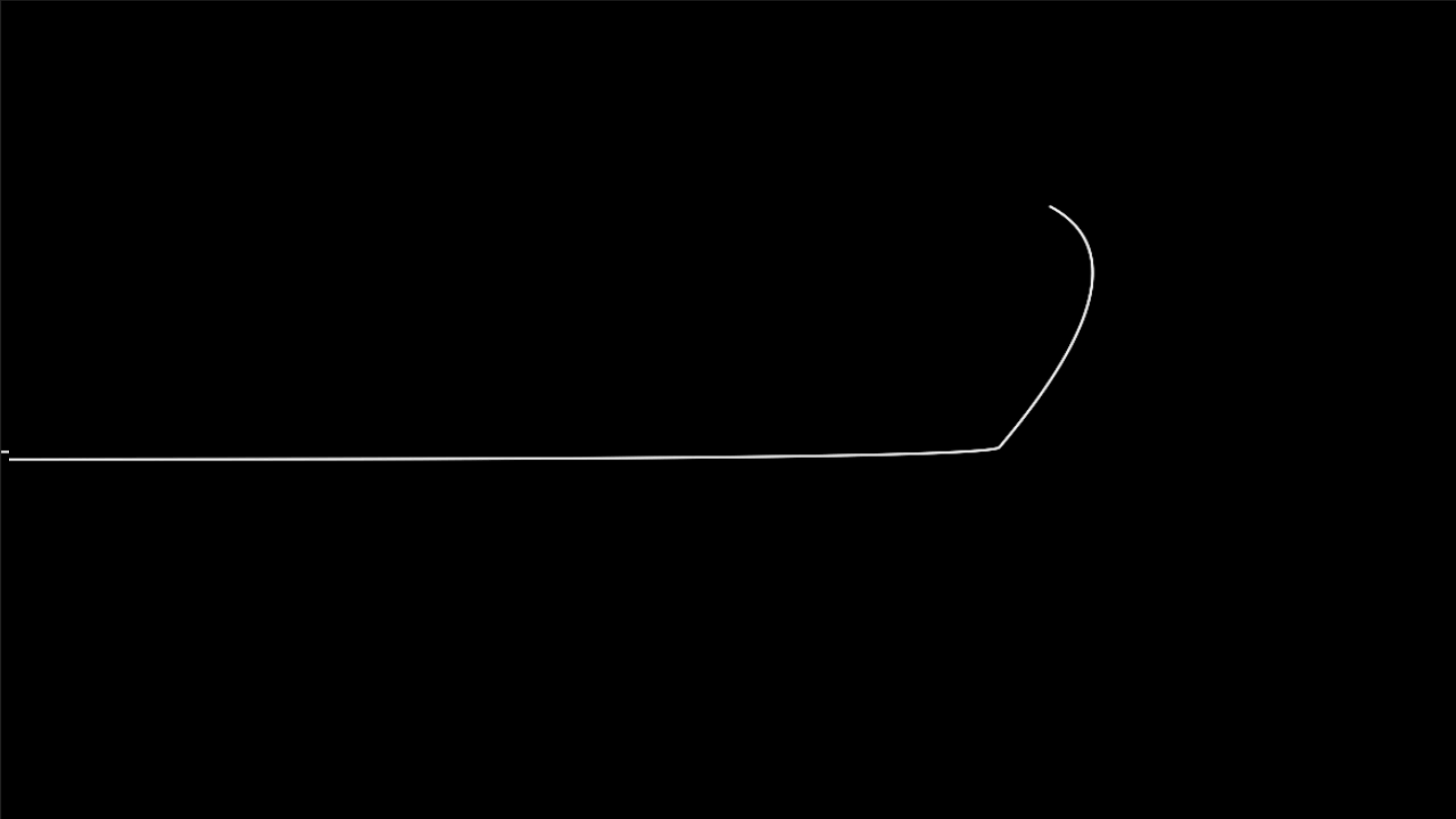
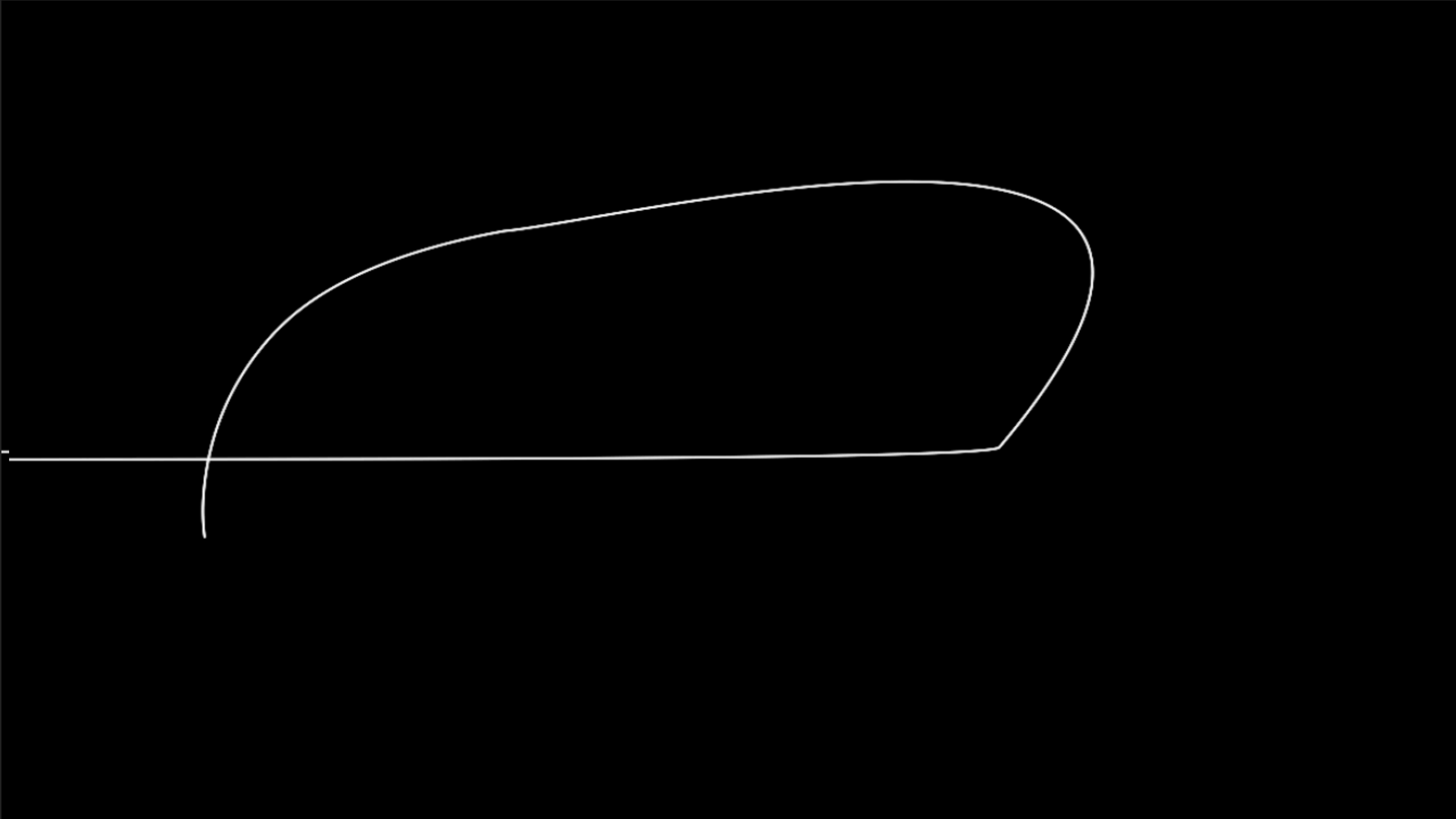
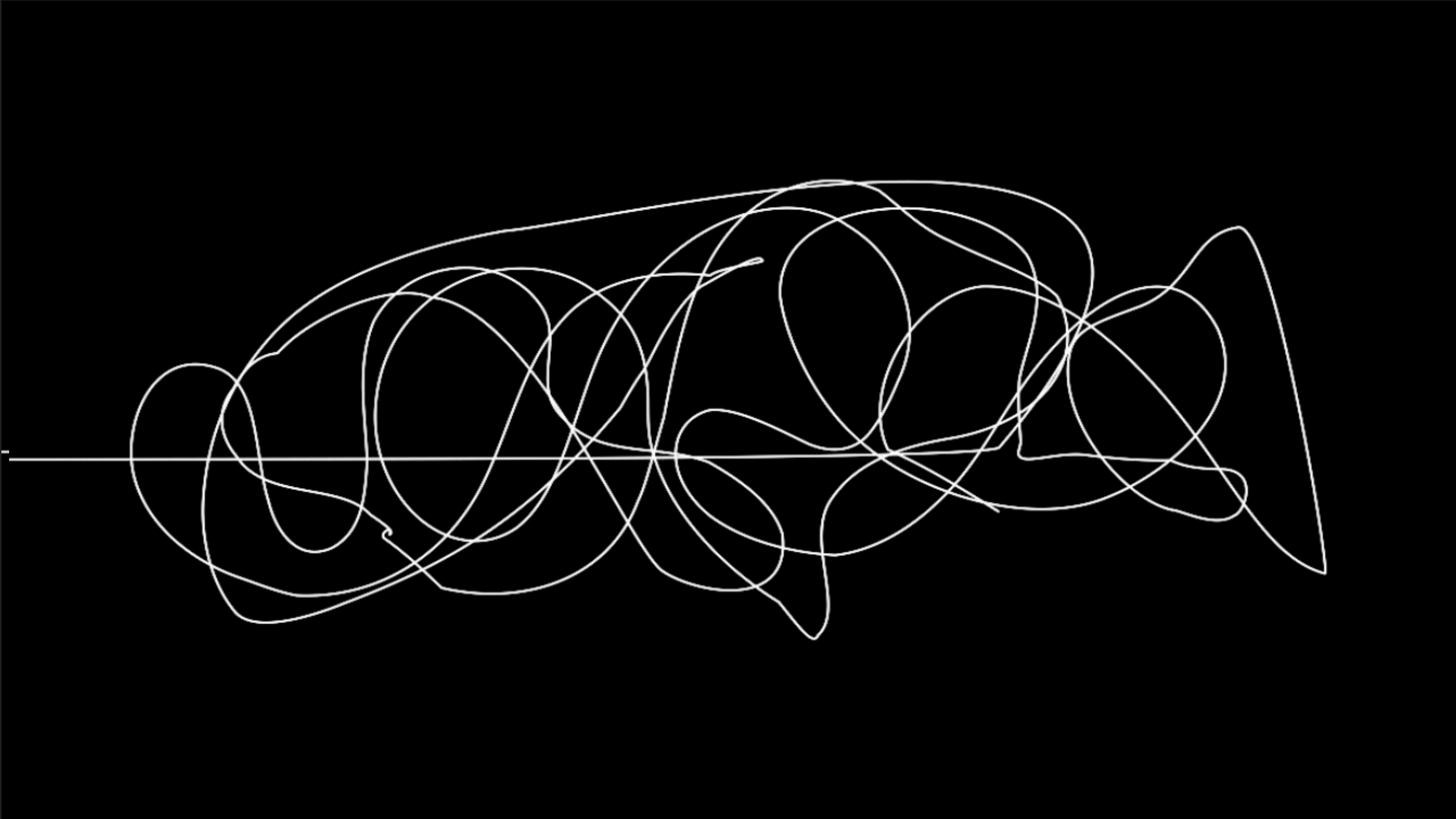








