

## **Deteriorating Ambient Air Quality Resulted from Invasion of Foreign Air Pollutants**

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**Abstract :** Invasion of foreign air pollutants to deteriorate local air quality has become an emerging international issue of concern. This study aimed to apply meteorological and air quality model, WRF-Chem (V3.1), for simulating and analyzing the phenomenon of forming of high-concentrated particulate matters, PM10 and PM2.5, in ambient air of Taiwan during January 17th to 19th, 2014. The foreign air pollutants were mainly from long-distance transport of air pollutants of China being transported with a strong continental cold high. It was observed that PM10 and PM2.5 peaked as high as 182~588  $\mu\text{g}/\text{m}^3$  and 95~165  $\mu\text{g}/\text{m}^3$ , respectively, in the ambient air of west side of Taiwan. They were about 2~3 folds higher than the usual concentrations of particulate matters in these seasons.

**Keywords :** WRF-Chem, air pollution, PM2.5, ambient air quality

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