

## Water soluble iron oxide nanoparticle through dual-interaction graft polymer

양희만, 장광석, 이현진, 박찬우, 김종득\*

KAIST

(kjd@kaist.ac.kr\*)

The biocompatible and water dispersible poly(amino acid) derivative was employed to alter the surface property of hydrophobic iron oxide nanoparticles that exhibit high saturation magnetization. The  $\text{Fe}_3\text{O}_4$  nanoparticles protected by hydrophobic ligands were chemically conjugated onto the hydrophilic poly(amino acid)s we easily synthesis the alternative nanoparticles surface through dual-approach that is coordinate bonding and hydrophobic van der waals interaction. The hydrophilic poly(amino acid)s conjugated  $\text{Fe}_3\text{O}_4$  nanoparticles form self-aggregates in aqueous solutions.