EXPLORATION OF MOVEMENT ACTUATORS FOR WEARABLES

IN A MAKERSPACE CONTEXT

NOT A PRODUCT
NOT A SOLUTION TO WORLD ISSUES
NOT FOR A CUSTOMER
NOT FOR BUSINESS

...YET

FOR MY FUTURE
POST-FABRICADEMY SELF
TO BUILD PROJECTS AND RESEARCH ON

AND ANYONE ELSE WHO MAY BENEFIT

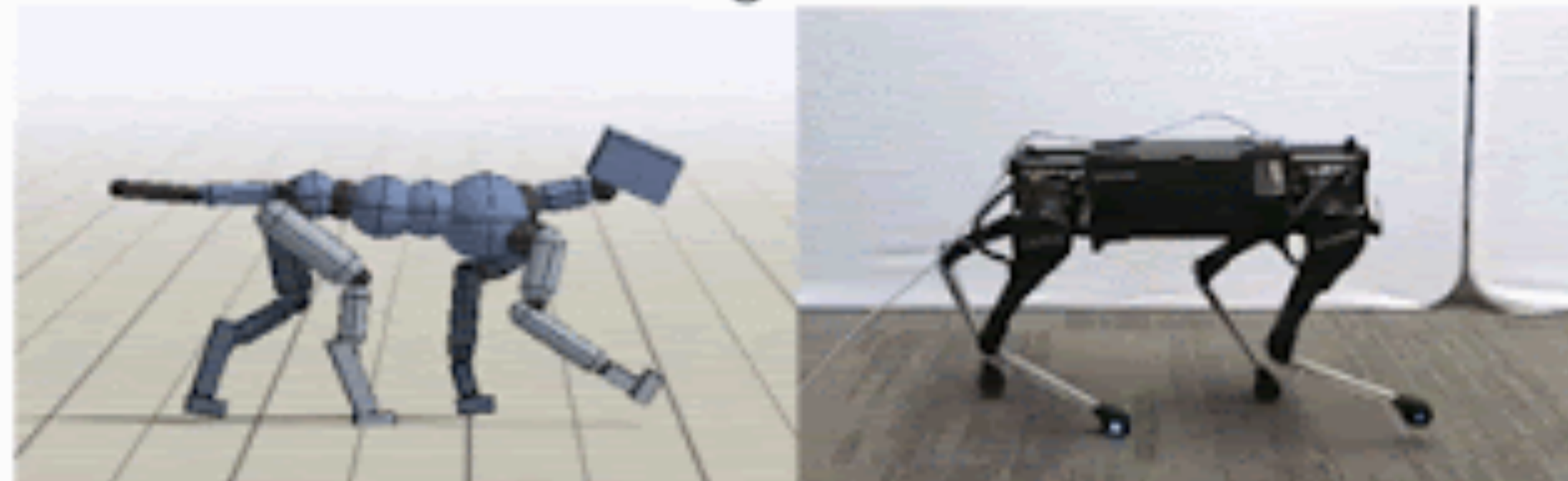


Eadweard Muybridge



Eadweard Muybridge

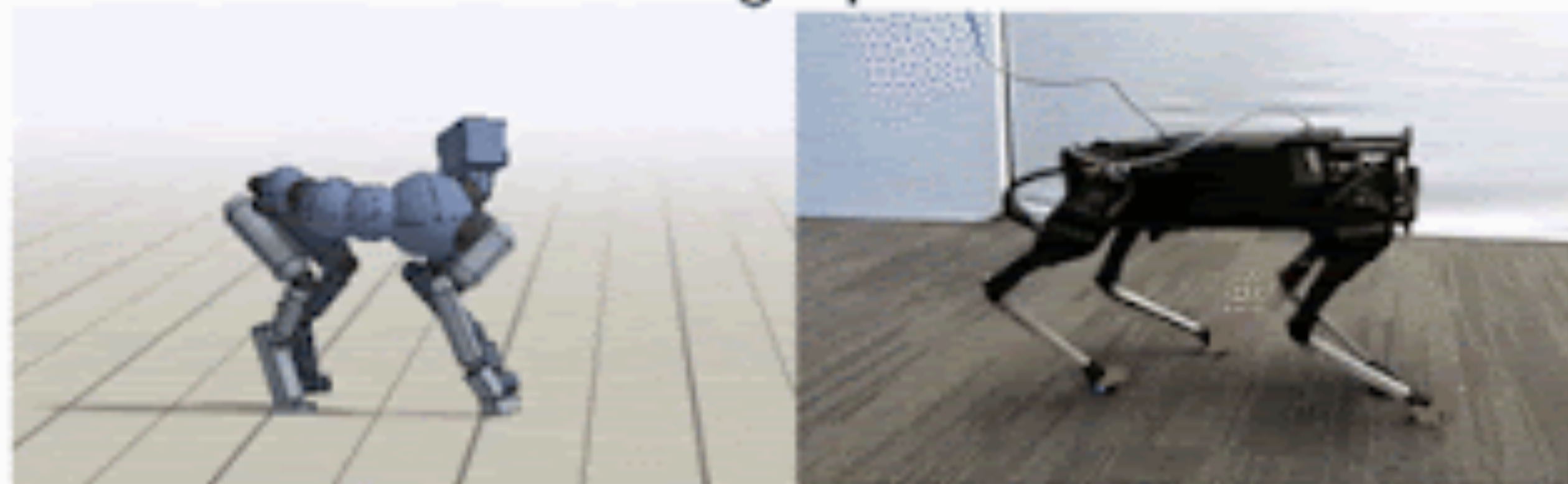
Dog Pace



Dog Trot



Dog Spin



Dog Backwards Trot



VIBRATION



<https://www.youtube.com/watch?v=I4bGuMJhvRM>

INFLATION



<https://www.youtube.com/watch?v=gJjlyUwKLEY&t=2s>

FLAPPING



SERPENTINE



TWISTING



CURLING UP



BBC natural world



scitechdaily.com

Youtube - Richard Aguilar

EXPANSION / CONTRACTION



Youtube - nature video

**OR
AN ILLUSION OF
MOVEMENT**

LEDS

OPTICAL FIBRES

NEOPIXELS



Kobakant - Ohne mich

MOVEMENT ACTUATORS

- Vibration motor
- Magnetic field
- Solenoid
- Transducer
- Motor: DC/stepper

- Shape memory alloy
- Exoskeleton/artificial muscles
- Pneumatics
- Fluidics
- Other to discover!

- **Vibration motor**
- **Magnetic field**
- Solenoid
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- **Shape memory alloy**
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GEOMETRIES

