

NEW HETEROGENEOUS CATALYST OF OIL SHALE FOR ORGANOPHOSPHORUS SYNTHESIS ASSISTED BY ULTRASOUNDS

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Abstract. A new heterogeneous catalyst has been developed based on Moroccan oil shale raw matter. This new support was used in the α -hydroxyphosphonates synthesis by Pudovik pathway using dialkylphosphites and carbonyls compounds. The transformation was performed by using oil shale-based catalyst under room temperature and by ultrasound-assisted synthetic approach. Both approaches have been found to be efficient in the organophosphorus synthesis. The reaction was carried out with a high yield in dry media, the catalyst is separated easily and reused several times without losing its activity.

Keywords: α -hydroxyphosphonate, oil shale, heterogeneous catalysis, ultrasound.