عنوان مقاله:

Thermal conductivity enhancement of transformer oil using nitrogen doped graphene nanoparticles

محل انتشار:

دوازدهمین همایش بین المللی انرژی (سال: 1397)

تعداد صفحات اصل مقاله: 6

نویسندگان:

Sajad Hosein Zadeh - *Gilan Electrical distribution company*

Seyed Hasan Ehsandoost, - *Department of Chemistry, Faculty of Science, University of Guilan*

Maryam Ghomashpasand

خلاصه مقاله:

In this study the effects of nitrogen doped graphene nanoparticles were used to modifying the transformer oil. We present on the breakdown voltage of oil. The synthesized materials characterized by XRD EDX and TEM techniques. The concentrations of nanoparticles in transformer oil are in the range from 0.1 to 0.3 volume percentage. From the experimental results, it was found that Results obtained show that, using of transformer oil-based nanofluids as a cooling medium instead of pure transformer oil lead to improve the cooling performance of transformer by reducing the temperature of transformer and as a consequence increasing the protection of the transformer against the .breakdown. The results show that thermal conductivity with increase in % vol concentration of nanoparticles

کلمات کلیدی:

graphene, nanoparticles, nitrogen, transformer oil