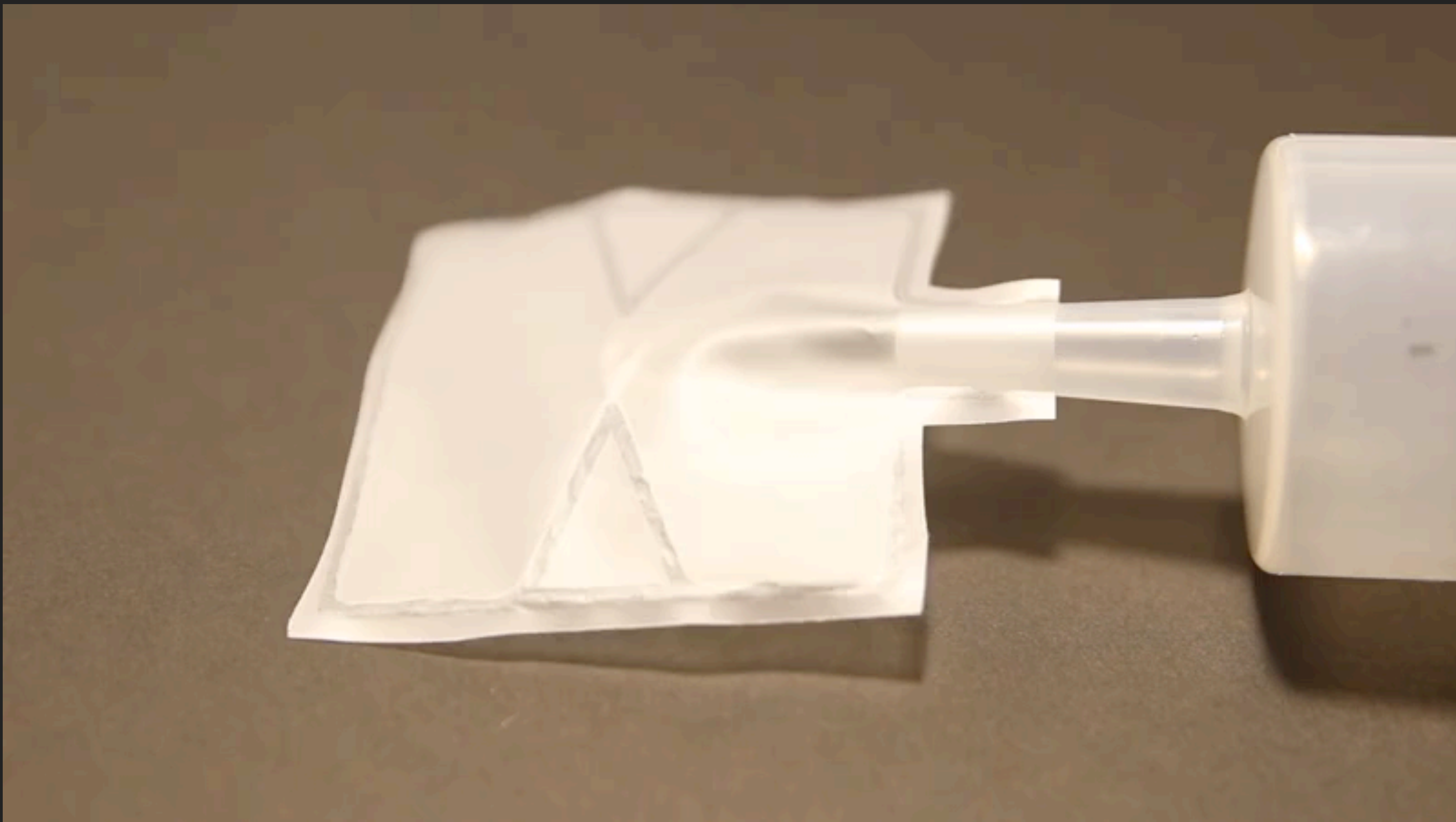
$2D < 3D < 4D$

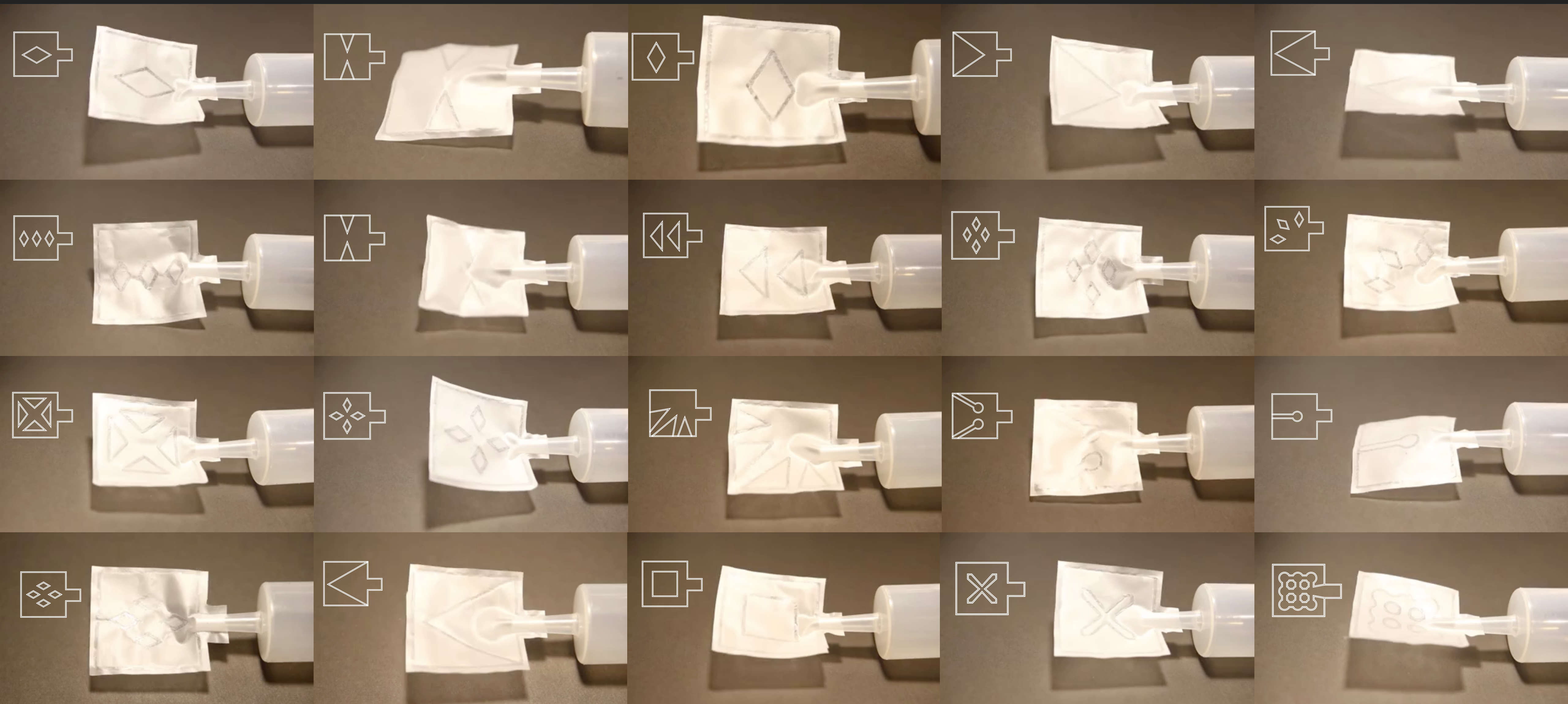
