

#### **Preface**

# "Innovative Materials, Processes and Technologies" Honoring Prof.univ.dr.eng. Ion BALASANIAN



Professor univ.dr.eng. Ion BALASANIAN

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The first step that leads to eternity is sacrifice and hard work. Professor Ion Balasanian is an example of how to succeed in life through ingenuity and hard work, and he shows how to live your dreams by keeping your feet on the ground. The activity of Professor Ion Balasanian is a fascinating symphony of life!

### 1. Personal data, studies and professional experience

The days pass and the years fly. . .

Gaudeaumus! He was born in on October 14, 1942, in the city of Cernavoda, Constanta, Romania. In 1965, he graduated from the Faculty of Industrial Chemistry, Polytechnic Institute "Gheorghe Asachi" Iasi, obtaining a Diploma in Engineering and specializing in Inorganic Substances Technology. In the same year, he became an assistant professor in the Department of Inorganic Substances Technology, where he successively went through the stages for the promotion of teaching degrees, obtaining the title of professor in 1992. He defended his doctoral thesis entitled "Mathematical description of catalytic oxidation of dioxide of sulfur in case of transformation processes are carried out according to the macrocinetic model" in 1981 under the scientific direction

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of Prof. Constantin Calistru. Since 1990, he has been a PhD supervisor in the Chemistry / Chemical Engineering field. He retired in 2008, but he remained in the academic community as a consulting professor and doctoral supervisor, being in close collaboration with the Inorganic Products Engineering team within the Department of Chemical Engineering of the Faculty of Chemical Engineering and Environmental Protection "Cristofor Simionescu". At the age of 75, he received the title of Senior Professor and the "Gheorghe Asachi" distinction within the Celebration of the 80th anniversary of the establishment of the Polytechnic School of Iaşi, organized by the Technical University "Gheorghe Asachi" of Iasi.

#### 2. Teaching activity or to be, above all, in search of an absolute...

He was born to be a teacher, and in this role, Professor Ion Balasanian, an eminent teacher, has few equals!

Professor Ion Balasanian was concerned with improving teaching, for which he worked continuously and with great professionalism, contributing to the training of over 40 classes of engineers, sub-engineers and doctors in chemical engineering. The man sanctifies the place...! He dedicated himself especially to specialized disciplines by training engineers from the specialization of Inorganic Substances Technology and sub-engineers from the specializations of Inorganic Compounds Technology and Construction Materials Technology (day and evening courses) due to being the instructor of several courses, such as the following: Inorganic Compounds Technology - acids, Technology of sulfur and phosphorus compounds, Furnaces and specific equipment, the Characterization and testing of heterogeneous catalysts, Modern catalytic technologies, etc. He also carried out teaching and research activities with graduates who have completed in-depth studies in the specialization of Anticorrosive Protection or master's studies in the specializations of Clean Process Engineering and Ecological Catalysis due to being the instructor of Passive Anticorrosive Protection, the Basics of manufacturing and operation of heterogeneous catalysts, and theoretical and experimental aspects of catalysis, respectively. Interested in everything that was new regarding pollution reduction and environmental protection, he initiated and supported the courses of Atmospheric Protection Technology and Catalysis in Environmental Protection for the training of engineers in the field of Environmental Engineering.

He has always taken a highly active and hands on approach to the supervision of his students' research at all levels. His lectures were appreciated by advanced and elementary students alike. He possesses the keen ability to offer logical and lucid expositions of engineering phenomena and will be remembered by many generations of students as a friendly guide through the intricacies of a difficult subject, who spared no effort in promoting their progress and welfare.

## 3. Scientific activity or an example of how to not only assume existence but transcend it

At Iasi, he built a cathedral to science...

and "To create by hard work is to live twice" (A. Camus).

Professor Ion Balasanian and carried out scientific activity in research fields of great interest for the academic and scientific community at the national and international level: • the engineering of specific chemical processes for obtaining inorganic products and materials, • the engineering of heterogeneous catalytic and photocatalytic processes, • the synthesis and characterization of heterogeneous catalysts and the design of heterogeneous catalytic reactors, • the catalytic and non-catalytic processes applied in environmental depollution, and • the recovery of by-products and wastes from the inorganic chemical industry. He was a member of several national and international scientific and professional societies, such as the following: the Romanian Chemical Society, the Romanian Catalysis Society, and

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the Romanian Society of Chemical Engineers. He is the main author or co-author of 26 specialized books, 4 laboratory and technological project guidelines, 105 scientific papers published in ISI-listed or BDI-indexed journals, and 46 scientific papers published in the volumes of national or international conferences. He participated as a manager or member in 49 scientific research and development contracts financed by national competitions or by national economic agents. After 1990, he scientifically guided 14 doctoral students who defended their doctoral theses and obtained the title of doctor in the field of Chemistry or in the field of Chemical Engineering.

Success is not luck but rather ideal means and hard work. Due to being particularly attracted by the application of specialized disciplines and by the activity of designing reactors and chemical equipment, Professor Ion Balasanian has rich activity in the field of inventions and technological transfer, which materialized into 20 patents, and his work has been appreciated at national and international specialized fairs. We can mention the following: a gold medal and two bronze medals at the 44th World Exhibition of Invention, Research and Industrial Innovation, EURECA'95 (Brussels); a gold and a bronze medal at INVENTICA'96 - III -the International Exhibition of Inventions, Research and Technological Transfer (Bucharest, Romania); and a gold medal at INVENTIKA 2008 - 12th Edition, International Exhibition of Inventions and Technologies (Bucharest, Romania) for a cycle of inventions related to the processes of the capitalization of used catalysts and equipment for dissolving solids.

#### 4. Activity and collaborations in the academic community

Professor Ion Balasanian has all the qualities of a leader, and he knew it from an early age. Due to the professional and managerial skills he showed during his activity, which was further supported by his rigor and work capacity, Professor Ion Balasanian became a trusted member of the academic community from Politehnica Ieşeană. In the post-revolutionary period, he was Vice-Rector for students (1992 - 1996); and in the periods of 1996 - 2000 and 2004 – 2008, he coordinated the activity of the Faculty of Chemical Engineering and Environmental Protection as the Dean, making meritorious contributions to faculty organization and development and the restructuring of curricula by moving to the Bologna process. All this led to the award of the title of "Honorary Member of the University Community" of the "Gheorghe Asachi" Technical University of Iaşi in 2014.

The collaborations of Professor Ion Balasanian, or the embodiment of nobility of spirit. Professor Ion Balasanian has a most gracious personality. He is considerate, courteous, and charming. He has never regarded the people working with him as subordinates. He often asks about their families and is genuinely sorry to hear of illnesses and misfortunes. He does not reprimand, but suggests and teaches in a most unobtrusive manner. He has never felt compelled to assert his authority; he inspires cooperation and encourages independent thought. The relationships forged over the years have endured and have shaped the ties that still exist between his laboratory and industry.

To live is to fight (Seneca). Thank you dear Professor Ion BALASANIAN!