhu Ge, Kazuyo Yamaji, Joshua S Fu, Xuemei Wang, Qi Fan, Syuichi Itahashi, Hyo-Jung Lee, Cheol-Hee Kim, **Chuan-Yao Lin**, Meigen

- Zhang, Zhining Tao, Mizuo Kajino, Hong Liao, Meng Li, Jung-Hun Woo, Jun-ichi Kurokawa, Qizhong Wu, Hajime Akimoto, Gregory R Carmichael, and Zifa Wang, 2018. Model evaluation and inter-comparison of surface-level ozone and relevant species in East Asia in the context of MICS-ASIA phase III Part I: overview. *Atmos. Chem. Phys.*, 19, 12993–13015, 2019 <https://doi.org/10.5194/acp-19-12993-2019>
37. Wu Yu-Ting; Teh-Lu Liao; Chang-Kuo Chen; **Chuan-Yao Lin**; Po-Wei Chen, 2019, Power output efficiency in large wind farms with different hub-position configurations, *Renewable Energy*, 132, 941-949. <https://doi.org/10.1016/j.renene.2018.08.051>
 38. Lei Chen, Yi Gao, Meigen Zhang, Joshua S. Fu, Jia Zhu, Hong Liao, Jialin Li, Kan Huang, Baozhu Ge, Xuemei Wang, Yun Fat LAM, **Chuan Yao Lin**, Syuichi Itahashi, Tatsuya Nagashima, Mizuo Kajino, Kazuyo Yamaji, Zifa Wang, and Jun-ichi Kurokawa, 2018, MICS-Asia III: Multi-model comparison and evaluation of aerosol over East Asia. *Atmos. Chem. Phys.* 19, 11911–11937, 2019 , <https://www.atmos-chem-phys.net/19/11911/2019/>
 39. Lee Li-Chin, Ting-Chang Hsu, Tsung-Yu Lee, Yu-Ting Shih, **Chuan-Yao Lin**, Shih-Hao Jien, Thomas Hein, Franz Zehetner, Fuh-Kwo Shiah, Jr-Chuan Huang* 2018, Unusual Roles of Discharge, Slope and SOC in DOC Transport in Small Mountainous Rivers, Taiwan, *Scientific Reports*, 9, Article number: 1574 (2019) 1574 <https://www.nature.com/articles/s41598-018-38276-x>
 40. **Lin, C.-Y.***, Y. H. Lee, C-Y. Kuo, W.-C., Chen, Y. F. Sheng, C-J. Su, 2018, Impact of river-dust events on air quality of western Taiwan during winter monsoon: observed evidence and model simulation, *Atmospheric Environment*, 192, 160-172. <https://doi.org/10.1016/j.atmosenv.2018.08.048>
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 42. Tong C.H.M, Yim, S.H.Lam, Rothenberg D., Wang C., **Lin C.-Y.**, Chen Y., Lau N. C., 2018, Projecting the impacts of atmospheric conditions under climate change on air quality over the Pearl River Delta region, *Atmospheric Environment*, 193, 79-87. <https://doi.org/10.1016/j.atmosenv.2018.08.053>
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 44. Lin Y.C., S. C. Hsu, **C.-Y.Lin**, S.H. Lin, Y. T. Huang, Y. Chang, Y. Lin Zhang, 2018, Enhancements of Airborne Particulate Arsenic over the Subtropical Free Troposphere in the Springtime: Impact by South Asian Biomass Burning. *Atmos. Chem. Phys.* 18,13865-13879. <https://www.atmos-chem-phys.net/18/13865/2018/>
 45. Kueh, M-T, **C.-Y. Lin***, Y-J Chuang, Y-F Sheng, Y-Y Chien, 2017, Climate variability of heat waves and their associated diurnal temperature range variations in Taiwan, *Environmental Research Letters*, (<https://doi.org/10.1088/1748-9326/aa70d9>).

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