

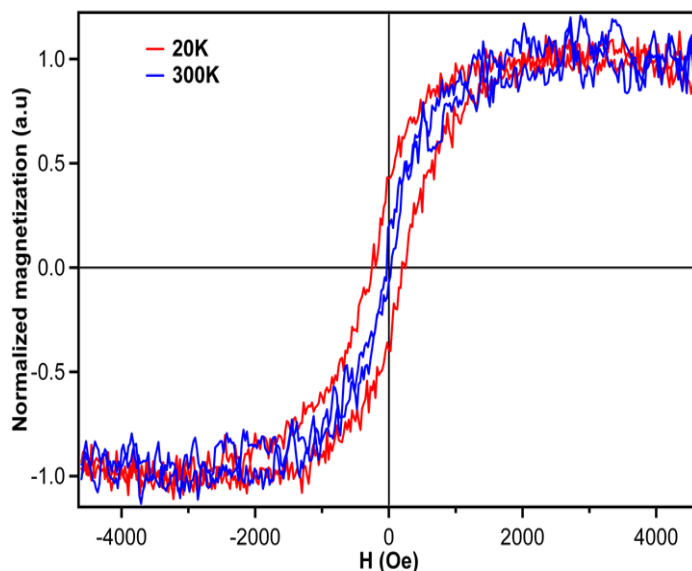
Synthesis of soft-magnetic alloy nanoparticles

The Problem

For applications such as magnetic heads, it is important that there is no residual magnetization of the head so that the data or signal will be accurate.

The Solution

The air-stable soft-magnetic nanoparticles of this technology, exhibit low coercivity and high saturation magnetization, making them well suited to applications such as magnetic heads. Further, their biocompatibility makes them suitable for cancer treatment by magnetic hyperthermia.



Magnetization curve showing low coercivity and high saturation magnetization of soft magnetic alloy nanoparticles at 20K (red) and room temperature (blue).

Applications

- Magnetic hyperthermia for cancer treatment
- Material for magnetic heads

Benefits

- Stable in air
- Bio-compatible
- Method applicable to other materials

Keywords

Magnetic hyperthermia, cancer treatment, biocompatibility, magnetic head, magnetic storage, soft magnetic, nano-alloy, low coercivity, high saturation magnetization

Opportunity

- Licensing

Patent protection

This technology is protected by an International Patent Application: PCT/JP2015/003973.

For more information

Technology Licensing Section at bdtl@oist.jp or +81-(0)98-966-8937