



CURICULUM VITAE

Tenured Professor Mikolaj SZAFRAN, PhD, DSc, Eng.
Professor of the Warsaw University of Technology
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2014 till now - Head of the Department of Chemical Technology, Faculty of Chemistry, Warsaw University of Technology

2008 - 2013 - Head of Inorganic Technology and Ceramics Department, Faculty of Chemistry, Warsaw University of Technology

2002- 2008 - Vice-Dean of the Faculty of Chemistry Warsaw University of Technology

MASTER SCIENCE THESIS

“Hot pressing of piezoceramic materials”

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DOCTORAL THESIS

“Sintering of Li-Mn-Mg Ferrite Foil Using the Tape Casting Method”

HABILITATION THESIS

“Macroscopic and microscopic aspects of designing porous ceramic materials”

Professor Mikolaj Szafran is a chemist specialized in technology of advanced ceramics and composites and works in designing of the advanced ceramic materials based, specially, on the chemistry.

His present scientific interests concern mainly the following issues:

- Synthesis and applications of new low-toxic monomers for gelcasting of ceramic powders, based on the mono-, di- and oligosaccharides. These monomers play triple role in ceramic processing: organic monomers able to polymerize in situ, dispersing agents for nano- and submicro- ceramic powders and as compounds forming cross-linked polymeric network without any external additives. These monomers have been synthesized and have been applied for the first time by Prof. Szafran scientific group. This work is

associated with the use of new, environmentally friendly organic additives in ceramic technology.

- Designing, synthesis and application of new water thinnable polymeric binders for die pressing and tape casting of ceramic powders;
- Deagglomeration of nanoceramic powders with application of monosaccharides and their derivatives;
- Ceramic matrix composites with gradient concentration of metal particles;
- Ceramic-polymer composites on the porous ceramic base;
- Designing of porous ceramic materials for ozonation of drinking water and aeration of waste water.

His scientific achievements comprise **3** monographs, over **220** scientific articles published in scientific journals and over **300** oral and poster presentations at national and international conferences in Poland and abroad. He is also the author and co-author of **45** Polish patents. Moreover, he has delivered over **50** speeches as an invited speaker at numerous conferences in many countries. He has cooperated with many foreign centres for many years. Now he cooperates with:

- EMPA, Materials Science and Technology, Switzerland;
- National Institute of Materials Science, Tsukuba, Japan;
- Institute of Glass and Ceramics, Madrid, Spain;
- Institute of Science and Technology for Ceramics”, Faenza Italy;
- Institute for Problems of Materials Science National Academy of Science, Kiev, Ukraine.
- Ente per le Nuove Tecnologie e Ambiente, Rome, Italy;

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Others International Achievements:

1. Member of the World Academy of Ceramics (Class Science);
2. “Distinguished Award 2014 for Novel Materials and their Synthesis” given by International Union of Pure and Applied Chemistry & Organization Committee of Novel Materials and their Synthesis (10th International Conference on Novel Materials and their Synthesis (NMS-X), 10-15.10.2014, Zhengzhou, China);
3. Member of the Prize Committee World Academy of Ceramics, cadency 2014-2018;
4. Member of the Editorial Board of the *Journal of Ceramic Science and Technology*
5. Member of many Scientific and Organizing Committees of the International Congresses and Conferences.