

Title (en)
METHOD OF MAKING HIGH-PURITY (>99%) MOO2 POWDERS, PRODUCTS MADE FROM MOO2 POWDERS, DEPOSITION OF MOO2 THIN FILMS, AND METHODS OF USING SUCH MATERIAS

Title (de)
VERFAHREN ZUR HERSTELLUNG VON HOCHREINEN (>99%) MOO2-PULVERN, AUS MOO2-PULVERN HERGESTELLTE PRODUKTE, ABSCHIEDUNG VON DÜNNEN MOO2-FILMEN UND VERFAHREN ZUR VERWENDUNG DERARTIGER MATERIALIEN

Title (fr)
PROCEDE D'ELABORATION DE POUDRES DE MOO SB 2 /SB , PRODUITS A BASE DE CES POUDRES, DEPOT DE FILMS MINCES DE MOO SB 2 /SB , ET PROCEDES RELATIFS A L'UTILISATION DE TELS MATERIAUX

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Abstract (en)
[origin: WO2005040044A2] The invention relates to high purity MoO₂ powder by reduction of ammonium molybdate or molybdenum trioxide using hydrogen as the reducing agent in a rotary or boat furnace. Consolidation of the powder by press/sintering, hot pressing, and/or HIP is used to make discs, slabs, or plates, which are used as sputtering targets. The MoO₂ disc, slab, or plate form is sputtered on a substrate using a suitable sputtering method or other physical means to provide a thin film having a desired film thickness. The thin films have properties such as electrical, optical, surface roughness, and uniformity comparable or superior to those of indium-tin oxide (ITO) and zinc-doped ITO in terms of transparency, conductivity, work function, uniformity, and surface roughness. The MoO₂ and MoO₂ containing thin films can be used in organic light-emitting diodes (OLED), liquid crystal display (LCD), plasma display panel (PDP), field emission display (FED), thin film solar cell, low resistivity ohmic contacts, and other electronic and semiconductor devices.

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DOCDB simple family (application)
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