PROCESSES

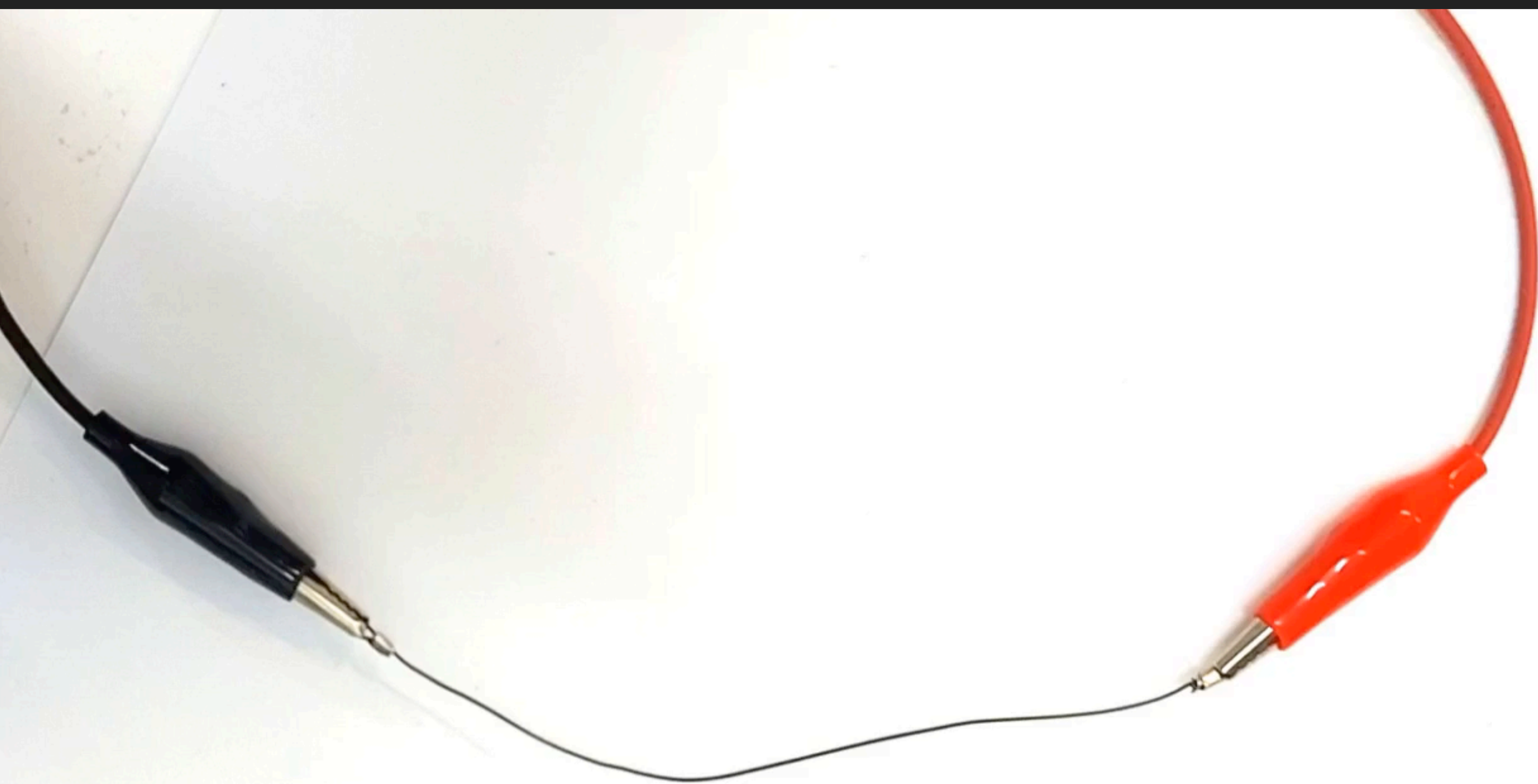
HEAT FUSING, LASERCUTTING, 3D PRINTING

