

KAIST researchers develop device for flexible drug delivery

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A team of researchers at the Korea Advanced Institute of Science and Technology (KAIST) in South Korea has developed a flexible drug delivery device.

The team has fabricated a device consisting of a substrate onto which a 50 μm -thick active drug delivery layer was transferred. They used a method called inorganic laser lift off to apply the drug delivery layer. The fabricated device was mechanically flexible while maintaining its capability to administer exact dosages of drugs at desired times.

The flexible drug delivery system can be applied to smart contact lenses or by implanting it inside the body. A wireless power transfer system was also built into the device to allow continuous and stable operation over prolonged periods of time. The researchers were also able to dispense an anti-epileptic medication via the device to the appropriate brain regions.

The team believes that the flexible microdevice will further expand the applications of smart contact lenses, pave the way for novel treatments of brain disease and make theranostic subcutaneous implants possible.