

## Light Absorption and Fluorescence of Organic Aerosol Components

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PM<sub>2.5</sub> samples were daily collected using a Hi-Vol sampler at an urban site and a remote site in Korea. Organic matter was extracted using methanol and dichloromethane mixture (1:3 vol) and subsequently fractionated by polarity. High polarity (HPOM) and low polarity organic matter (LPOM) were analyzed for UV-Vis absorption and excitation-emission matrix (EEM). Light absorption and fluorescence of the organic fraction were investigated to make a relationship with their chemical composition.

HPOM showed higher mass absorption efficiency (MAE) than LPOM. For HPOM MAE tended to be enhanced at the remote site of Baengnyeongdo compared to the urban Seoul site. MAE was comparable at both sites for LPOM. Substantial difference was obvious in EEM by the location and chemical polarity. It demonstrates the possibility of EEM as useful information for the source and transformation of organic aerosol. In this study PARAFAC analysis of EEM was performed to classify the source and transformation. Detailed discussion will be shown in the presentation.

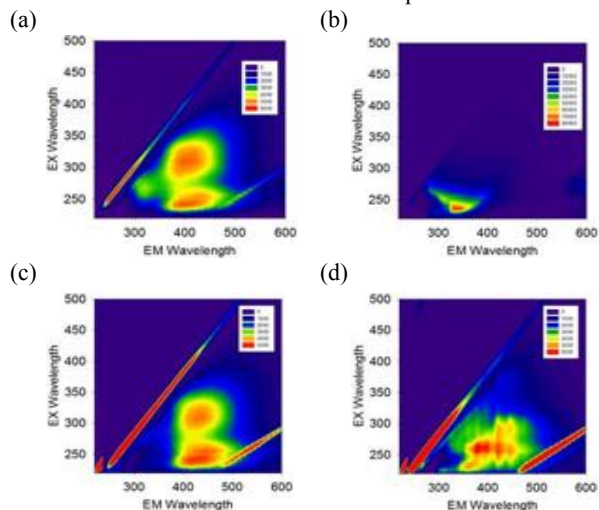


Figure 1. EEM of organic matter on May 27, 2016. (a) HPOM in Seoul, (b) LOPM in Seoul, (c) HPOM in Baengnyeongdo, (d) LOPM in Baengnyeongdo.

This research was supported by the National Strategic Project-Fine Particle of the Korea National Research Foundation of Korea (2017M3D8A1090658).