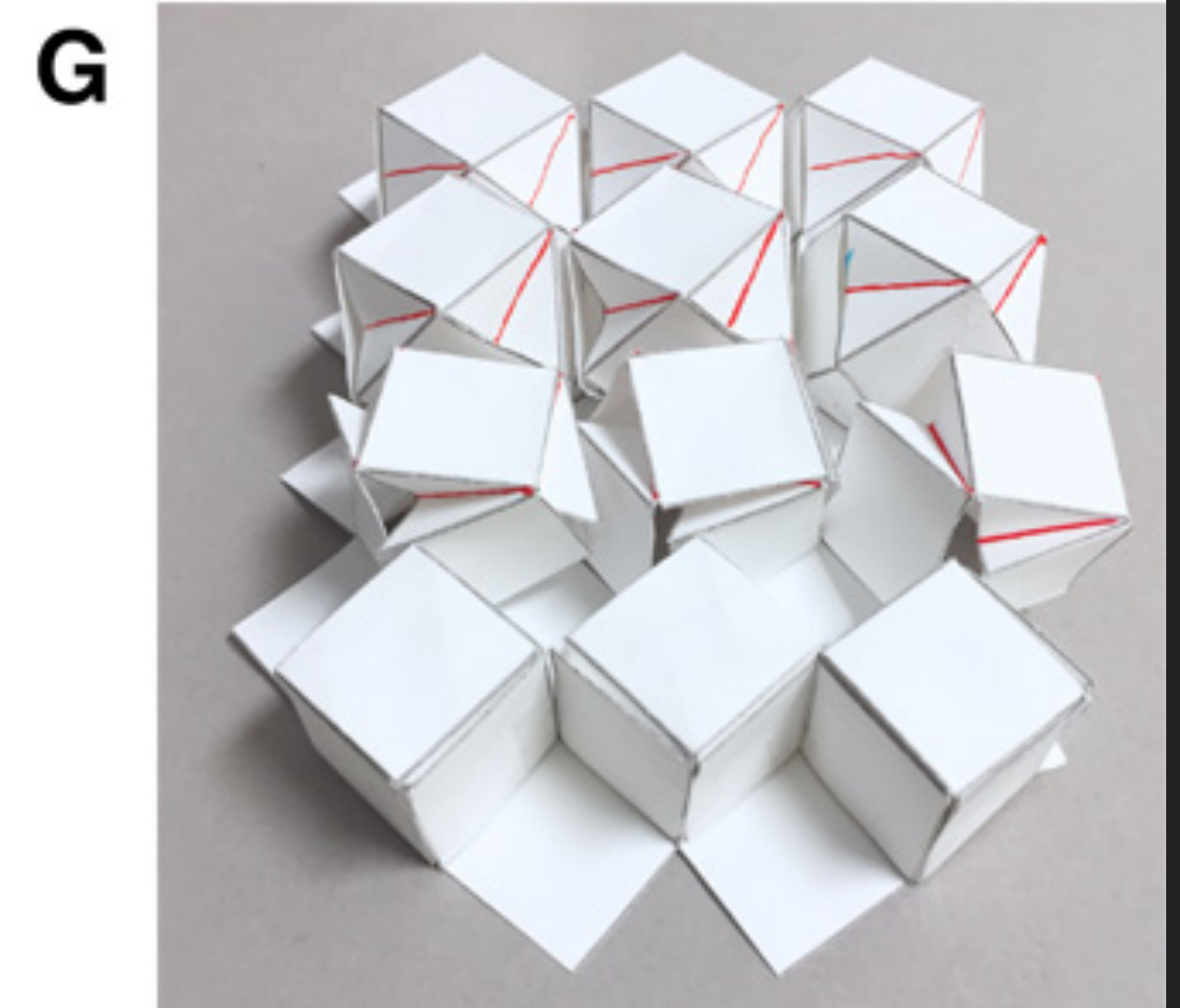
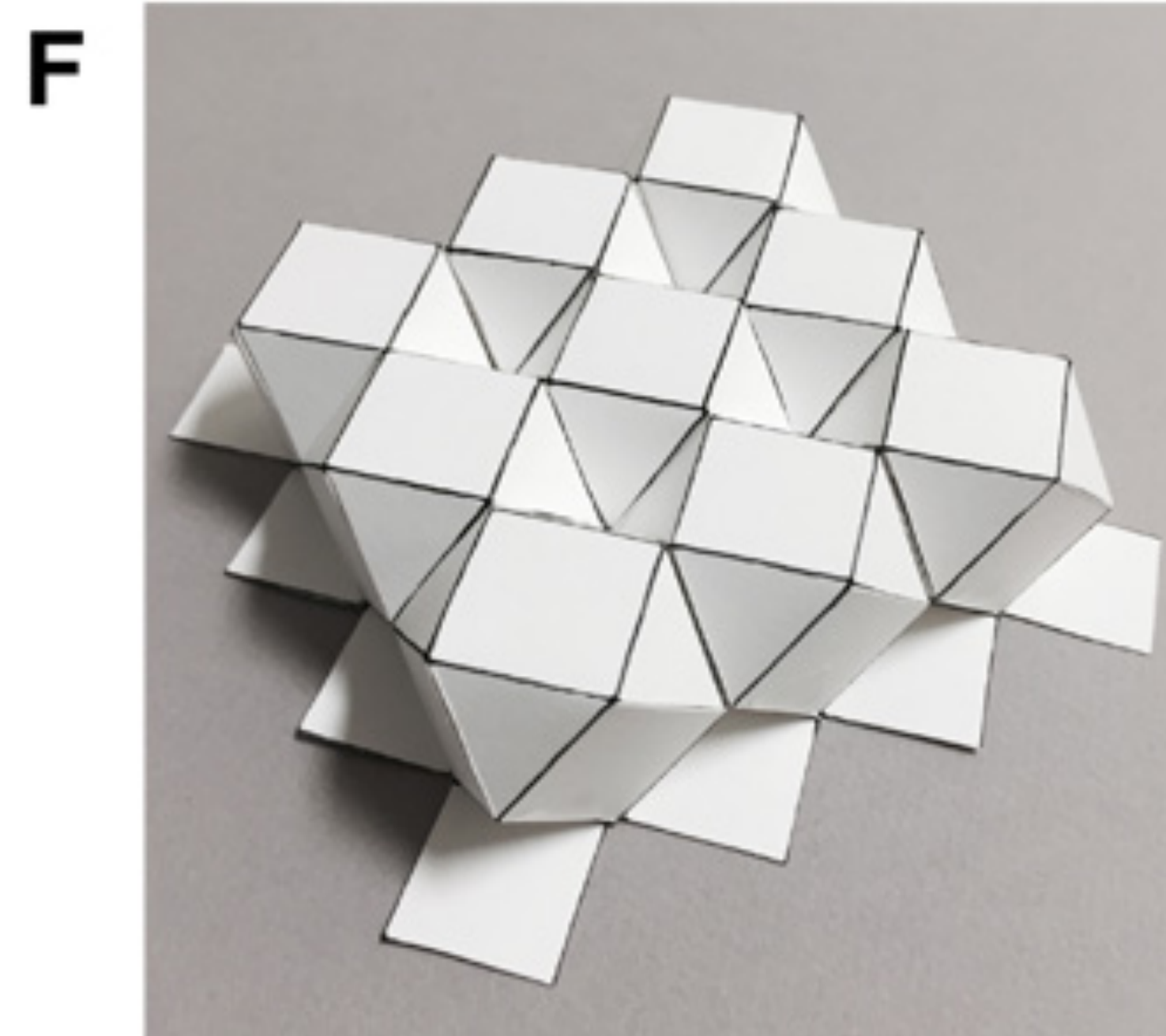
