

EDITOR'S NOTES

IN HONOUR OF PROFESSOR LEON GRADOŃ ON THE OCCASION OF HIS 70TH BIRTHDAY

Professor Leon Gradoń is one of the most prominent Polish scientists working in the field of chemical engineering. Leon Gradoń studied chemical engineering at Warsaw University of Technology (WUT) and mathematics at University of Warsaw. He received his PhD on the mechanisms of evaporation of superheated droplets in emulsions (1976) under supervision of Professor Anatol Selecki. In 1978-79 Leon Gradoń was a postdoc fellow at University of Houston (TX), where he worked with several distinguished scientists (prof. Payatakes, Amundson, Luss, Bailey) and started his scientific work on dispersed systems and aerosols. Upon return to Warsaw he continued this research which led him to the second degree (DSc - *'habilitation'*) received in 1982 with the thesis entitled *'The mechanism of dendrite formation from submicron aerosols'*. In 1984-85 and 1987 he was a visiting professor at the SUNY at Buffalo where he worked on modeling of fibrous particle deposition in lungs. After his return to Poland he became the head of the Division of Fundamental Processes at the Faculty of Chemical and Process Engineering, Warsaw University of Technology. In 1990 he became the full Professor of chemical engineering at WUT. In 1993-94 he was a visiting professor at University of Cincinnati (OH) as a recipient of Fulbright Foundation Award (cooperation with prof. Pratsinis). Later on he also stayed for some weeks at University of Hiroshima (17 years of cooperation with prof. Okuyama), University of Vienna, Technical University of Delft, University of Lund and University of Salzburg.

During the years of his work at WUT he significantly contributed to the development of new areas of research and teaching. He established the world-recognized Polish scientific school in aerosol science. Together with his younger collaborators he advanced the research on aerosol filtration (theory and applications), physicochemical effects of inhalation, powder particle engineering and liquid filtration. He also introduced new teaching areas at the Faculty (*Environmental Protection Process Engineering, Polymer Processing and Biomedical Processes & Products*), with many new lectures and laboratories. During 1999-2005 Professor Gradoń was the dean of the Faculty of Chemical and Process Engineering. Since 2013 he has been a head of the Chair of Integrated Processes Engineering.

Currently Professor Gradoń is a head of the executive board of the Foundation for Polish Science (FNP), a member of the National Science Council (NRN), the Committee of Chemical Engineering Polish Academy of Sciences and several scientific boards of international and domestic institutions, scientific organizations and journals. In 2006 Professor Leon Gradoń received the main award of Foundation for Polish Science (known as *'Polish Nobel Prize'*) for his research and application/industrial achievements in filtration of dispersed systems. He was also a recipient of Marian Smoluchowski Award (1989, Vienna) and Rockefeller Foundation Award (1995) for his achievements in aerosol science. Prof. Gradoń was a recipient of the Japan Society for Promotion of Science Award (2001) and was distinguished as Doshisha University Fellow (Kyoto, 2011-2014). He holds a title of the *'Distinguished Cummins Professor in Filtration'* obtained from Cummins Filtration, Inc. (Cummins Endowed Professor) as a mark of excellence in the development of a Diesel engine exhaust filter which had been applied by this company.

The main scientific activities of Professor Leon Gradoń have been related to (to name the few):

- Design of filtering structures for separation of micro- and nanoparticles from fluids
- Design of coalescing filters for mists and emulsions
- Physicochemical and transport phenomena of inhaled aerosol particles in the lungs
- Particle formation by controlled spray-drying
- Design of inhaling devices and systems

In all these fields he published significant papers. He has (co-) authored over 150 scientific papers, 4 books and 65 patents. He supervised 11 PhD theses and was the co-advisor of 4 PhD students in USA and Japan. For his achievements in the field of science and engineering, Professor Gradoń was awarded with Commander's Cross of Polonia Restituta Order (2014).

Professor Leon Gradoń significantly contributed to the international scientific community as a Board Member of GeAF (*Gesellschaft für Aerosolforschung*) and a regular member of ISAM (*International Society for Aerosols in Medicine*) and *American Filtration Society*. He has been a member of Editorial Boards of the scientific journals: *Journal of Aerosol Science*, *Journal of Aerosol Medicine*, *Advanced Powder Technology*, *KONA – Particle and Powder Journal*, and *Chemical & Process Engineering*.

All the contributors to this issue wish Professor Gradoń further scientific achievements and good health in the coming years.

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