Anniversary

Professor Waldemar Wołczyński is the second person to whom this issue of the Archives of Metallurgy and Materials is dedicated. He is well known researcher in the area of metallurgy and materials science.

The main scientific interests of Professor W. Wołczyński are: eutectic pattern formation under steady-state, solute micro-segregation and solute redistribution after back-diffusion, structure size selection with the application of the theorem of minimum entropy production and marginal stability, modelling of structure formation for rapid solidification, mass transport during formation of multi-layers coating or diffusion interconnections, numerical modelling of columnar – and equiaxed structure growth in the massive steel ingot.

He is with the Polish Academy of Sciences, the Aleksander Krupkowski Institute of Metallurgy and Materials Science in Kraków since 1970.

He earned his First Class M.Sc., in the area of physical metallurgy at the AGH University of Science and Technology, Faculty of Non-Ferrous Metals. He received his Ph.D., with distinction in the oriented eutectic growth. His D.Sc., (habilitation) referring to the application of certain thermodynamic criteria to description of pattern formation, was presented in 1994, at the Institute of Metallurgy and Materials Science of the Polish Academy of Sciences. The scientific title of professor was awarded to him by the decision of the President of the Republic of Poland in 2002.

The Prize of the President of the Polish Academy of Sciences was allocated to him for achievements in application of thermodynamics of irreversible processes to the description of the lamellar spacing selection during oriented eutectic growth in 1984.

He joined staff of the IRSID in Maizieres-les-Metz to study a competitive growth in low carbon steel with Professor G. Lesoult's group in 1988.

He was also awarded a prestigious fellowship from the Japan Society for the Promotion of Science to work at the Tokyo University. Along with the Professor T. Umeda's group, he studied the solute micro-segregation and redistribution accompanying peritectic reaction in 1997 and 2000.

Professor W. Wołczyński is a member of the Scientific Board of the Institute of Metallurgy and Materials Science of the Polish Academy of Sciences, and the Board of Review for the Archives of Metallurgy and Materials.

His studies on the effect of microgravity on the correlation between morphology of cellular doublets and solute redistribution, as well as structure size selection with Professor B. Billia's group from the Aix-Marseille University and the Center for Nuclear Researches in Grenoble, took place in 1996-2000 and were completed by writing a chapter entitled: *Back-Diffusion Phenomenon during the Crystal Growth by the Bridgman Method*, placed in the book: Modelling of Transport Phenomena in Crystal Growth, Eds. J.Szmyd & K.Suzuki, ed. WIT Press 2000, Southampton/UK – Boston/USA.

Professor Wołczyński was able to improve the K.A. Jackson & J.D. Hunt's theory by delivering a new solution to the diffusion equation in the paper: *Concentration Micro-Field for Lamellar Eutectic Growth* published in Defect and Diffusion Forum 272, (2007), 123-138.

He was invited to write a chapter entitled: *Pattern Selection in Crystal Growth* which is part of the book: Modern Aspects of Bulk Crystal and Thin Film Preparation, Eds. N. Kolesnikov & E. Borisenko, ed. In Tech 2012, Rijeka/ Croatia.

He was also asked to write an entry to the Encyclopedia of Iron, Steel, and Their Alloys, Eds. Taylor & Francis Group 2015, New York/USA. His entry is entitled: *Mathematical Modeling of the Microstructure of Large Steel Ingots*.

Professor Wołczyński currently is employed at the Institute of Metallurgy and Materials Science of the Polish Academy of Sciences as the lecturer at the PhD Studies. The subject of his lectures is: "Fundamentals of Solidification".

I wish him all the best, with continuous scientific satisfaction of his and his students' attainments in the field of crystal growth description.

Paweł Zięba
Editor-in-Chief
of the Archives of Metallurgy and Materials
of the Polish Academy of Sciences