

† **Electronic Supplementary Information (ESI) available: [details of any supplementary information available should be included here]. See DOI: 10.1039/b000000x/**

### **Self-setting bioceramic microscopic protrusions for transdermal drug delivery**

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#### **Three-dimensional (3-D) image of SCMN**

Microtomography (microCT) was used to examine the sparsely arranged CaP SCMNs; the obtained projections were reconstructed into a 3-D image of the needles. A more detailed illustration of the needles can be found in the attached video 1.

#### **In vitro insertion of SCMN in porcine skin**

The CaP SCMNs was inserted manually into porcine skin, which was obtained from the back of porcine. The resulting porcine skin with SCMN after insertion was shown observed by microCT. A 3-D reconstruction of the microCT projection of *in vitro* insertion of CaP SCMNs into porcine skin was also presented. A closer examination of this is shown in the attached video 2.