

# BJ. KIM LAB.

## Painless Healthcare Beyond Skin Barrier



Department of Mechanical and Biofunctional Systems  
Center for Research on Engineering in Medicine and Biology  
Laboratories for International Research on Multi-disciplinary Micro Systems

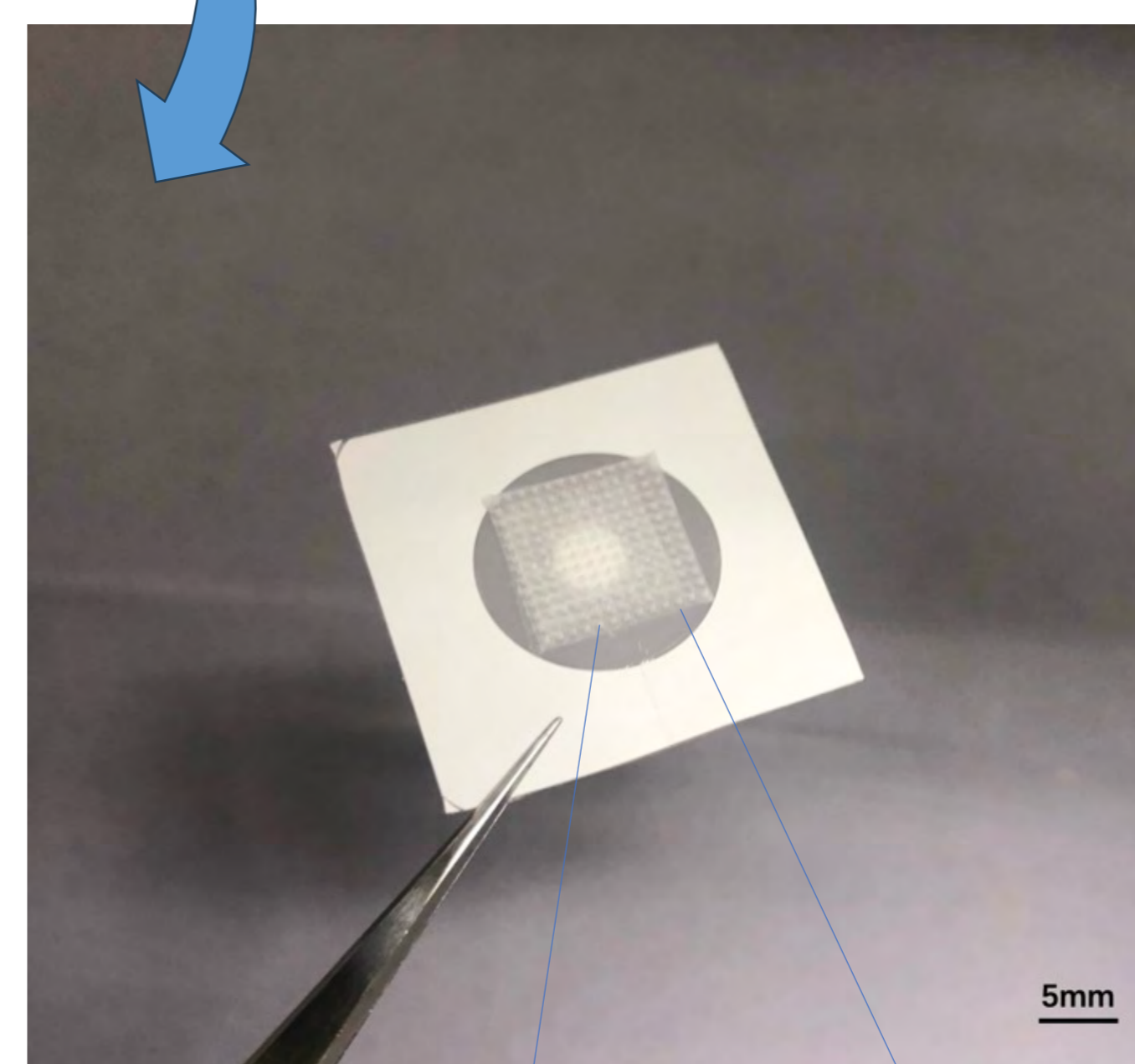
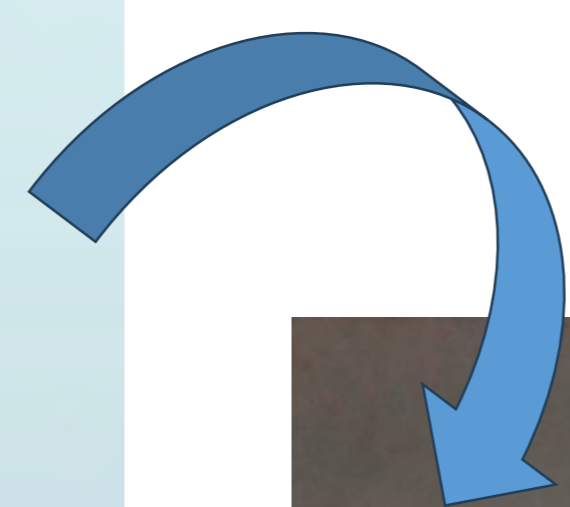
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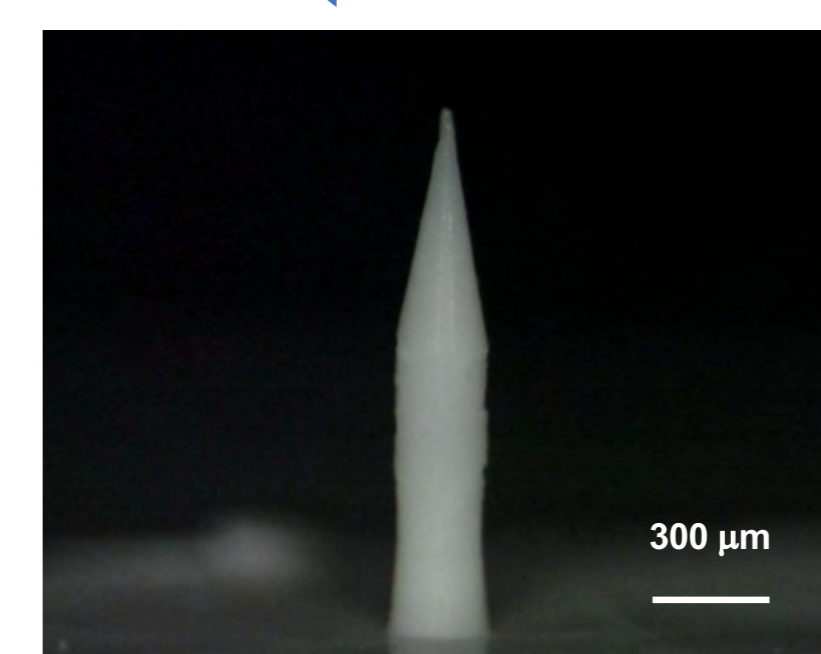
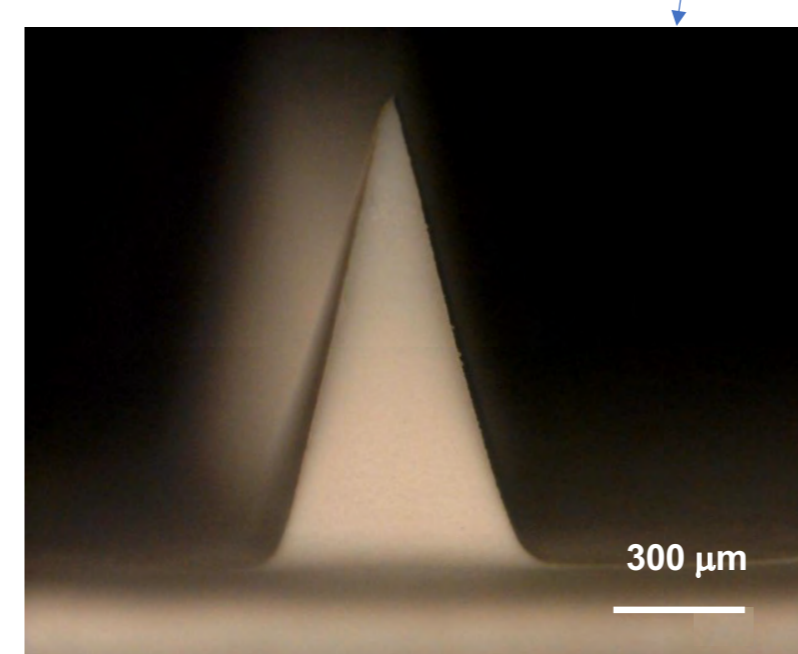
## Microneedles—Enhanced pathway beyond skin

Recently, in the transdermal drug delivery methods, the microneedle-mediated drug delivery system (DDS) has been developed to replace the hypodermic injection-mediated DDS, to provide painless self-administration of biological drug with patient friendly manner. Dissolvable microneedles are attracting many attentions as it has several advantages such as no needle-related risks. We have developed new fabrication methods for biodegradable microneedles array patches (MAPs), which are different with the conventional fabrication ones, such as stepwise casting method. Here, new transdermal drug delivery system by using dissolvable micro needle patch will be introduced. We also develop several aspects of bio-sensors components to accomplish portable Point-of-Care diagnostic devices, which are disposal, user-friendly, low-cost, and highly sensitive.

## What is MAP (Microneedle Array Patch)



Please, [Click QR code!!](#)  
**MAP**  
for Beauty and Health?



Bio-dissoluble Microneedle Patch for DDS and Sensing