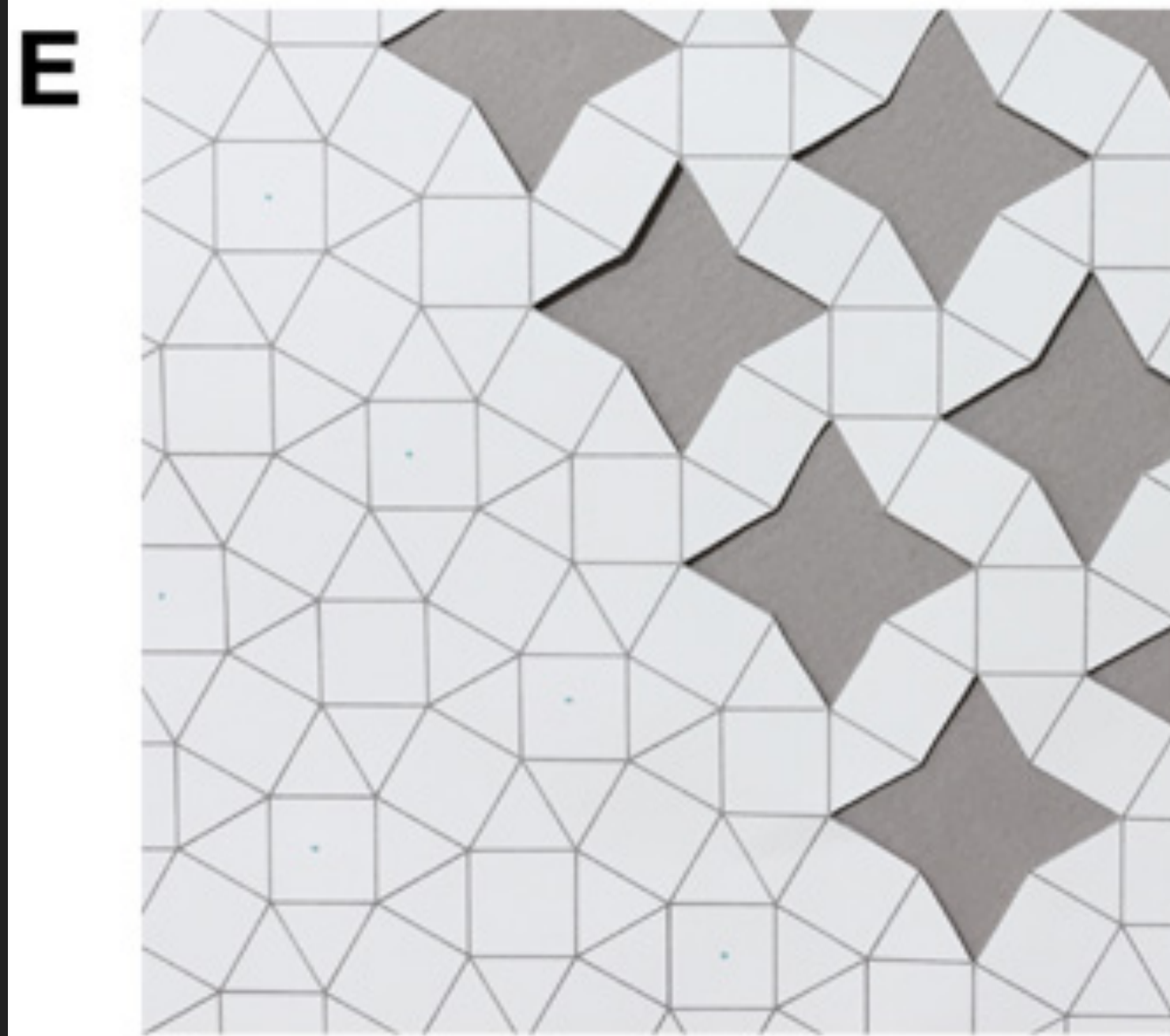
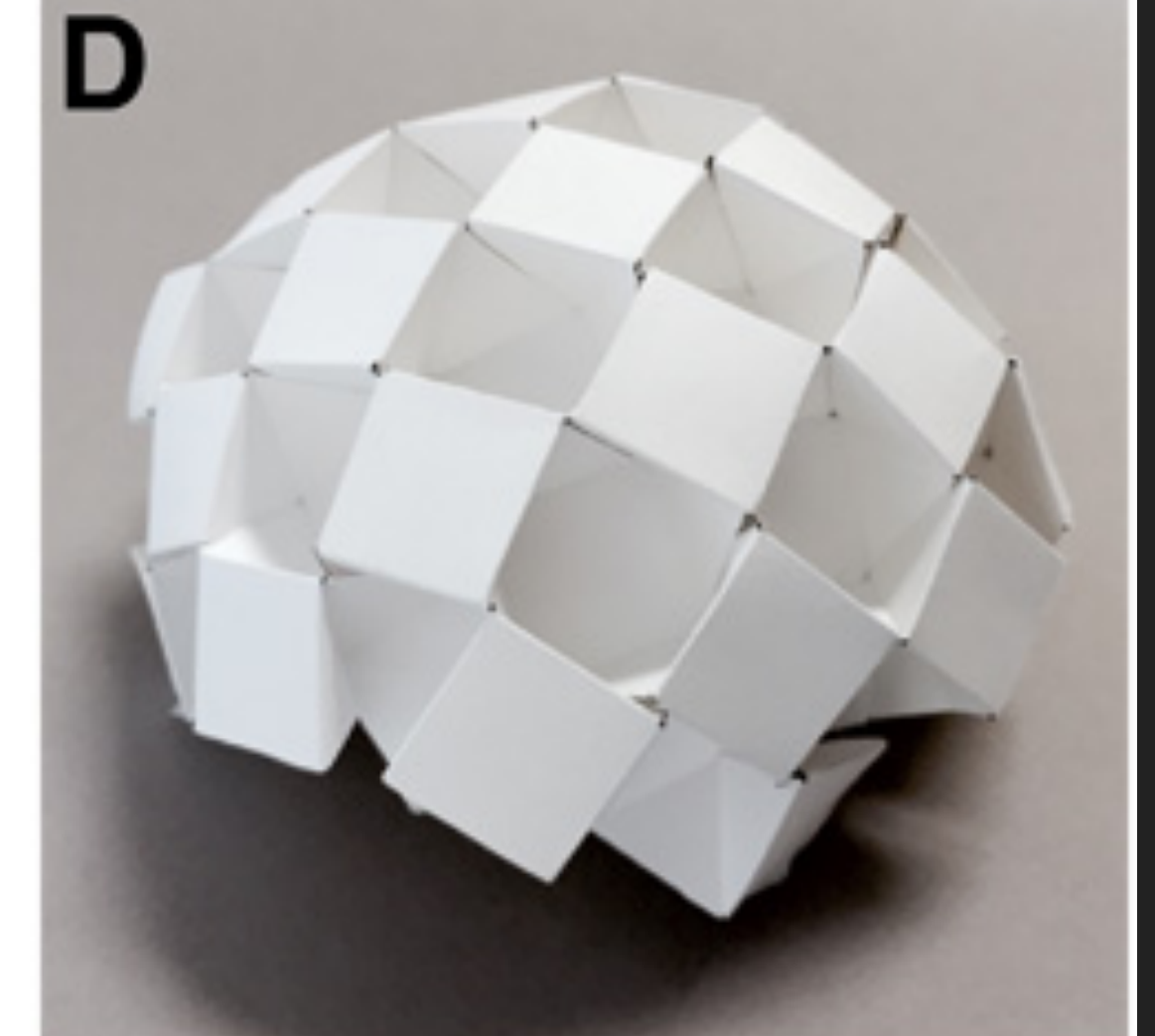
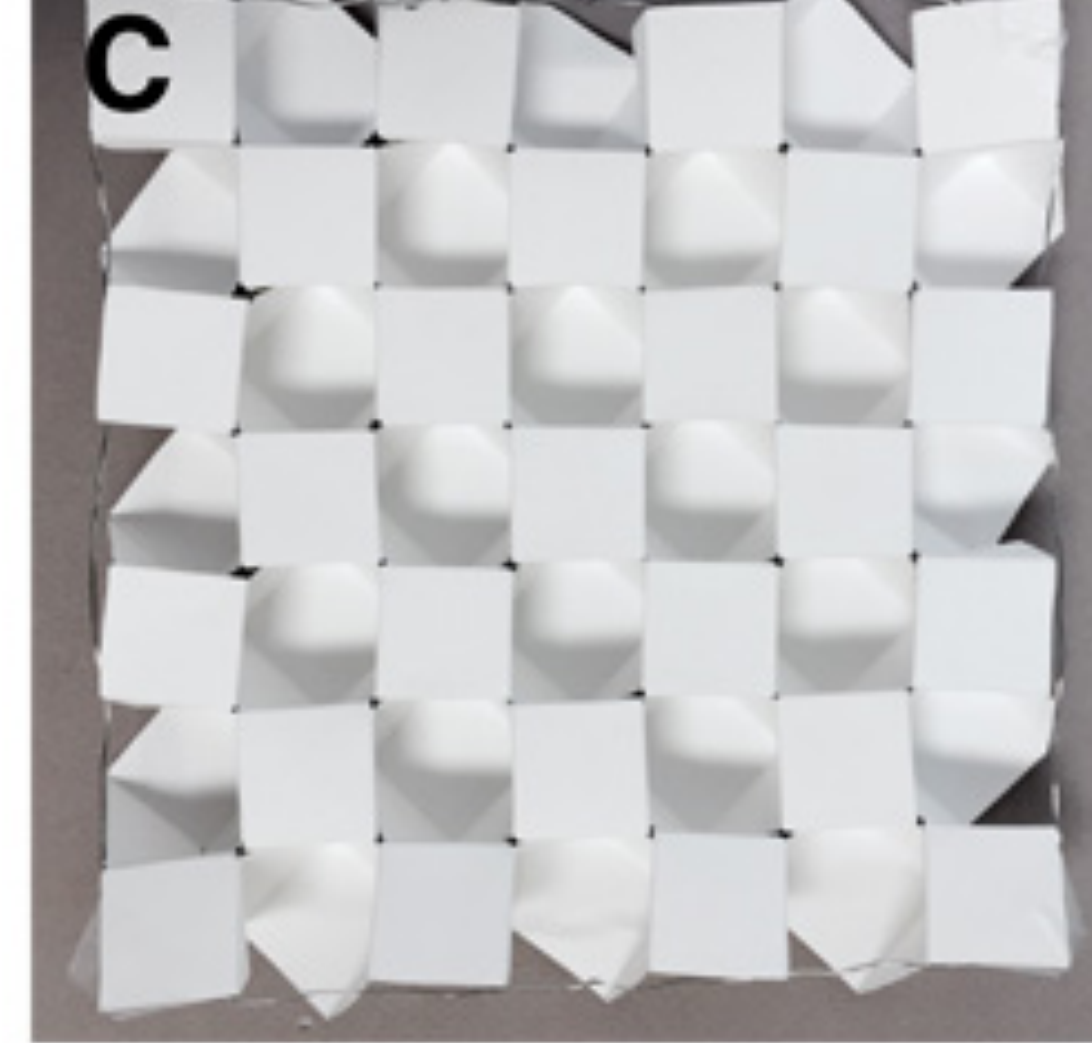
