

## عنوان مقاله:

Decomposition of tires and satellite milling: a new method for economical preparation of carbon nanoparticles

## محل انتشار:

اولین کنفرانس ملی میکرو نانو فناوری (سال: 1397)

تعداد صفحات اصل مقاله: 4

## نویسندگان:

Roshanak Haji norozi asl - *Department of chemistry, Imam Khomeini International University, Qazvin, Iran*

Shahriar Ghamamy - *Department of Chemistry, Qazvin inorganic chemistry Branch, Imam Khomeini International University, Qazvin, Iran*

## خلاصه مقاله:

Carbon black nanoparticles (CBIp) were derived from waste tire rubbers via a melt-extrusion pyrolysis process at 300 °C. The chemical structure and content of the bound rubber shell were characterized, quantified and compared with the commercial carbon black N330 and pyrolytic carbon black (CBp). The average particle size of CBIp is about 22 nm, with a rubber shell thickness of 7-12 nm. Functional carboxylic group and ZnO were detected on the surface of CBIp by FTIR and XRD, respectively, which are absent from N330 and CBp. The light pyrolysis process provides a facile and clean approach to generate useful carbon nanoparticles 20 out of waste tire rubbers. Carbon nanoparticles has been produced by using the satellite mill

## کلمات کلیدی:

waste tire rubber, light pyrolysis, carbon black

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/807704>

