

FTIR-BASED ANALYSIS OF ATMOSPHERIC ORGANIC AEROSOLS IN NY-ÅLESUND.

Name : Nkembeng Kenneth Fuanke

Affiliation : Graduated school of Environmental studies

"Laboratory of Atmospheric Chemistry (D3)

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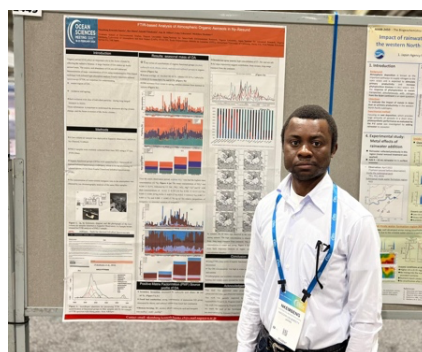
2024 Ocean Sciences meeting took place in New Orleans, Louisiana, USA, from 18-23 February, 2024 this year. This was a large international meeting involving researchers of all part of the globe to discuss ocean related phenomena with emphases on climate change. It was an international experience as it involves expert of different interdisciplinary branches of oceanography and environments. My poster presentation during the conference was about my current research findings on chemical characterization of atmospheric organic aerosols components in the atmosphere and its climatic implications, understanding the role organic plays in determining chemical properties of aerosol, and air-sea interface contribution (atmospheres and ocean). Knowledge on the Seasonal variation and chemical composition and sources of organic aerosols in the Arctic, air - sea interphase environments are limited. The following were outlined during the presentation; mass concentration of organics; proportions and seasonal variations of organics and their sources.

In my study, in order to understand the characterization of organic aerosols Fourier Transform Infrared Spectroscopy (FTIR) was used to quantify organic aerosol concentration collected on Teflon filters from 8 June 2021 to 15 March 2022 at the Zeppelin observatory in Ny-Ålesund.

The result obtained from this analysis show the mass concentrations of organic aerosols in summer, autumn, winter and spring. The average density of organic matter was obtained from elemental composition and the

inorganic ions was determine using Ion Chromatography. In order to the understand the role of organic aerosols and climatic implications, it was necessary to know their abundance concentration and chemical composition that characterizes organic aerosols, such information is scarce in the Arctic region, thus it's important to include it the atmospheric model.

During my poster presentation I received some question and appreciation from the audience. Some senior researchers made some suggestions about my research and addresses some key gaps that were lacking. Also, I participated in some oral presentations on topic related to my research, I learned different ideas from other presentations which will further help me during the writing of my thesis. Attending early career guideline talks with expert broadened my understanding of relevant topics in my field of study and also improve my ability to present future findings more effectively.



I am thankful to my supervisor, Professor MOCHIDA Michihiro for research guidance and support fund provided by CICR and ISEE in convering my travel expenses.