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Contribution to the Valorization of Moroccan Oil Shales

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Oil shale has constituted for a long time an economical hope for countries that possess important reserves of these rocks and that view to use them as an energy source substitute for petroleum. Morocco, with estimated reserves of 93 billion tons, is increasingly looking at oil shale as an alternative energy source. A lot of studies have concentrated on oil shale located in Timahdit and Tarfaya, because of their high percentage of organic matter. Most of the studies focus either on the effect of various parameters on the yield and the quality of the oil obtained by conventional pyrolysis, or on the characterization of these oils by different physical and chemical techniques. This paper explores the possibility to produce new materials, starting from the Moroccan oil shale, for different applications. More specifically, we aimed to demonstrate that the organic fraction of the oil shale could be used as precursors of low cost carbon fibres or graphitizable carbon, after appropriate chemical treatments resulting in a “maturation” of this organic phase. We also showed that this organic fraction of the Moroccan oil shale has interesting bioactive properties and that it could be used as a source of compounds with pharmaceutical interests.

Biography:

Abdelkrim Abourriche is a Professor in the Industrial Engineering Department at the National School of Applied Sciences in Safi, Morocco, taking on the role of Head of the department in 2008. Abdelkrim's specialist areas are the development of original natural resources such as Moroccan oil shale. He is the author of over 50 publications in international journals and conference proceedings refereed and a hundred oral presentations or by posters. He is the member of scientific and organizing committees of several national and international conferences