



The Second Sino-French Workshop on Atmospheric Environment (Orleans, December 2010): Preface

A sound scientific understanding of the factors affecting the environment is essential to guarantee the sustainable development of the world's economic and societal activities. Many environmental issues, such as air quality and climate change are intimately linked to atmospheric chemistry and physics, therefore research in these areas is of tremendous importance. Both anthropogenic and biogenic emissions contribute greatly to the chemical composition of the atmosphere. Even though the atmosphere is a self-cleaning system through its photochemically-driven reactions, the hazardous direct impacts of primary and secondary pollutants on human health and ecosystems are observable and have been evidenced on different scales from local to global (e.g. ozone hole, climate change, air quality...). The chemical processing of the species present in the atmosphere is one of the most important players in driving the evolution of the atmosphere.

Despite a large number of studies over the past decades, which have improved our understanding, many fundamental atmospheric chemical processes are still poorly understood or need to be described in greater detail, in order to furnish a scientifically sound basis for the forging of better assessment tools in terms of chemical and physico-chemical processes modules which can be included in numerical models of our atmospheric environment.

Understanding the chemical processes involved in air pollution (air quality and climate change) and impacts requires a multidisciplinary approach which must involve groups of researchers with highly complementary skills. Therefore, building a network that is able to meet new challenges in the field of elementary chemical processes in the atmosphere requires collaboration between different research teams. The Sino-French Workshop on Atmospheric Environment series provides a platform for such a network. The first workshop, which was organised by CRAES-MEP, ICARE-CNRS and RCEES-CAS, was held in Beijing (October, 2008). The second one organised by the same institutions was held in Orléans (December, 2010). More than 100 scientists from China and France have attended this workshop.

This special issue is dedicated to the second Sino-French Workshop on Atmospheric Environment. Twenty one peer-reviewed articles representative of the topics dealt with in the workshop have been selected for publication in this issue.

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