

Self-organized microstructure of ZnO-Bi₂O₃ eutectic

K. Kolodziejak, D. A. Pawlak, K. Rozniatowski, R. Diduszko, M. Malinowski,
M. Kaczkan, E. Starnawska

Institute of Electronic Materials Technology, ul. Wolczynska 133, 01-919 Warsaw, Poland

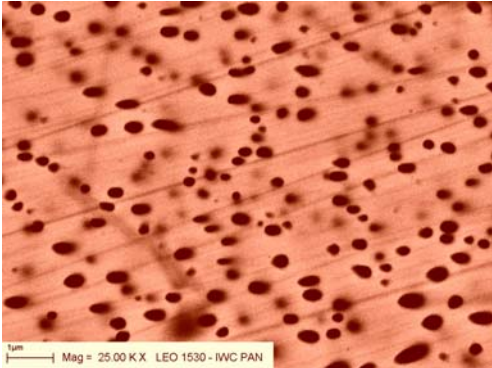


Fig. 1. Globular microstructure of ZnO - ZnBi₃₈O₆₀ eutectic

Eutectics are special materials which are both a MONOLITH and a MULTIPHASE MATERIAL.[1] Thanks to this and their product properties they might behave as metamaterials. In this work a new binary eutectic of ZnO - Bi₂O₃ system will be presented. Two types of microstructure has been obtained in this eutectic: globular and fibrous. The pattern phase is formed by ZnO and the matrix phase is formed by ZnBi₃₈O₆₀. The quantitative analysis of the microstructure, luminescence and cathodoluminescence of the eutectic will be presented.

[1] J. Llorca, and V.M. Orera, *Progress in Mat. Sci.*, 51, 711 (2006).