




JUTARAT KEAWBOONCHU


Position:

Lecturer Dr.

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Dr. Jutarat Keawboonchu is a lecturer at the Faculty of Public Health, Mahidol University, with research expertise in air pollution, VOC emission control, and sustainable industrial development. Her work focuses on emission inventory and atmospheric modeling, with several publications in international journals on VOCs, PM_{2.5}, and petrochemical pollution management. She actively collaborates with academic and industrial partners to develop science-based solutions for environmental sustainability.

RESEARCH INTERESTS & FIELD OF SPECIALIZATION:

- Air pollution management and control
- Volatile organic compounds (VOCs) emission and impact assessment
- Atmospheric dispersion modeling
- Emission inventory development for industrial sectors
- Environmental technology for sustainable industrial development
- ESG integration and sustainability

Education:

- Ph.D. (Environmental Technology), Mahidol University, Thailand, 2023
- M.Sc. (Environmental Technology), Mahidol University, Thailand, 2019
- B.Sc. (Chemistry), King Mongkut's University of Technology Thonburi, Thailand, 2014

WORK EXPERIENCES:

- Lecturer at Faculty of Engineering and Technology, Siam Technology College
- Research & Project Coordinator for air quality and pollution research projects in the industrial sector, including IRPC, PTT, SCG, and EGAT.
- Developed emission inventories and applied advanced atmospheric modeling techniques.
- Led feasibility studies and developed mitigation plans for PM_{2.5} and VOC emissions in industrial zones.

RESEARCH PUBLICATIONS:

- Jindamanee, K., Keawboonchu, J., Pinthong, N., Meeyai, A., Inchai, P., & Thepanondh, S. (2025). Environmental impacts and emission profiles of volatile organic compounds from petroleum refineries. *Scientific Reports*, 15(1).
- Jindamanee, K., Thepanondh, S., Keawboonchu, J., Pinthong, N., & Meeyai, A. (2024). Manifesting the hidden pollutants: Quantifying emissions and environmental impact of petroleum refinery on PM_{2.5}. *Atmospheric Environment: X*, 24, 100300.
- Sirawat S., Jutarat K., Thibordin S., Jiraporn P., & Theeranan O. (2023). The Comprehensive Analysis of City Carbon Footprint from Energy Consumption in a District of the Central Region of Thailand. *EnvironmentAsia*, 17(2).
- Keawboonchu, J., Thepanondh, S., Kultan, V., Pinthong, N., Malakan, W., & Robson, M. G. (2023). Integrated Sustainable Management of Petrochemical Industrial Air Pollution. *Int J Environ Res Public Health*, 20(3).
- Pinthong, N., Thepanondh, S., Kultan, V., & Keawboonchu, J. (2022). Characteristics and Impact of VOCs on Ozone Formation Potential in a Petrochemical Industrial Area, Thailand. *Atmosphere*, 13(5), 732.
- Jookjantra, P., Thepanondh, S., Keawboonchu, J., Kultan, V., & Laowagul, W. (2022). Formation potential and source contribution of secondary organic aerosol from volatile organic compounds.
- Saikomol, S., Thepanondh, S., Laowagul, W., Malakan, W., Keawboonchu, J., & Kultan, V. (2021). Characteristics and Dispersion Modeling of VOCs Emission Released from the Tank Farm of Petroleum Refinery Complex. *EnvironmentAsia*, 14(1).
- Keawboonchu, J., Malakan, W., Thongkum, W., & Thepanondh, S. (2019) Effect of the waste heat recovery system to buoyancy and momentum flux of combustion stack in the cement industry. *Environment and Natural Resources Journal*, Vol. 17(1), 11-21.
- Malakan, W., Keawboonchu, J. & Thepanondh, S. (2018) Comparison of AERMOD performance using observed and prognostic meteorological data, *EnvironmentAsia*, Vol. 11(2), 38-52