عنوان مقاله:

Investigating the characterization of a new Nano-adsorbent to increase methane storage gas

محل انتشار:

دوازدهمین کنفرانس ملی پژوهش های نوین در علوم و مهندسی شیمی (سال: 1400)

تعداد صفحات اصل مقاله: 7

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خلاصه مقاله:

There are several ways for natural gas storage, like Compressed Natural Gas (CNG), Adsorbed Natural Gas (ANG), and liquefied gas methods. The ANG technologies allow the natural gases to be absorbed via porous materials at high temperatures around ۵۰۰ psig (۳.۵ MPa). Via an accurate comparison, it has been exhibited those gases can be stored in a CNG tank at approximately ۳,۵۰۰ psig. Therefore, the ANG system appears to be prospective for any future activities. In this study, Glucose–Graphene hybrid based materials with hierarchical structures, tunable surfaces, chemical doping, and functionalization were simulated for gases with = ۱.۴۱ such as (H۲, N۲, O۲) and = ۱.۳۳ for (CH۴, CO۲, NH۳, NO۲, H۲S, SO۲) and = ۱.۶۷ for (He, Ne) sorption, storage, and separation. The scope of this work is to produce a new Nanoadsorbent, i.e., Hybrid -Glucose-Graphene, which can be introduced as a new candidate for .that gas storage

کلمات کلیدی:

Adsorbed gas, Storage test, Glucose, Graphene oxide, G-As-Pt, doping