

**Biosynthesis of various nanoparticles under room temperature condition**

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ \*  
KAIST  
(leesy@kaist.ac.kr\*)

As nanotechnology have a fast increase in interest and it produced remarkable development, the nanomaterial synthesis process having under high temperature, pressure, and using expensive catalysts. Here, we report the biosynthesis of various nanoparticles using recombinant *Escherichia coli* (*E. coli*) considering as nanofactory. Synthesized nanoparticles were observed their morphology and size by low to high resolution transmission electron microscopy (TEM) at 200 kV and energy-dispersive X-ray (EDX) spectra for each synthesized nanoparticles element detection. Based on the suggested biosynthesis methods, it will adjustable for the various nanoparticles production under room temperature. This work was supported by the Technology Development Program to Solve Climate Changes on Systems Metabolic Engineering for Biorefineries from the Ministry of Science, ICT and Future Planning (MSIP) through the National Research Foundation (NRF) of Korea (NRF-2012-C1AAA001-2012M1A2A2026556).