

From the Editor-in-Chief

Dear Readers,

This is the first time that we went somewhat out of our traditional topics devoted to thermal processes being the base for many different processes in engineering – in many technologies and equipments, in energy production and consumption, in chemical and process engineering, in internal combustion engines, in agriculture and food processing, in metal processing and in many other engineering activities, as finally are buildings and environmental protection.

This time, our Supplement is devoted to thermal processes on the Earth surface, in oceans, and atmosphere.

There are two main reasons for this, may be risky, enterprise of the journal *Thermal Science* editorial Board:

- future energy production, use of fossil fuels, nuclear energy or renewable energy sources, is closely connected and depends, globally and in each specific country, on climate changes and deterioration of environment (atmosphere, forests, oceans, *etc.*), or on popular term “GLOBAL WARMING”, and
- there are still many controversies, and different supporting facts, used in scientific and political discussions about human influence on climate changes and specifically on global mean temperature changes, as a result of an ever increasing concentration of greenhouse gases in the atmosphere.

Having this in mind, we with pleasure accepted proposal of Dr. Milan Radovanović Director of the Geographical Institute “Jovan Cvijić” of the Serbian Academy of Sciences and Arts, to jointly prepare Supplement 2, 2015, devoted to thermal processes in atmosphere.

Incidentally, our Supplement 2 coincides with the just finished Conference of the Parties to the United Nations Framework Convention on Climate Change, otherwise known as COP21, in Paris. COP21 reached a consensus agreement to prevent global climate change beyond repair by cutting the emissions of greenhouse gases. Among the measures in that direction is an increase of the share of renewable energy sources in the world energy mix for which the wealthy will help the developing countries to overcome their lack of investments for implementation of more expensive new technologies for use solar, wind and biomass energy instead of local fossil fuels.

This costly effort is the great dilemma for decision-makers in every country, responsible for making such energy strategy and strategy of environmental protection aimed to contribute to the global action to avoid man-induced increase in the greenhouse effect and prevent global warming, and at the same time make basis for economic growth.

Discussions how to solve controversies in scientific community, connected with human origin of climate changes are extremely important for people making decision about energy strategies and development of new energy technologies. By decision to publish this issue we believe that we can make small, but for our readers and countries significant contribution towards solving the mentioned dilemmas.

I appreciate much the endeavour of the Guest editor Dr. Milan Radovanović, to do an excellent selection of papers making Part I, of this Supplement. To support his efforts to present wide range of opinions and scientific results, we added in Part II a set of papers devoted to use of

renewable energy sources, mainly solar energy. This set of papers presents the results of investigations in countries of quite different economic strengths, and technological level, giving insight in scientific and industrial efforts to contribute to diminishing human influence on climate changes, irrespective if this influence is the main force responsible for future change of global mean temperature, but with conscience that sources of the fossil fuels are limited, and in great part exhausted.

Finally, I appreciate also the contribution of Dr. Miodrag Mesarović, who made a well balanced review of different scientific controversies, and numerous uncertainties in scientific, engineering, and political approaches to such a complicated problem as GLOBAL WARMING is, and particularly for his deep insight in the existing cross-discipline debates on this, still not well understood, interdisciplinary issue.

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Prof. Simeon Oka, Ph. D.
Editor-in-Chief