Improvement of Rotating Magnetocaloric Effect in 2D Mn(II)-Nb(IV) Molecular Ferrimagnet

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Magnetic and magnetocaloric properties of a 2D Mn(II)-Nb(IV) ferrimagnet on single crystals were investigated. A sizable anisotropy of magnetocaloric effect between the easy plane and hard axis in low fields was used to study the rotating magnetocaloric effect. We demonstrate that the inverse part of magnetocaloric effect can be used to improve the rotating magnetic entropy change up to 51%. This finding is of key importance for searching efficient materials for RMCE.

References:

[1] P. Konieczny, Ł. Michalski, R. Podgajny, S. Chorąży, R. Pełka, D. Czernia, S. Buda, J. Młynarski, B. Sieklucka, T. Wasiutyński, Inorg. Chem., 56 (2017) 2777-2783

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