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Current Positions Associate Professor,
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Education

Ph.D., Industrial Health, University of Michigan, Ann Arbor, MI, USA.
M.S., Graduate Institute of Environmental Health, National Taiwan University, Taipei, Taiwan.

Expertise

Aerosol Chemistry Aerosol Physics Air Pollution Source Apportionment
Exposure Assessment Industrial Hygiene Environmental Health

Research Interests

My research interests surround air pollution issues in both occupational and environmental settings, and focus on aerosols, i.e., tiny solid or liquid particles suspended in air. Through measurements of their physical and chemical properties, my lab aims to gain improved understandings of the sources, formation mechanisms, transport phenomena and inhalation risk of aerosols. Ongoing research areas include the volatility and number-size distribution of airborne nanoparticles (<100 nm) in ambient air and diesel engine exhaust, and the sources and spatiotemporal distribution of PM_{2.5}.

Selected Grants:

1. Single-particle internal morphology and toxic metal oxidation state: The effects of pollution level and vertical height. MOST 110-2221-E-039-009-MY3. 2021/08/01 – 2024/07/31.
2. Temporal and spatial variation of physical and chemical properties in PM_{2.5} and PM₁₀ and their influence on atmospheric visibility. EPA 109A266. 2020/6/17 – 2021/12/31.

Selected Publications

1. Hsiao, T.C., Chuang, H.C., Griffith, S.M., Chen, S.J., **Young*, L.-H.** (2020, May). COVID-19: An Aerosol's Point of View from Expiration to Transmission to Viral-mechanism. *Aerosol and Air Quality Research*, 20(5), 905 – 910.
2. **Young, L.-H.**, Li, C.-H., Lin, M.-Y., Hwang, B.-F., Hsu, H.-T., Chen*, Y.-C., Jung, C.-R., Chen, K.-C., Cheng, D.-H., Wang, V.-S., Chiang, H.-C., Tsai*, P.-J. (2016, Aug). Field performance of a semi-continuous monitor for ambient PM_{2.5} water-soluble inorganic ions and gases at a suburban site. *Atmospheric Environment*, 144(2016):376-388.
3. Cheng, M.-T., Chen, H.-J., **Young*, L.-H.**, Yang, H.-H., Tsai, Y.I., Wang, L.-C., Lu, J.-H., Chen, C.-B. (2015, Apr). Carbonaceous composition changes of heavy-duty diesel engine particles in relation to biodiesels, aftertreatments and engine loads. *Journal of Hazardous Materials*, 297(2015), 234-240.
4. **Young*, L.-H.**, Lee, S.-H., Kanawade, V.P., Hsiao, T.-C., Lee, Y.-L., Hwang, B.F., Liou, Y.-J., Hsu, H.-T., Tsai, P.-J. (2013, Jan). New particle growth and shrinkage observed in subtropical environments. *Atmospheric Chemistry and Physics*, 13, 547-564.

Selected Patents

N/A