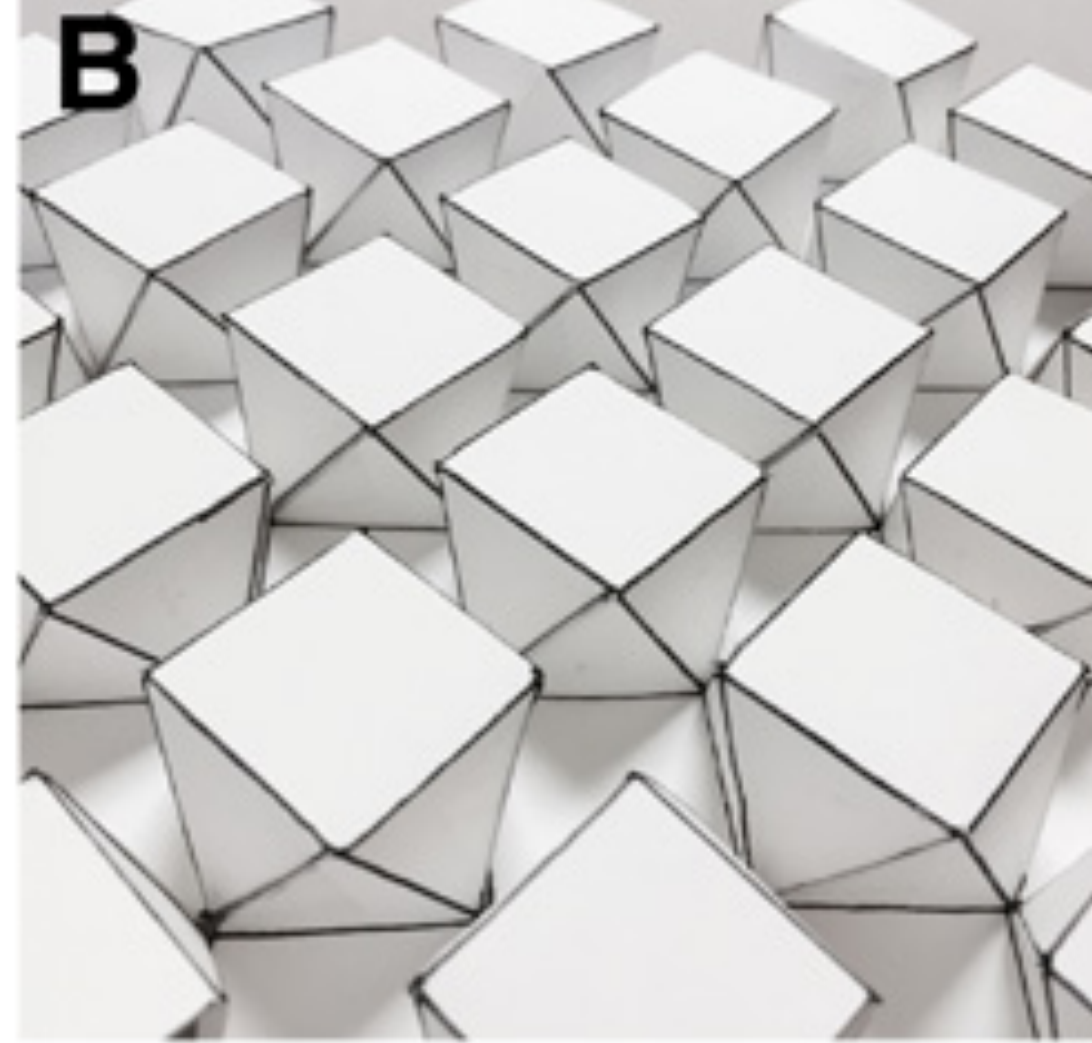
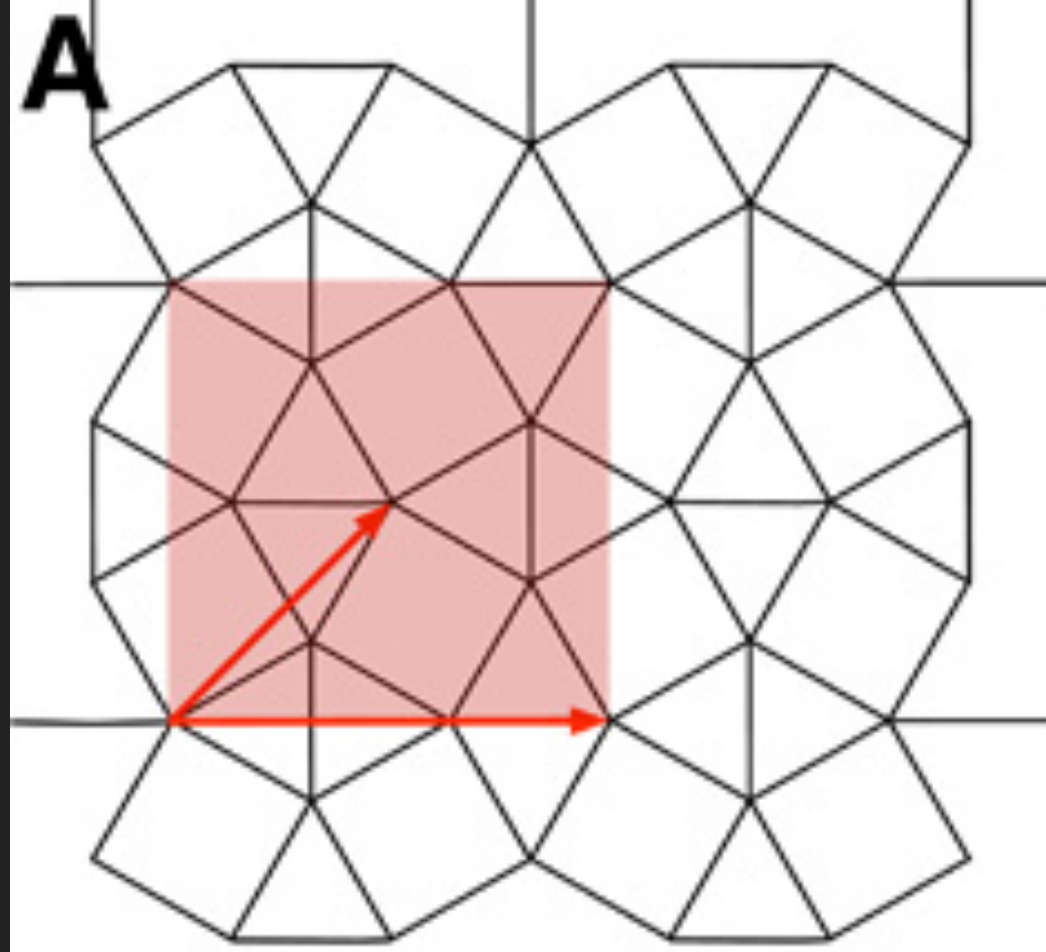


