

Bioinspired Self-Shaping Clay Composites for Sustainable Development

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This file contains a protocol to produce bioinspired self-shaping objects from local clay, hydrogel, and plant materials.

1. Materials and Utensils

The following ingredients are required, in quantities relative to the intended dimensions of the products to fabricate:

- Clay
- Water
- Starch powder
- Fiber-rich plant such as celery

The utensils to be used are:

- A plastic foil, textile or similar. The foil will be used as a substrate to roll the material and should be easy to remove.
- A rolling pin and rollers. The thickness of the rollers should be the thickness of the desired layer, typically of less than 3 mm.
- A measuring beaker. A balance, measuring spoons, or similar, can also be used.
- A recipient for mixing the ingredients.
- A heater up to 100 °C.
- (optional) a drying oven with controllable temperature up to 100 °C.