

## Guest Editor's Remarks on the Special Issue

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Until the fifties of the last century the human activity did not threaten the very existence of the humanity. Nowadays it is not the case any longer. Everybody has already heard about the impact of agriculture, industry and transportation activities on the environment. The mean temperature of the earth has increased as a consequence of this human activity. To day nobody would dare deny that the climate has changed and that it will likely change drastically within the next decades if nothing is done. This is the context in which the Non Thermal Plasma research workers try to bring new ideas, new processes that can limit the impact of the human activity on its environment.

In June 2006 the University of Poitiers have had the great honour to welcome the fifth International Symposium on Non Thermal Plasma Technology for Pollution Control and Sustainable Development (ISNTPT-5). This symposium took place in the Conference Centre of the French CNRS (National Centre for Scientific Research) in the Oléron Island. 73 articles or posters were presented by about 60 participants and I would like to thank all of them for the quality of their work and presentation.

The congress was divided into two sessions :

1) NTPT for Gases with the following sub-sessions :

- 1A – Fundamental studies on discharges
- 1B – Reactors
- 1C – Treatment of gases with catalysis
- 1D – Treatment of gases without catalysis
- 1E – Transportation applications
- 1F – Modelling

with applications to air pollution control (removal of nitrogen, of sulphur oxides, of volatile organic species, of particulate matter.....) and applications to transportation (automobile exhaust, flue gas treating, indoor air cleaning...).

2) NTPT for liquids with the following sub-sessions :

- 2A - Water treatment
- 2B – Reactors
- 2C – Biological applications

with application to biology (removal of bacteria, of micro-organisms, of toxic organic and inorganic chemical species....), to treatment of water (drinking water, ground water, industrial waste, destruction of chemical and biological agents....), to industrial chemistry (hydrocarbon synthesis, hydrogen production, carbon dioxide reactions with applications for sustainable chemical processing to minimize the impact on the environment).

11 articles (marked with \* in the contents) have been selected to be published in this first special issue of the new International Journal of Plasma Environmental Science and Technology. I would like to express my gratitude to the editors who created this new Journal dedicated to Plasma Technology and to all the reviewers without whom this special issue would not have existed.