

21 世紀 COE 特別講演会 報告書

集会名： Professor Robert J. Donovan 特別講演会

日 時： 平成 17 年 6 月 23(木) 12:30 ~ 13:30

講演会場： A2 - 118 号室 (桂キャンパス会議室)

主な参加者：教員、本学大学院生

総参加者概数：教員 3 名、大学院生 12 名、学部学生 5 名

講演者：Professor Robert J. Donovan (エジンバラ大学化学科教授)

講演題目：Recent advances in aerosol mass spectrometry

講演内容：

Recent laboratory and field measurements using a single aerosol particle mass spectrometer, with laser ablation, were described. A comparison with other related techniques was also presented.

Out line of the talk is, 1. Origins and importance of aerosols, 2. A brief history, 3. basic set-up and theory of single aerosol particle mass spectrometry, 4. brief overview of field campaigns, and 5. other single particle detection techniques.

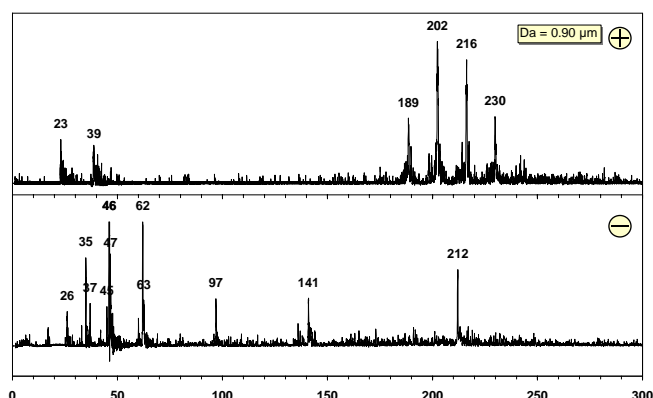
As the atmospheric particulate matter,

1. Extremely important atmospheric component (health effects, local/regional visibility, climate change or radiative forcing from reflective particles or radiative forcing from light absorbing particles, contribute to atmospheric chemical processes or surface reactions, deposition of chemical components)

2. Extremely diverse characteristics (size distribution from 10 nm to 100 μm , shapes of spherical or aggregates or rods, surface and bulk chemical components)

3. Extremely diverse sources from natural to anthropogenic (primary: combustion particles, industrial and mechanical emissions e.g. steel works, road traffic, wind-blown dust, sea-salt, secondary: gas-to-particle condensation of inorganic sulphates and nitrates, or organic oxidation products)

4. For particle analysis (properties of particles to measure, different techniques measure different properties, e.g. different ways of measuring size)



A typical mass spectrum of diesel particles

報告書作成：工学研究科分子工学専攻 川崎昌博