

# Summarize what are the requirements for a material to show a magnetocaloric effect

- **Magnetic requirements**

1. Large Magnetization / volume or mass
2.  $T_c$  adapted to applications temperature Tunable  $T_c$
3. Small hysteresis if any
4. Low magnetic anisotropy
5. Easily saturable material => low  $H$  needed for the device
6. Large magnetocaloric effect  $\Delta S$  and  $\Delta T$

- **Other requirements**

1. Mechanical stability
2. Corrosion resistance
3. Good thermal conductivity
4. Cheap raw material
5. Low cost synthesis process