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THE GRANXEL; A NEW CONCEPT FOR THE DIGITAL PROCESSING OF MICROSTRUCTURAL IMAGES

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Abstract

This work introduces a new concept applicable to the digital processing of microstructure images. This concept named *granxel*, in analogy to pixel, which is the smallest element of a digital image, has been defined to seed up the development of algorithms to obtain parameter of the quantitative metalography. The *granxel* data structure includes common parameters of grains and pores in a microstructure such as: area, perimeter, orientation, mean intercept, width, form factor, Feret diameter and other. In course of this work, the advantages of using such a data structure are described.