

SUPPLEMENTARY INFORMATION

Gadolinium-oxide nanoparticles for cryogenic magnetocaloric application

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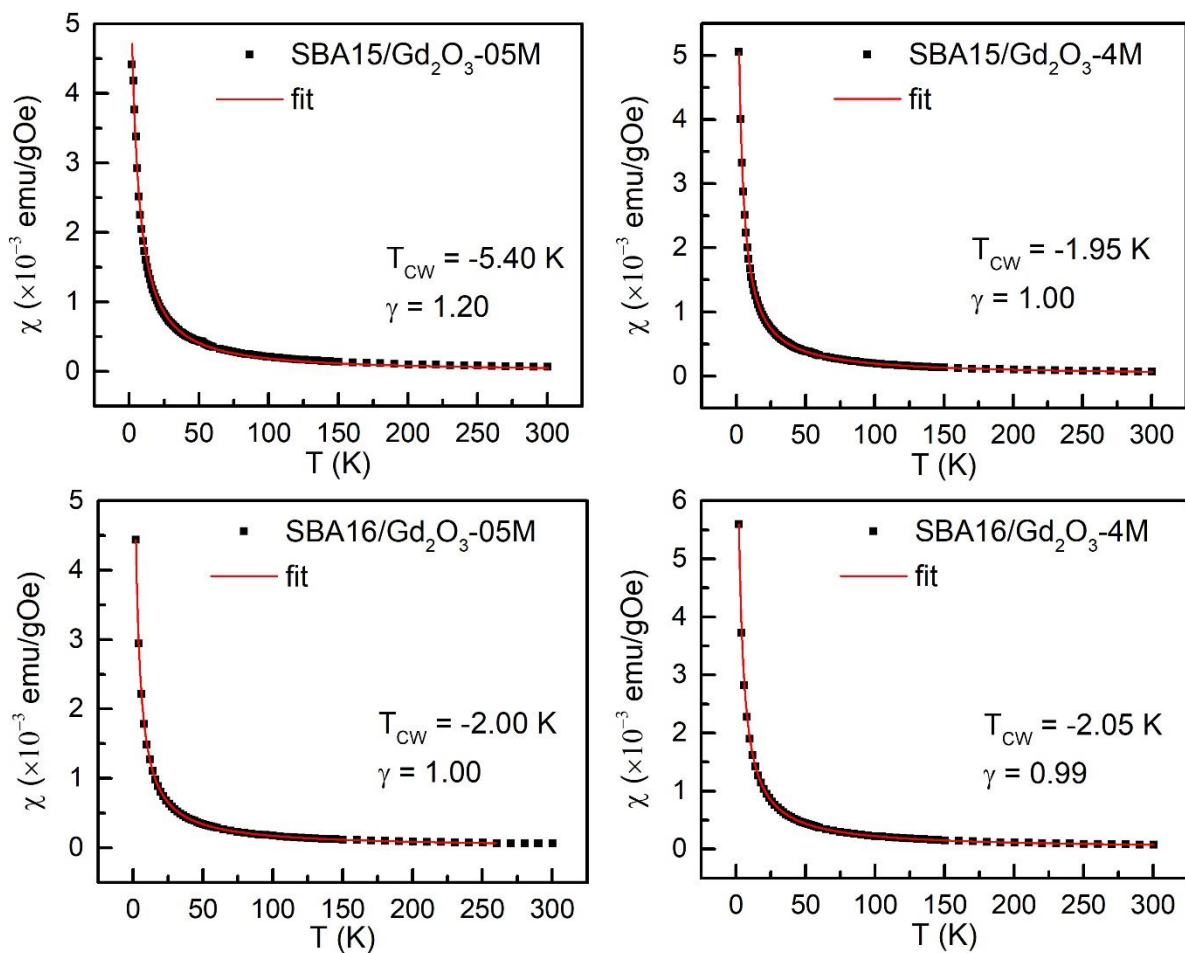
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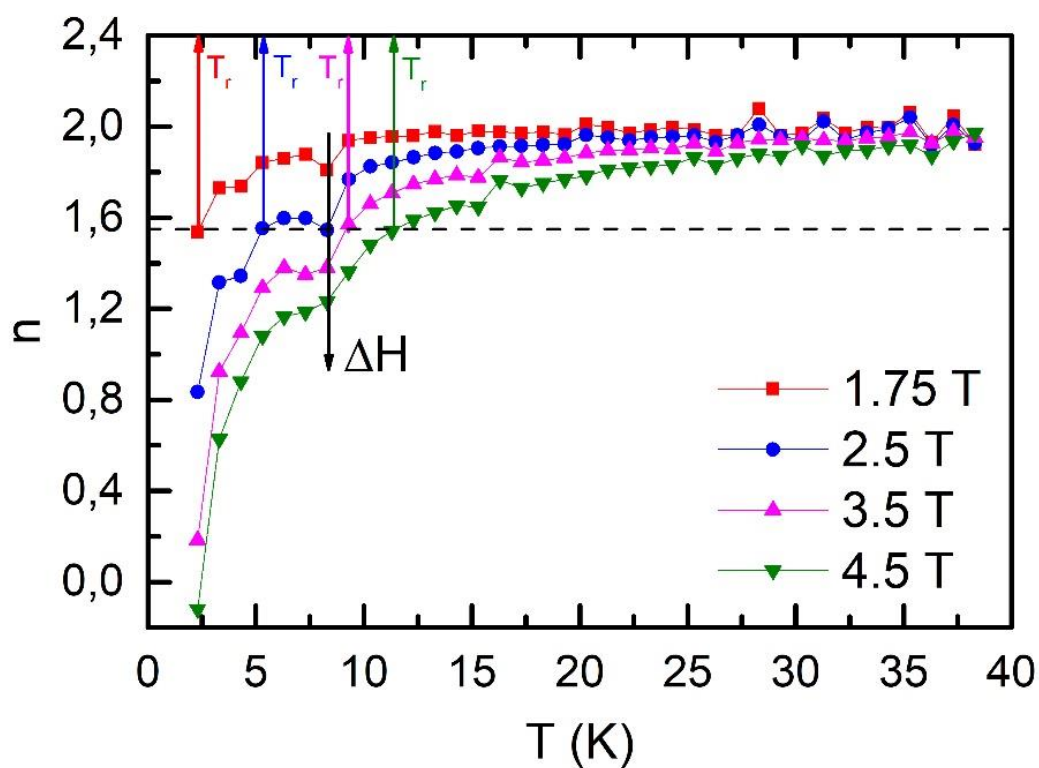
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Supplementary Fig. 1 Susceptibility (black squares) of the systems SBA15/ Gd_2O_3 -0.5M; 4M and SBA16/ Gd_2O_3 -0.5M; 4M calculated from the magnetization obtained in ZFC regime in the applied static field 100 Oe. Red lines represent the best fits to the experimental data according to the Curie-Weiss law $\chi=C/(T-T_{CW})^\gamma$, where C and T_{CW} is Curie-Weiss constant and temperature, respectively.



Supplementary Fig. 2 Temperature and applied field change dependence of the exponent n calculated for the system SBA16/Gd₂O₃-4M. The reference temperatures T_r have been determined as the temperatures corresponding to the value $n = 1.55$ (dashed line) of each $n(T)$ curve. Black arrow indicates applied field change dependence of $n(T)$ local minimum.