FROM THE EDITORIAL BOARD OF THE JOURNAL THERMAL SCIENCE

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Recently, in the 2023, the VINČA Institute of Nuclear Sciences celebrated its 75th anniversary of the Yugoslav government's decision to establish and build a scientific institute aimed at researching nuclear processes and their use in industry, energy production, medicine, *etc*. [1]. When the 50th anniversary of the VINČA Institute of Nuclear Sciences was celebrated in 1998, a monograph entitled *Half a Century of the VINČA Institute of Nuclear Sciences (1948-1998)* was published two years later [2].

In this monograph, the organization, development, and scientific achievements of more than 20 scientific laboratories of the Vinca Institute are described comprehensively and in detail. Among other facts and data on 50 years of scientific activity of the VINČA Institute of Nuclear Sciences, a detailed review of the scientific activity and scientific achievements in the Laboratory of Thermal Engineering and Energy was given. This laboratory, which was initially founded and organized in 1961 under the name Laboratory for thermo technique of nuclear reactors, mainly investigated heat and mass transfer in gas and/or water cooled nuclear power reactors.

In the late 1960's, as scientific interest and technological development in the world shifted towards clean fossil fuel technologies (*i.e*. in the USA, large long term projects were supported by the government under the name CLEAN COAL TECHNOLOGIES – starting from basic research to the design and construction of industrial-scale demonstration units), and also due to the changing interest of the domestic industry, the research interest in the Laboratory for thermo technique of nuclear reactors, changed strongly towards a wide spectra of heat and mass transfer processes, the combustion of fossil fuels, two phase flows – gas-solid particles and fluid-solid particles flows, fluidized beds – bubbling and circulating fluidized beds, low temperature plasma, technologies and equipment for flue gas cleaning, solid particle extraction, desulphurization, and low NO_x combustion conditions, in many conventional technologies, in heat and power generation, in industrial and power production boilers, in the process industry and in agriculture, clean coal technologies, use of biomass for energy production, energy efficiency, use of solar and wind energy. Accordingly, the name of the laboratory was changed to the Laboratory for Thermal Engineering and Energy.

In general, the following heat and mass transfer processes have been studied during the entire period mentioned, from the foundation of the laboratory in 1961 until today: boiling and two phase flows of liquids; heat and mass transfer in two phase flows; mathematical modeling of two phase flows and flows of liquids or gasses with solid particles; turbulence and turbulent flows of liquids and gasses; structure of turbulent flows; flows of isothermal gas jets and gas combustion; combustion of solid and gaseous fuels; burners for gas and solid fuels; high temperature gas flows over solid surfaces with ablation; low temperature plasma flow with solid particles; pulverized coal combustion and pulverized coal burners in boilers and furnaces; combustion of coal and other solid fuels in bubbles and fast fluidized beds. Mainly from applied fundamental research to pilot or demonstration plants under real operating conditions.

From the very beginning, the VINČA Institute of Nuclear Sciences and also the Laboratory of Thermal Engineering and Energy have initiated and organized cooperation with

prestigious international scientific institutes and universities as an important part of scientific policy and have published their scientific results in reputed journals.

One year after the establishment of the Laboratory of Thermal Engineering and Energy, together with the Faculty of Mechanical Engineering in Belgrade, the Society of Thermal Engineers of Yugoslavia was founded in 1962. The 1st Symposium of the Yugoslav Society of Thermal Engineers was held in Herceg Novi in 1964 when discussions on the establishment of the International Center for Heat and Mass Transfer also began.

Laboratory of Thermal Engineering and Energy, initiated and founded the International Center for Heat and Mass Transfer (ICHMT) in 1968, supported by world renowned scientists – Prof. S.S. Kutateladze (Russia), Prof. Brian Spalding (England), Professor James P. Hartnett (USA), Prof. Fran Bošnjaković, from Croatia and Drezden Technical University, and many others [3]. The scientific and administrative secretariat of the ICHMT was located in Belgrade, in the Laboratory of Thermal Engineering and Energy, until 1993, when it was moved to Ankara, Turkey. Prof. Zoran Zarić was posted as Secretary General and Prof. Naim Afgan as Scientific Secretary. Until 1993, the ICHMT organized more than 50 meetings of various types and quality – conferences, seminars, and summer schools - in many cities on the Adriatic coast in the former Yugoslavia, most of them in Dubrovnik [3, 4].

