

Jan T. Bonarski (1957–2016)

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Jan Bonarski passed away on 5 January 2016, at the age of 59. Born in Wodzislaw, Poland, Jan studied from 1976 at the Faculty of Metallurgy at the Academy of Mining and Metallurgy in Cracow, before starting his PhD on X-ray diffraction quantitative phase analysis of textured materials, which he defended with honours in 1990.

In 1988 he joined Jan Pospiech's group at the Institute of Metallurgy and Materials Science, one of the 70 Institutes of the Polish Academy of Sciences, where he remained for the next 28 years, except for a one-year sabbatical at Clausthal Technical University (Germany) with Professor H.-J. Bunge. He received the Habilitation in 2002 and became Full Professor in Technical Sciences in 2014.

In the meantime, Jan took on numerous responsibilities; he was representative of the Director for the Accredited Testing Laboratories, supervisor of the X-ray diffraction laboratory, the head of a research group (Laboratory of Anisotropic Structures) and the Deputy Director of the Institute for the last five years. He always eagerly transmitted his knowledge, his teaching passion and his enthusiasm to the many PhD students he supervised as well as to researchers, notably in his presentations to conferences. He was well known to participants of the International Conference on Textures of Materials (ICOTOM) conference series, as well as those of the French–German Texture and Anisotropy meetings of the SF2M-DGM, which he attended from the beginning.

His main research contributions were completely off the beaten track. He initiated the first applications of quantitative texture analysis of wood, in which he demonstrated the effects of textures and residual stresses on ultrastructural modifications. Dealing with such poorly crystalline materials as cellulose opened his way to similarly analyse the textures of polymers like polypropylene. Duplex stainless steels, metal nitride composites, texture–stress depth evolution, texture–tomography and texture inhomogeneities are some of the many fields he contributed to. More recently, he began very productive work on the application of texture analysis of natural biomaterials, to analyse texture evolution in mollusc shells.

Jan's major contributions are without doubt the identification of texture components that lead to the destruction of single-crystalline photovoltaic devices, and the development of measuring techniques to correct pole figures in the case of thin materials, which allowed him to properly analyse textural heterogeneities. He could then demonstrate the existence of an electromotive force resulting from differently oriented grains of the same material. These latter achievements allowed him to deposit two patents.

Jan maintained scientific collaborations with colleagues in numerous institutions in Austria, Bulgaria, Germany, Spain, Russia, Slovenia and Ukraine. His contribution to science comprises not less than 170 publications and two books. He received several prizes and distinctions, the most important being the Gold Cross of Merit for his exceptional scientific achievements, awarded by the President of the Republic of Poland in 2008. Jan will remain forever in our memories as a thoughtful warm colleague, a fair director and a talented scientist of high reputation.