

*Current Topics in Biophysics (Zagadnienia Biofizyki Współczesnej)* vol. 33(suppl.A), 2010, 227-230

**The EPR measurements of Al<sub>2</sub>O<sub>3</sub> powders and mullites used in aerospace industry for cores and shapes**

Ireneusz Stefaniuk, Piotr Potera, Józef Cebulski

In this work the electron paramagnetic resonance (EPR) spectra of Al<sub>2</sub>O<sub>3</sub> powders were measured for different sizes of grains (# 200, # 325) as well as the mullites (0.007 and 0.012). The measurements were performed at room temperature and in the temperature range from 140 K up to 380 K. The main purpose of this work was to investigate the possible relationships between EPR spectra and the size of powder grains as well as the identification of EPR spectra in view of potential application of EPR technique as a fingerprinting method.