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PHYTOREMEDIATION OF CADMIUM BY THE TERRESTRIAL PLANTS GROWN ON KÜTAHYA PB-ZN-AG MINING SOILS, TURKEY

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The Gümüsköy Ag (As, Pb and Zn) deposit is located about 25 km west of Kütahya and the largest silver deposit in Turkey. This study investigated cadmium (Cd) uptake and transport from the soil to different plant parts by documenting the distribution and accumulation of Cd in the roots and shoots of 11 terrestrial plant species, all of which grow naturally in surface soils of the Gumuskoy mining area. Plant and soil samples were collected from the field, and Cd concentrations were analyzed by ICP-MS. The average Cd values in the soil, root, and shoot of the terrestrial plants in the study area were 82.75, 55.44, and 43.51 ppm, respectively. The plants were separated to several groups according to ECS and ECR values of these plants. These groups showed that the *Phlomis* sp. (PH), *Onosma* sp. (ON) and *Carduus nutans* (CR) for Cd could be good bioaccumulator plants and be useful for phytoremediation or remediation studies of mining soils contaminated by Cd.

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GLOBAL PETROLEUM POTENTIAL OF THE BASEMENT RESERVOIRS OF SEDIMENTARY BASINS

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Hydrocarbon exploration targeting basement reservoirs is a challenging issue for the fundamentals of petroleum geology and routine industrial practices. By now, commercial production of hydrocarbons from fractured crystalline basement is well documented, with petroleum basins across the globe hosting weathered, fractured and/or altered basement fields. To present time more than 450 oil and gas fields in 54 countries and more than 100 sedimentary basins with commercial productivity of the crystalline basement are known worldwide. Among these ones