## International Conference on the Management of Naturally Occurring Radioactive Materials (NORM) in Industry



Contribution ID: 251 Type: Poster

## Innovative Ideas to Process Phosphogypsum from Morocco –a Review

Morocco is after China the second largest phosphate rock producing country in the world and controls nearly one fourth of all phosphate rock reserves worldwide. During phosphate rock processing with the wet-phosphoric acid (WPA) process considerable amounts of phosphogypsum are produced. For every ton phosphoric acid roughly 5 tons phosphogypsum are produced. Phosphogypsum shows low-levels of radioactivity that results from the naturally occurring radioactivity in the processed phosphate rock. Morocco does not only mine phosphate rocks but also processes significant quantities of the ore so that relevant amounts of phosphogypsum accumulate every year. Researchers have looked into innovative processes to utilize the phosphogypsum produced in Morocco as construction material, fertilizer supplement, etc.. In this paper we review the most promising ideas and processes that could be employed for the utilization of Moroccan phosphogypsum in the near future.

**Primary authors:** BODINIER, Jean-Louis (Geology & Sustainable Mining, Mohammed VI Polytechnic University, Lot-660, Benguerir 43150, Morocco and Geoscience Montpellier, University of Montpellier, Montpellier-Cedex 5- 34095, France); EL HARRAK, Mohamed (OCP Group, Morocco); EL-YAHYAOUI, Adil (Centre National de l'Énergie, des Sciences et des Technique Nucléaires (CNESTEN), B.P. 1382, Route Principale, 10001 Rabat, Morocco); HANEKLAUS, Nils (Td Lab Sustainable Mineral Resources, Danube University Krems, Krems 3500, Austria); TULSIDAS, Harikrishnan (United Nations Economic Commission for Europe, Geneva 1200, Switzerland); ROY, Amit A. (IFDC, International Fertilizer Development Center, IFDC, Muscle Shoals, AL 35662, USA); STEINER, Gerald (Td Lab Sustainable Mineral Resources, Danube University Krems, Krems 3500, Austria)

**Presenter:** BODINIER, Jean-Louis (Geology & Sustainable Mining, Mohammed VI Polytechnic University, Lot-660, Benguerir 43150, Morocco and Geoscience Montpellier, University of Montpellier, Montpellier- Cedex 5-34095, France)

**Session Classification:** Session VI - Solutions for Residue and Waste Management

Track Classification: NORM Residue and Waste Management