

THE SYNTHESIS OF CALCIUM CARBONATE FUNCTIONALIZED WITH POLY (MALEIC ANHYDRIDE-ALT-1-OCTADECENE)

Catalin Croitoru, Ionut Claudiu Roata, Alexandru Pascu and Elena Manuela Stanciu

Materials Engineering and Welding Department, Transilvania University of Brasov,
Eroilor 29 Str, 500036, Brasov, Romania

In this paper amorphous and crystalline particulate calcium carbonates, with diameters ranging from 10 to 55 μ m was surface treated and functionalized with poly (maleic anhydride-alt-1-octadecene) to decrease their surface energy, and improve their interfacial adhesion with thermoplastic polymer matrices, such as polyolefins. The morphology of the functionalized particles was characterized by SEM coupled with EDS, evidencing an optimum coating with the oligomer, XRD and FTIR spectroscopy, evidencing a decrease in surface crystallinity of the particles and respectively physical bonding with the functionalizing agent.