

ABSTRACTS

ORAL PRESENTATIONS

for larger size of 20mm tested and the optimum temperature was 32 °C for all coatings.

PEAO10_AMD_1

Technology Review of Natural Gas Liquefaction Processes

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Limited studies have focused on the thermal performance of the storage system under dynamic conditions. In the present study, investigation of the thermal characteristics of adsorptive natural gas (ANG) storage system has been studied during its dynamic discharge process. It has been observed that a significant drop in bed temperature takes place during the discharge of the gas at different flow rates e.g. 1, 5, 10 l/min. To reduce the retention of the gas during the discharge process, bed preheating was carried out at different elevated temperature. It has been observed that the amount of desorption improved significantly as a result of bed preheating.

PEAO10_AMD_2

Kinetics of Catalytic Cracking of N-Heptane Over Synthesized Zeolite

experiment, CuZSM-5 has given the highest conversion and olefins yield with 17.72% and 3.55%, respectively.

PEAO10_AMD_4

Phase Formation of Barium Hexaferrite Nanoparticles by Sol-Gel Method in Presence of Organic Materials

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The sol-gel method was used to synthesize M-type barium hexaferrite nanopowders, using goethite and Ba carbonate as raw materials. The effects of organic materials, as coordinating agents, on the phase formation of barium ferrite were investigated. Phase identification of the samples was studied by X-ray diffraction (XRD). The results show that adding organic materials to the sol makes the gel more homogeneous and leads a decrease in calcining temperature of hexaferrite and the particle size of the final product. An average crystallite size of 22 nm in the presence of organic materials (calcined at 875 °C) and 38 nm in the absence of them (calcined at 1050 °C) have been obtained, using the Scherrer's formula. The morphology of the sample was checked by TEM.