

Xth Scientific Conference

Air Protection in Theory and Practice

18-21st October 2017, Zakopane (Poland)

Editors:

**Marianna Czaplicka, Oskar Czechowski, Janina Fudała, Magdalena Jabłońska-Czapla,
Joanna Kyzioł-Komosińska, Grzegorz Majewski, Katarzyna Juda-Rezler,
Wioletta Rogula-Kozłowska, Izabela Sówka**

Organizers:

**Institute of Environmental Engineering Polish Academy of Sciences in cooperation with
the scientific network AIRCLIM-NET**



PREFACE

For many years, the problem of air pollution has been perceived as an important risk factor for human health, decreasing the quality of life and worsening the condition of the natural environment. Recently, more and more attention has been paid not only to air pollution on a local scale, but also to the assessment of transboundary transport of air pollutants and global phenomena, such as depletion of ozone layer or the greenhouse effect. The development of instrumental methods of analysis, as well as new measurement methods dedicated to the control of pollutants immission and emission, enabled the detection of ultrafine aerosol particles and even the trace concentrations of gaseous pollutants, which in the long term allows us to assess the risks associated with the presence of toxic micro-contaminants in the atmosphere. The progress in the use of effective methods for dust removal and utilization of gaseous pollutants in the sector of power generation and industry, combined with increasingly restrictive legal regulations in the field of atmosphere protection, led to a significant reduction of emissions of major air pollutants. Nevertheless, a number of problems, resulting e.g. from the conventional combustion of solid fuels or air pollution in cities, still remain unresolved. Meanwhile, the current state of knowledge allows to generate more and more new statistics on the current or forecasted number of cardiovascular and respiratory diseases caused by inhalation of polluted air. According to the above, all actions aimed at exchanging information and experiences regarding the widespread air protection against pollution are perfectly justified. An example of such activities was the Xth edition of the scientific conference entitled "Air Protection in Theory and Practice", held in Zakopane (Poland), on 18-21st October 2017. The conference was organized by the Institute of Environmental Engineering Polish Academy of Sciences located in Zabrze and gathered 70 delegates from the whole country and abroad (38 oral presentations and 26 posters were presented).

The aim of the conference was to present the scientific achievements and to exchange views on the following topics: air pollution and climate change, emissions of dust and gas pollution, the spread and transformation of air pollutants, methods used for emission reduction, alternative energy sources and cleaner energy technologies, legal aspects of emission control and problems connected with air quality management. The conference enabled the exchange of experiences and gave an opportunity to the discussions on the coordination of further research related to air protection and application activities.

The Organizing Committee would like to express the warmest thanks to all Authors of the conference publications for the effort put into their elaboration, and to the Reviewers for the reliable evaluation of the works.

On behalf of the Organizing Committee
Chairman, Prof. Dsc PhD. Eng. Marianna Czaplicka