

Название публикации:

Photodegradation of films based on polylactide-polyethylene blends

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Аннотация:

The influence of photodegradation on the changes in structure and properties of blends based on polylactide (PLA) and polyethylene (PE) was studied. The changes were measured by two methods: differential scanning calorimetry (DSC) and electronic paramagnetic resonance (EPR). It was found that polylactide is more prone to UV degradation than polyethylene. Melting temperature and crystallinity degree of polylactide decreased significantly after irradiation, while polyethylene structure was more stable. According to DSC data the blend consisted of 50% PLA and 50% PE had the highest crystallinity among other blends for both polymers before and after irradiation. Addition of different quantity of pre-oxidized polyethylene to PLA-PE blends had strong influence on the structure of blends, especially after UV irradiation. PLA form its own phase when its content in blend is 50% and higher. © 2018 Author(s).

Ключевые слова:

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