

## Supporting Information

### Large enhancement of magnetocaloric effect by chemical ordering in manganites

Yanmei Wang,<sup>†a</sup> Yinyan Zhu,<sup>†a</sup> Hao Liu,<sup>a</sup> Hanxuan Lin,<sup>a</sup> Tian Miao,<sup>a</sup> Yang Yu,<sup>a</sup> Furong Han,<sup>b</sup> Wenbin Wang,<sup>a</sup> Jirong Sun,<sup>\*b</sup> Lifeng Yin,<sup>\*ac</sup> and Jian Shen<sup>\*ac</sup>

- 
- a. State Key Laboratory of Surface Physics and Department of Physics, Fudan University, Shanghai 200433, China. E-mail: Shenj5494@fudan.edu.cn; lifengyin@fudan.edu.cn  
b. Beijing National Laboratory for Condensed Matter Physics and Institute of Physics, Chinese Academy of Sciences, Beijing 100190, China. E-mail: jrsun@iphy.ac.cn  
c. Collaborative Innovation Center of Advanced Microstructures, Nanjing 210093, China.

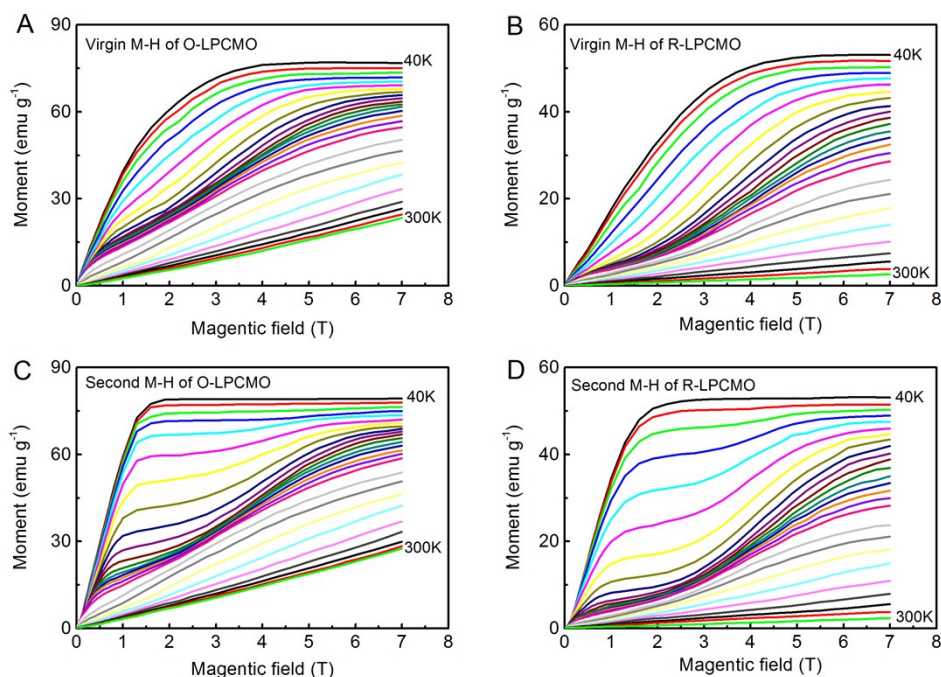


Fig. S1. (A and B) Virgin *M-H* curves of O-LPCMO and R-LPCMO, respectively. (C and D)

Second  $M-H$  curves of O-LPCMO and R-LPCMO, respectively. The measurements were performed in the range of 40k and 300 k with a 10 k interval. The magnetic fields were applied out- of- plane.

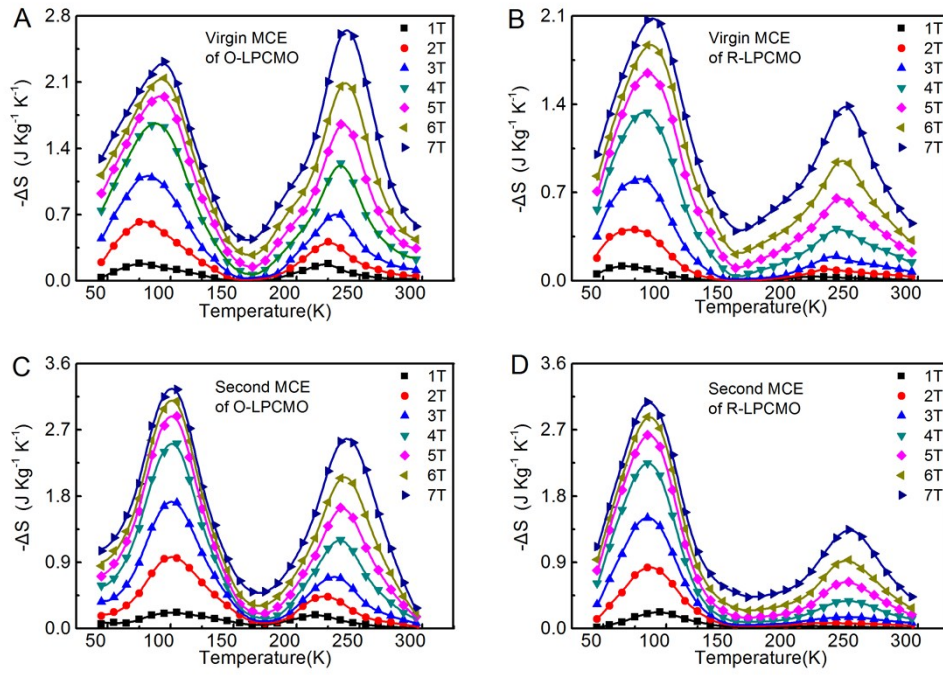


Fig. S2. Temperature dependent magnetic entropy change ( $-\Delta S$ ) for different magnetic fields applied out- of- plane.