

BJ. KIM LAB.

Painless Healthcare Beyond Skin Barrier



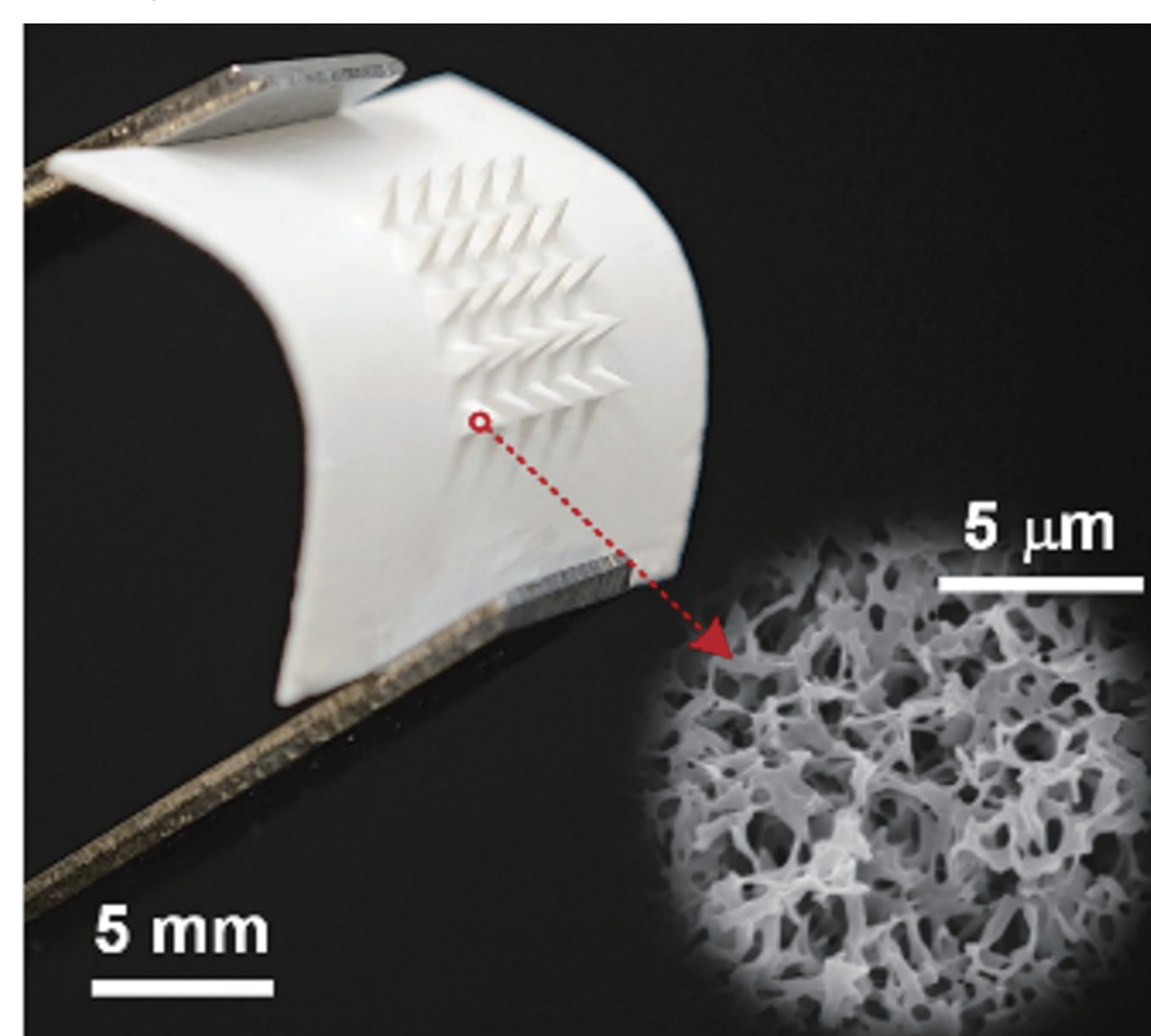
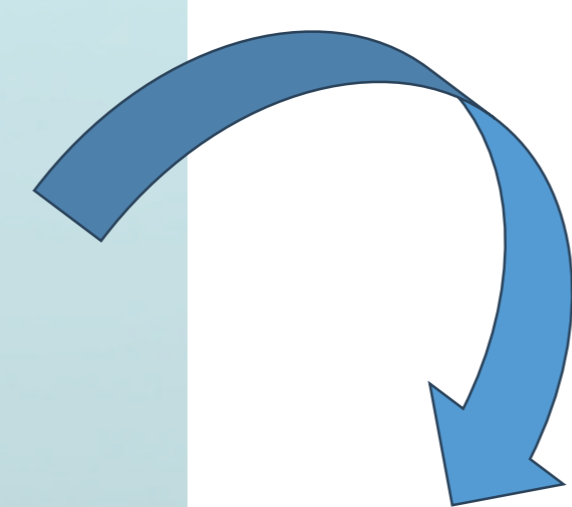
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Microneedles—Enhanced pathway beyond skin

By integrating MEMS-based semiconductor micro/nanofabrication with novel materials and device engineering, we have established advanced platforms for the precise fabrication of functional micro- and nanosystems. Building on these technological foundations, we are developing biodegradable microneedles array patches (MAPs), for painless transdermal delivery of vaccines and poorly absorbable therapeutics, including peptide- and protein-based drugs. Recent advances in transdermal drug delivery have led to the development of microneedle-mediated drug delivery systems (DDS) as an alternative to conventional hypodermic injection-based DDS, enabling patient-friendly self-administration of biopharmaceuticals. We are also advancing porous microneedle-based biosensing technologies for minimally invasive sampling of interstitial fluid and convenient biomarker monitoring. Through these innovations, we aim to create transformative medical technologies that will complement and potentially redefine conventional injection and transdermal therapies.



Bio-dissoluble Porous Microneedle Patch for Sensing

Please, **Click QR code !!**
MAP
for Beauty and Health?

