Magnetocaloric effect in $CsDy(MoO_4)_2$

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$CsDy(MoO_4)_2$ belongs to the family of double alkaline rare-earth molybdates, with detectable low-temperature structural phase transitions, caused by the cooperative Jahn-Teller effect. Magnetocaloric studies of a single crystal of $CsDy(MoO_4)_2$ have been performed in magnetic field applied along the a axis in the temperature range from 1.9 K to 48 K in magnetic fields up to 7 T. Isothermal magnetization curves were measured in a commercial Quantum Design SQUID magnetometer. Large conventional magnetocaloric effect was found around 5 K ($-\Delta S_M = 8$ J/(kgK) for 5 T) and around 44 K ($-\Delta S_M = 9$ J/(kgK) for 5 T). The latter can be associated with the presence of a structural phase transition occuring at $T \approx 40$ K.

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