

Korean Scientists Develop 3D Printing Ink Material Using Sunflower Pollen

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A visitor walks through a field of blooming sunflowers along the Bukhan River in Hwacheon, Gangwon Province, northeastern South Korea, on Aug. 3, 2021. (Yonhap)

SEOUL, Aug. 31 (Korea Bizwire) — A group of South Korean scientists have succeeded in developing a 3D printing ink material using sunflower pollen.

A research team led by professor Cho Nam-joon of Nanyang Technological University in Singapore has found a way to use sunflower pollen to develop a 3D printing ink material.

After incubating sunflower pollen in an alkaline solution for six hours, the research team converted the hard pollen grains into softer microgel particles.

Those particles were then mixed with alginic acid or hyaluronic acid to create a pollen-hydrogel compound ink.

Existing hydrogel-based bio-inks lack strength following the printing process, thereby making it difficult to maintain a three-dimensional shape and structure.

In contrast, the newly-developed pollen-based bio-ink maintained the print structure with good structural integrity after printing.

The research team said that the pollen-based bio-ink can replace the ink that is currently used for 3D printing (bio-printing) in biomedical areas.

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