



## **Characterization of soil contamination by using environmental magnetic techniques: example of the Ribatejo power plant**

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Soil contamination resulting from power plant atmospheric emissions represents a major problem for soil management, water resource and agriculture. Here, we studied the contamination of soils located close to the Ribatejo power plant, near Carregado, Portugal. We used magnetic susceptibility (MS), isothermal remanent magnetization (IRM) curves and frequency-dependent magnetic susceptibility (K<sub>fd</sub>) in order to identify the concentration and grainsize of anthropogenic magnetic particles. Separation of natural (background) and anthropogenic magnetic particles is achieved by studying several sites located close (polluted) and far (background) from the Ribatejo power plant. Vertical variations of magnetic particle content at each site provide information about the depth at which anthropogenic particles are maximum, and allow discussing the influence of downward fluid percolation within the different soil horizons.