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Alternative synthesis processes for molybdenum content compounds

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It is well known the environmental risks which is present by using the huge and continuous sulphite roasting furnaces applied all over the world. Also, variation in the market prices, as the molybdenum recent one, may be responsible for furnaces closures due to their high cost and production levels. This work covers the author's experience in dealing with a batch and much smaller reactor which was build up in order to process the molybdenite roasting. The obtained materials are molybdenum tri-oxide and calcium sulphate. While the former can be used either in the Mo alloy production for different proposals, such as steel making industry, or in the fertilizer segment, as precursor of a Mo soluble salt, such as sodium molybdate, the former can be applied as soil corrective in some agriculture applications. The presence of Mo in an adequate soluble compound can lead to a significant change in the agriculture procedures as 20 grams per hectare of Mo content can be used instead of 900 Kg per hectare of urea, to make the plants absorption of nitrogen to work out properly. Therefore, for countries such as Brazil, with an important steel making industry and also having a huge agriculture area, the set up of alternative synthesis processes to produce Mo content compounds seems to be a great challenge and opportunity.