













traffic emitted CO transport to the indoor space through openings. Different numerical solutions are compared and analyzed. Conclusions are as follows:

- CO does not flow into the skyscraper due to pressure distribution. This may be related to either urban layout or the height of the skyscraper. Authors' continuous research on parametric urban morphologies shows that target building height is the main factor to cause this phenomenon.
- Lower surrounding buildings in the high density urban area are still influenced by the traffic-induced pollution.
- Indoor air speed increases with increased outdoor wind speed. High speeds are observed near openings.

By studying indoor environment of a naturally ventilated skyscraper through CFD simulation, the conclusions can provide suggestions for building regulations with respect to street-level pollution transport from idling car. The findings may change the traditional way we think about pollution problem for a skyscraper in high-density urban areas. These results suggest the need to continue exploring different pollution distribution characteristic in urban areas and corresponding air quality standard requirements. This study only uses a fixed urban layout and building geometry. Future work will focus on variations of urban morphology and the impact on pollution transport to indoor space.

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