Since the Yugoslav Society of Thermal Engineers was organized as a cooperation of 6 republican societies, it was easy to organize the Serbian Society of Thermal Engineers in 1993 as the successor of the former Yugoslav Society after the end of the former Yugoslavia. In December 2022, the 60th anniversary of the now renamed Society of Thermal Engineers of Serbia was celebrated [3, 4].

The Society of Thermal Engineers of Serbia was the initiator and founder of two scientific journals: TERMOTEHNIKA, which appeared in Serbian in 1974 and was aimed at local readers in the former Yugoslavia as well as local scientists and engineers. Dr. Ljubomir Jovanović from the Laboratory, and Prof. Milan Vesović, from the Faculty of Mechanical Engineering in Belgrade were editors-in-chief for a long time. In 1997, on the initiative of Prof. Simeon Oka, the international journal *Thermal Science* was founded, which is published in English and is dedicated to presenting the latest scientific achievements in Serbia and other Southeast European countries to the international scientific community. Prof. Simeon Oka was editor-in-chief until June 2018, a full 21 years.

The editorial board of the journal *Thermal Science* considers it their duty to publish from time to time review papers presenting the scientific achievements of the Laboratory for Thermal Engineering and Energy, the founder and publisher of the journal, from its inception to the present day [5-20].

The International Forum for Clean Energy Technologies of the University Novi Sad organized the 14th INTERNATIONAL FORUM FOR CLEAN ENERGY TECHNOLOGIES on 28 and 29 September in Novi Sad under the title ENERGY OF SERBIA – POST PANDEMIC STEP FORWARD INTO THE FUTURE and, as always, awarded scientists and institutions with the prestigious *TOP ENERGY 2021* prize. This time, our journal *Thermal Science* was recognized for its contributions to science and research in Serbia and the cooperation of Serbian scientific institutions with institutions in Southeast Europe and many countries in Europe, Asia, and Africa through the publication and dissemination of work from these countries, as well as for the best scientific results in Serbia. Prof. Dr. Simeon Oka, who has been the Editor-in-Chief of the journal *Thermal Science* for 21 years, from its beginnings in 1997 until 2018, was invited to present a paper at the 14th Forum under the title: journal *Thermal Science* - Foundation, History of Development and Scientific Contribution – on the scientific policy and

goals of the journal, which is today considered one of the best journals in the Southeast European countries, covering a wide range of scientific topics in the field of heat and mass transfer and energy technologies. The paper was presented at the 14th INTERNATIONAL FORUM FOR CLEAN ENERGY TECHNOLOGIES on September 28, 2021, and published in English and Serbian in the journal EKO list, special issue, September 28, 2021, pp. 29-41 [21].

The Society of Thermal Engineers of Serbia, the founder of our journal, which recently celebrated its 60th anniversary, had a great influence on the development and international reputation of our journal and also often published special issues with selected papers presented at the SIMTERM scientific meetings. Journal *Thermal Science* has also made a great contribution to the dissemination of Serbia's scientific achievements in the international scientific society and helped to revive the interrupted international scientific cooperation between Serbia and the countries of Southeast Europe, especially with the countries of the former Yugoslavia.

Given these facts, the Editorial Board of the journal *Thermal Science* has decided to pay great attention to informing the international scientific community about the efforts and activities of the Society of Thermal Engineers of Serbia. As the first paper presenting the efforts of the Society of Thermal Engineers of Serbia to help and support scientists in Serbia to improve their scientific achievements and present them to the world scientific community, we have published a paper in this issue: Simeon Oka: *Thermal Science* Journal - Foundation, History of Development and Scientific Contribution – presenting the scientific policy and aims of the journal.

In some of the upcoming issues, we will present other past and future activities of the Society of Thermal Engineers of Serbia.

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