

## عنوان مقاله:

Study on the morphology and mechanical properties of PLA/PCL blends

## محل انتشار:

سومین کنفرانس بین المللی پژوهش در علوم و مهندسی (سال: 1396)

تعداد صفحات اصل مقاله: 5

## نویسندگان:

Zahra Zamani - *Department of Polymer Engineering, Faculty of Engineering, Qom University of Technology, P.O. Box: ۳۷۱۹۵-۱۵۱۹, Qom, Iran*

Mohsen Mohammadi - *Department of Polymer Engineering, Faculty of Engineering, Qom University of Technology, P.O. Box: ۳۷۱۹۵-۱۵۱۹, Qom, Iran*

Hamed Azizi - *Department of Plastics Engineering, Faculty of Polymer Processing, Iran Polymer and Petrochemical Institute, P.O. Box: ۱۴۹۶۵-۱۱۵, Tehran, Iran*

Jafar Khademzadeh Yeganeh - *Department of Polymer Engineering, Faculty of Engineering, Qom University of Technology, P.O. Box: ۳۷۱۹۵-۱۵۱۹, Qom, Iran*

## خلاصه مقاله:

For investigating the properties of poly (lactic acid) (PLA)/poly(ε-caprolactone)(PCL) blends in this study PLA/PCL blends were prepared with 7, 15 and 30 % PCL via melt mixing method in the internal mixer (Brabender). The morphology of PLA/PCL blends was observed by scanning electron microscopy (SEM) and the effect of PCL content on the mechanical properties was studied. The results of SEM showed that the PLA/PCL blends are immiscible and phase-separated and that the size of dispersed phase (PCL) increases with addition PCL content. The mechanical properties as modulus and tensile strength reduce while the elongation at break and toughness increased by adding PCL to PLA matrix and the brittleness PLA improves.

## کلمات کلیدی:

poly(lactic) acid, poly (ε-caprolactone), blends, mechanical properties, morphology

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/677522>

