

EPR characterization of new cadmium, zinc and rare-earth tungstates and molybdates

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Some well known double molybdates and tungstates single crystals, as e.g. $\text{CsDy}(\text{MoO}_4)_2$, $\text{KDy}(\text{WO}_4)_2$, $\text{KLa}_{0.25}\text{Pr}_{0.75}(\text{WO}_4)_2$, $\text{KLa}_{0.25}\text{Pr}_{0.75}(\text{MoO}_4)_2$, as well as new cadmium and rare-earths tungstates or molybdates with the formulas $\text{CdRE}_2\text{W}_2\text{O}_{10}$, $\text{Cd}_{0.25}\text{RE}_{0.50}\text{MoO}_4$, and, rare-earth double molybdato-tungstates $\text{Cd}_{0.25}\text{RE}_{0.50}(\text{MoO}_4)_{0.25}(\text{WO}_4)_{0.75}$ ($\text{RE}=\text{Pr}$, Nd , Sm-Dy) as well as zinc and rare-earth molybdato-tungstates $\text{ZnRE}_2\text{MoWO}_{10}$ ($\text{RE}=\text{Pr}$, Sm-Dy) and $\text{II-Pr}_2\text{W}_2\text{O}_9$ and $\text{II-Pr}_2\text{WO}_6$ were analyzed using EPR method. The obtained compounds crystallize in the scheelite type structure and some of them show solubility in e.g. CdMoO_4 forming solid solutions.

