

Title (en)

TRANSITION-METAL SUBSTITUTED TUNGSTOALUMINATE COMPLEXES FOR DELIGNIFICATION AND WASTE MINERALIZATION

Title (de)

MIT ÜBERGANGSMETALLEN SUBSTITUIERTE WOLFRAMALUMINAT-KOMPLEXE FÜR DELIGNIFIZIERUNG UND ABFALLMINERALISIERUNG

Title (fr)

COMPLEXES DE TUNGSTOALUMINATE SUBSTITUES PAR DES METAUX DE TRANSITION DESTINES A UNE DELIGNIFICATION ET UNE MINERALISATION DE DECHETS

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Abstract (en)

[origin: WO9911857A1] A method of delignifying lignocellulosic fibers is disclosed. In one embodiment, the method comprises the steps of combining a polyoxometalate complex with aluminum heteroatom of the formula $[Al_1V_mMonWoNb_pTaq(TM)rOs]_{<x>}$ where 1 is 1-6, m is 0-18, n is 0-40, o is 0-40, p is 0-10, q is 0-10, r is 0-9, and TM is a d-electron-containing transition metal ion, where $l+m+n+o+p+q \geq 4$, and s is sufficiently large that $x > 0$, with a lignocellulosic pulp, wherein the pH of the combination is between 6 and 11 and the consistency of the combination is 1-20 %; and heating the combination in a temperature-controlled and pressure-controlled vessel under conditions of temperature and time wherein the polyoxometalate is reduced and delignification occurs.

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