



Diurnal variation of on-road air pollution in an urban street canyon in Seoul

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Motor vehicles are a major source of CO, NO_x and particulate matters. Especially, in the surroundings of high-raised buildings, so-called an urban street canyon, air pollution levels increase due to limited dispersion of vehicle emissions.

In this study, a mobile laboratory was used to measure diurnal variation of on-road concentrations of air pollutants such as NO_x, particle-bound polycyclic aromatic hydrocarbons, black carbon and particle number in the urban street canyon on the Teheran road with eight lanes in Seoul, Korea from 5th to 8th November 2013. Each traveling distance was about 3.3km. Traveling vehicle at the middle of the Teheran road was recorded by video camera, and then the car counting by vehicle types. On road measurements conducted for 3~6 hours per day. Hourly average of air pollutant concentration in morning rush hour more than two times higher than those at the daybreak.

We will analyze the correlation between air pollution levels and traffic volume by vehicle types. We will discuss about spatial characteristics of on-road air pollution levels in the urban street canyon.