Geophysical Research Abstracts Vol. 20, EGU2018-19338, 2018 EGU General Assembly 2018 © Author(s) 2018. CC Attribution 4.0 license.



Characterization of biochars and hydrochars prepared from manure wastes for land reclamation

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Pyrolysis of organic wastes for biochar preparation has been proved as an useful way of waste management. Recently, a great interest was performed in the treatment of metal polluted soils with organic amendments such as composts or biochars as method. The effectiveness of the recovery of the degraded area depends on different properties of amendment as cation exchange capacity, surface area, porosity, nutrients content or water holding capacity.

On the other hand, in the biochar preparation, the high water content of some raw materials make necessary to use a dry step before pyrolysis treatment. For this reason, hydrothermal carbonization (HTC) of wet biomass could be an inexpensive alternative management method.

The main objective of this work is to evaluate the properties of manure waste compost, biochars and hydrochars prepared from manure waste for their use in the remediation of metal polluted soils from different mining area of Spain.

Authors want to acknowledge Economy and Competitiveness Ministry of Spain for the financial support (CGL2014-58322-R).