



"Gheorghe Asachi" Technical University of Iasi, Romania



EDITORIAL

A SPECIAL ISSUE DEDICATED TO

CENTENARY OF EDUCATION IN CHEMICAL ENGINEERING IN IAȘI, ROMANIA

"The industrial progress and economic prosperity of a country depend on culture, work, his intellectual and spiritual energies developed and enhanced through education"

Dragomir Hurmuzescu

Space of ideas interference, interdisciplinary territory with multicultural aspects, the University aims to provide through education human models and recognized benchmarks, as power to protect you wherever the time will take you, like the holy home ground carried on sandals by the ancient warriors.

History of technical education in Iasi, becoming then engineering education, interlaces with that of the University born in 1860 and has its source in the Faculty of Science (1864), in which the Chemistry Department has been firstly defined. In fact, the defining role of technical education is the consequence of the need to develop a national industry, goal that became more acute after the Independence War.

As the result of its great promoters' initiatives, Moldova was destined to creating and developing the education on technical chemistry, which appeared in 1882 with the first chemistry laboratory designed by Petru Poni at the University of Iași. Anastasie Obregia joined to the efforts of Petru Poni, both creating the basis of the chemistry laboratories, which will be the germ of education on applied chemistry at Iasi. Over time, this direction will acquire more and more engineering valences, the introduction of the Technological Chemistry Department and its specific courses being only a matter of time. This demarche of the two pioneers, supported also by Dragomir Hurmuzescu, Rector of the University of Iași, led to the approval in principle of the establishment of Applied Chemistry specialization by the Ministry of Religious Affairs and Public Education in 1906,

which will become in 1912 the Industrial Chemistry specialization, at the University of Iași.

Since 1912, the evolution of this education direction towards the specific education on chemical engineering and further to the birth (in 1937), growth and increase of the prestige of the faculty dedicated to the training of the chemical engineers has represent one of the priorities of the academic environment, being endorsed by eminent figures of science and education: Cristea Niculescu-Otin, Neculai Costăchescu, Constantin V. Gheorghiu, Petre Bogdan, Ilie Matei, Cristofor I. Simionescu, this pleiad being completed by our great teachers of the second millennium end and also contemporary.

Now, at the centennial anniversary, our faculty, integrated more than just in space and time in one of the most prestigious universities, proves that it respects and carries forward the dreams and efforts of the former teachers who believed in the higher education on chemical engineering, becoming one of the Romanian emblems of excellence in education and research. Even in the context of the less favorable economic environment, which the marks of an important once chemical industries are memories for the older people, or fiction for the younger ones, the faculty teaching and research staff, also the students, never cease to believe that the progress of any human society can not be achieved without engineers and, obviously, without the chemical engineers.

The education on any field of engineering offers the most complete training. The immaterial products offered by University on the market are the

knowledge and competence - under various forms: the training of specialists in different specific areas through high level education, research, projects consulting, expertise, involvement of the academic community in different aspects of social life etc.

Our university brings the fascinating horizons of education on engineering close to any dream you could imagine beyond the school doorstep. And if something can give color, flavor, fascination and trust to a such technical field as the engineering one, if something can create and perpetuate life, if something can give value and brightness to an universe, then that "something" is the chemistry.

The heterogeneous situation in the field of higher education, more visible with the European Union extension and the liberalization of the international labor market, supported by the existence

of an apparent more compact Europe, represent the objective premises of the necessity to unify the European higher education. In this context, the chemical engineering promoted in our faculty by prestigious teachers, through its remarkable performances both at educational level and research one, creates the certitude of the real European education, education that is supported by the experience and competence of 100 years of history.

Therefore, this centennial anniversary of education on chemical engineering is dedicated to all our former teachers who believed and built their dream, to all teachers who continue this way and to all who believe in what chemical engineering can offer to the future generations.

Dan Caşcaval

Guest Editor



Professor DAN CAŞCAVAL is the Dean of the Faculty of Chemical Engineering and Environmental Protection since 2008, being formerly the Head of the Department of Organic and Biochemical Engineering and Director of the Doctoral School of the Faculty.

Professor Dan Caşcaval is specialist in the fields of biochemical engineering and biotechnology, being the promotor of the biochemical engineering courses in the academic curricula. His competences and major scientific contributions are focused on bioseparations (*separation of biosynthetic compounds by liquid-liquid extraction with and without chemical reaction, extraction and transport through liquid membranes – free and facilitated pertraction, synergetic extraction and pertraction, direct extraction from unfiltered broths*) and bioreactors (*rheology of fermentation broths, efficiency and distribution of mixing into the stirred bioreactors, optimization of mixing, oxygen and substrate mass transfer, improvement of oxygen transfer by using oxygen-vectors, new bioreactors with mobile and packed beds of immobilized cells/enzymes*).

Professor Dan Caşcaval is PhD supervisor and post-doctoral programs coordinator. His main contributions on the research areas are included in over 230 publications (95 papers in ISI ranked journals – H index: 12; books/chapters; patents) and 26 international and national grants. He was invited professor at The University of Manchester, Vienna University of Technology, Karlsruhe University of Technology.

Professor Dan Caşcaval is member of the Editorial Boards of 7 journals and of Advisor Boards for over 20 journals, being also member of 5 scientific and professional organizations in the field of chemical and biochemical engineering and biotechnology.