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**Research Area**

Energy, Environmental Engineering: Air Quality Study.

**Research Interests**

Geophysical data analysis, numerical modeling of the atmosphere, regional and urban air pollution, weather and climate, satellite remote sensing applications, environmental education.

**Recent Publications**

**Refereed Journal Publications**

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| C Lin, **AKH Lau**, XQ Lao, JCH Fung, X Lu, Z Li, J Ma, C Li, AHS Wong. (**2020**). A Novel Framework for Decomposing PM2. 5 Variation and Demographic Change Effects on Human Exposure using Satellite Observations*, Environmental Research*, 109120.Cui Guo, Ta-Chien Chan, Yung-Chu Teng, Changqing Lin, Yacong Bo, Ly-yun Chang, **Alexis KH Lau**, Tony Tam, Martin CS Wong, Xiang Qian Lao. (**2020**). Long-term Exposure to Ambient Fine Particles and Gastrointestinal Cancer Mortality in Taiwan: A Cohort study, *Environment International*138, 105640.X Zhang, JCH Fung, Y Zhang, **AKH Lau**, KKM Leung, WW Huang. (**2020**). Assessing PM2. 5 Emissions in 2020: The Impacts of Integrated Emission Control Policies in China, *Environmental Pollution*, 114575.HHL Kwok, JCP Cheng, ATY Li, JCK Tong, **AKH Lau**. (**2020**). Multi-zone Indoor CFD under Limited Information: An Approach Coupling Solar Analysis and BIM for Improved Accuracy, *Journal of Cleaner Production* 244, 118912.Wenwei Che, H Christopher Frey, Jimmy CH Fung, Zhi Ning, Huamin Qu, Hong Kam Lo, Lei Chen, Tze-Wai Wong, Michelle KM Wong, Ophelia CW Lee, David Carruthers, Freeman Cheung, Jimmy WM Chan, David W Yeung, Yik Him Fung, Xuguo Zhang, Jenny Stocker, Christina Hood, Tilman Leo Hohenberger, King Wai Leung, Phillip YK Louie, Alison TY Li, Li Sun, Peng Wei, Zhiyuan Li, Yumiao Zhang, Meilan Wang, Qiaomu Shen, Wei Huang, Enoch Lee, Ashraf Patwary, Xiayu Lei, Steven Cheng, Md Shakhaoat Hossain, Kimberly Tasha Jiayi Tang, XiangQian Lao, Rae Leung, Denise Chan, Ying Li, Zibing Yuan, **Alexis KH Lau**. (**2020**). PRAISE-HK: A Personalized Real-time Air Quality Informatics System for Citizen Participation in Exposure and Health Risk Management, *Sustainable Cities and Society* 54, 101986.Z Li, W Che, **AKH Lau**, JCH Fung, C Lin, X Lu. (**2019**). A feasible experimental framework for field calibration of portable light-scattering aerosol monitors: Case of TSI DustTrak, *Environmental Pollution* 255, 113136.Y Huang, T Yao, JCH Fung, X Lu, **AKH Lau**. (**2019**). Application of Air Parcel Residence Time Analysis for Air Pollution Prevention and Control Policy in the Pearl River Delta region, *Science of The Total Environment* 658, 744-752.Y Zhang, JCH Fung, JWM Chan, **AKH Lau**. (**2019**). The Significance of Incorporating Unidentified Vessels into AIS-based Ship Emission Inventory, *Atmospheric Environment* 203, 102-113.C Lin, **AKH Lau**, JCH Fung, XQ Lao, Y Li, C Li. (**2019**). Assessing the Effect of the Long-Term Variations in Aerosol Characteristics on Satellite Remote Sensing of PM2.5 Using an Observation-Based Model, *Environmental Science & Technology* 53 (6), 2990-3000.Ben Liu, Mandy Minle He, Cheng Wu, Jinjian Li, Ying Li, Ngai Ting Lau, Jian Zhen Yu, **Alexis KH Lau**, Jimmy CH Fung, Ka In Hoi, Kai Meng Mok, Chak K Chan, Yong Jie Li. (**2019**). Potential Exposure to Fine Particulate Matter (PM2. 5) and Black Carbon on Jogging Trails in Macau, *Atmospheric Environment* 198, 23-33.Qiongqiong Wang, XH Hilda Huang, Frankie CV Tam, Xiaxia Zhang, Kin Man Liu, Claisen Yeung, Yongming Feng, Yuk Ying Cheng, Yee Ka Wong, Wai Man Ng, Cheng Wu, Qingyan Zhang, Ting Zhang, Ngai Ting Lau, Zibing Yuan, **Alexis KH Lau**, Jian Zhen Yu. (**2019**). 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