

عنوان مقاله:

Adsorbent Porous Keratin Sponge from Waste Chicken Feather

محل انتشار:

دوازدهمین سمینار بین المللی علوم و تکنولوژی پلیمر (سال: 1395)

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نویسندگان:

.Fatemeh Dadashian - Department of Textile Engineering, Amirkabir University of Technology, Tehran, Iran

.Sara Sadeghi - Department of Textile Engineering, Amirkabir University of Technology, Tehran, Iran

Nilloofar Eslahi - Department of Textile Engineering, Science and Research Branch, Islamic Azad University, Tehran, Iran

خلاصه مقاله:

Feathers are probably the most abundant protein material in nature. However, a significant amount of this product is wasted by burning or entombing. Feather keratin as a cheap, efficient and effective source of protein can be used in a wide range of applications from cosmetics to biomedical engineering. Therefore, recycling of these resources and developing a method for extracting keratin from such wastes has been the objective of many studies. In this work, chicken feathers are utilized to fabricate a highly porous keratin sponge by the simple freeze-drying method. For this purpose, keratin is firstly extracted from waste chicken feathers using our previously reported enzymatic treatment along with a suitable reducing agent. The physiochemical properties of the produced regenerated keratin sponge are characterized afterwards using scanning electron microscopy (SEM) and adsorption tests. The obtained results show that the fabricated porous sponge has a high potential to be applied as a promising absorbent

کلمات کلیدی:

Poultry feather- Recycling- Keratin-Porous sponge- Adsorbent

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