EFFECT OF SOLVENT ON THE SUPERCRITCAL EXTRACTION OF MOROCCAN OIL SHALE

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Abstract :

Currently, the conventional energy resources (natural gas, oil…) for the world are largely used and would not last indefinitely. So it is necessary to seek other energy resources. A lot of efforts and studies have been carried out to the direction of the oil shale, whose world reserves are five hundred times more significant than those of oil, but the presence of a rather significant amount of mineral matter makes difficult their use as a source of energy. However, their organic matter, rich in aromatic compounds, could have other applications. The present work is part of a more general programme of valorisation of the Moroccan oil shale deposit of Tarfaya. More specifically, the aim was to try to show that the organic fraction of the oil shale could be used, after appropriate chemical treatments resulting in a " maturation" of the organic phase as pitches to low cost carbon fibers (e. g. activated carbon fibers). During this study, we tried to define the optimal solvent likely to give a better maturation of the organic matter of the oil shale. The results obtained show that the water is a very efficient solvent for oil shale, giving a suitable maturation of the organic matter.