

## عنوان مقاله:

Effect of graphene on electrical conductivity of polymeric nanocomposites

## محل انتشار:

ششمین کنگره بین المللی رنگ و پوشش (سال: 1394)

تعداد صفحات اصل مقاله: 2

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## خلاصه مقاله:

One of the most promising applications of graphene as an electrical conductive material is in polymer nanocomposites in which the polymer is enabled to transition from an electrical insulator to a conductor at a very low loading of graphene. The fraction of graphene at which polymer nanocomposite becomes electrically conductive is called percolation threshold. In all studies, it is aimed to provide the lowest possible percolation threshold because the nanocomposite processibility becomes more difficult as the graphene loading increases. In this paper some of the key factors affecting the percolation threshold are discussed. Low percolation threshold of 0.15 wt% in graphene/polyurethane acrylate was reached as result of homogeneous dispersion and high aspect ratio of graphene which are two important factors. Graphene prepared through chemical vapor deposition process causes very high conductivity at a low loading due to its purity and continuous structure. Reduction method of graphene oxide and .nanocomposite fabrication process have also determining roles in the percolation threshold

## کلمات کلیدی:

Graphene- Nanocomposite- Electrical conductivity- Percolation threshold

## لینک ثابت مقاله در پایگاه سیویلیکا:

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