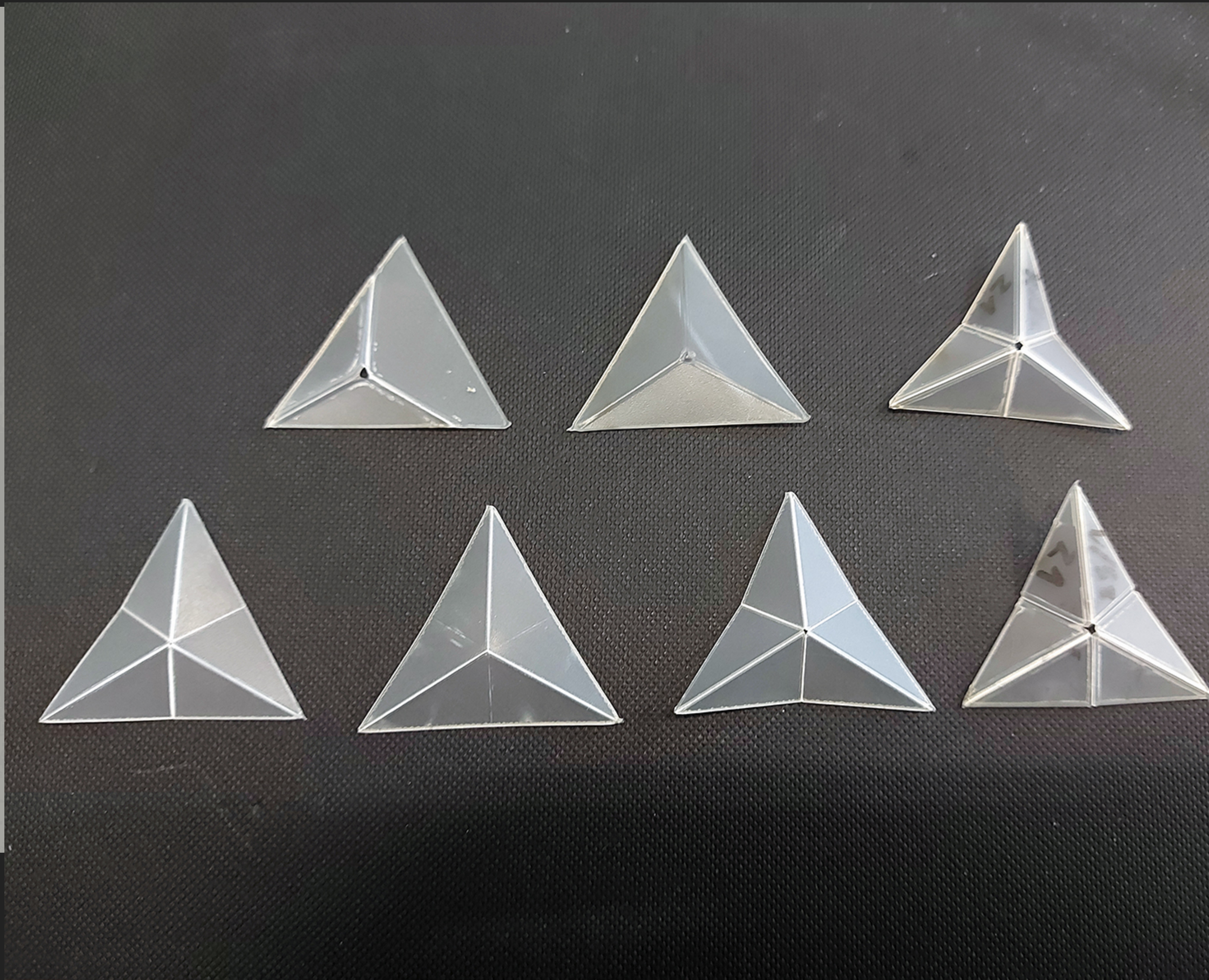
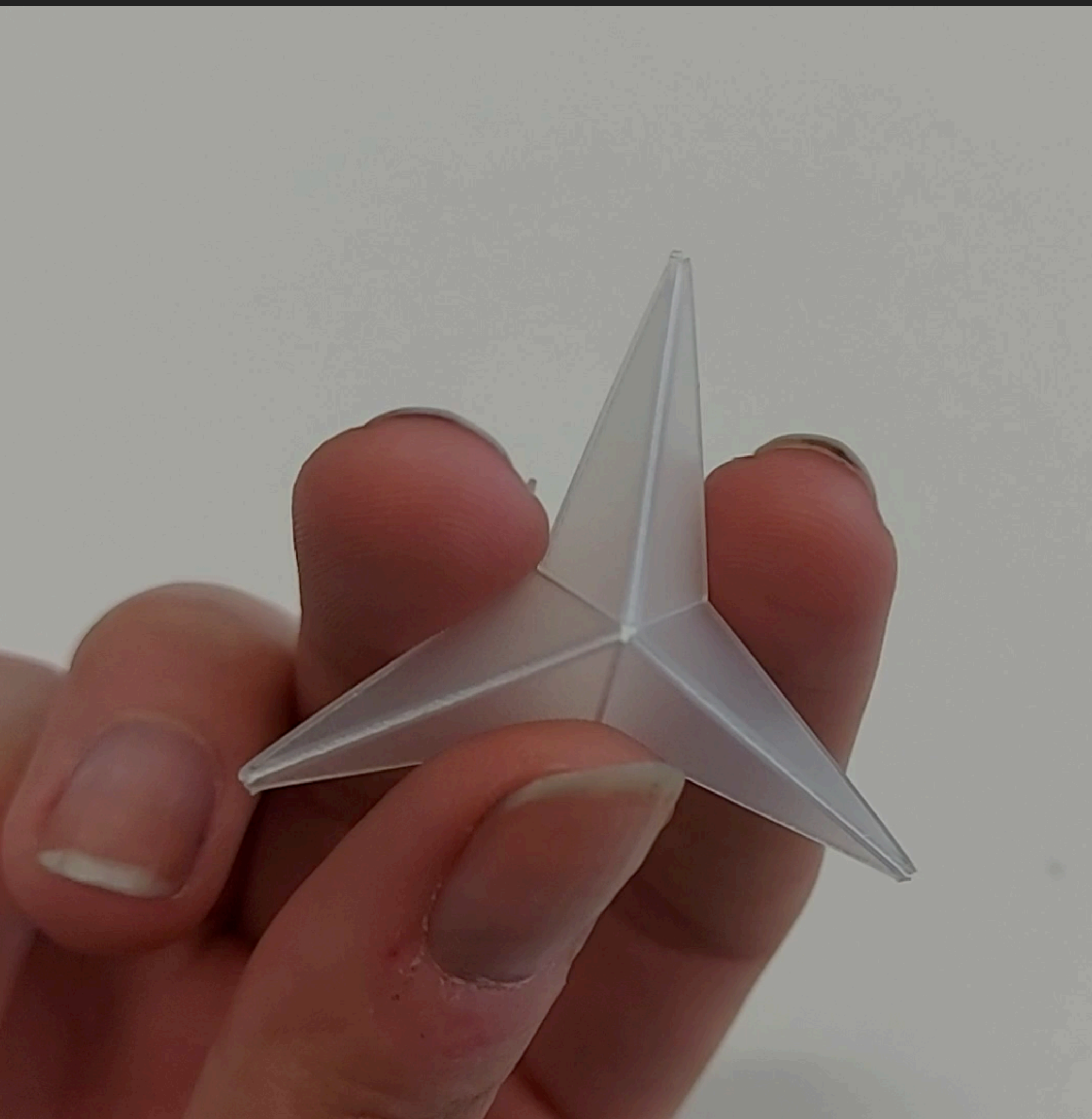


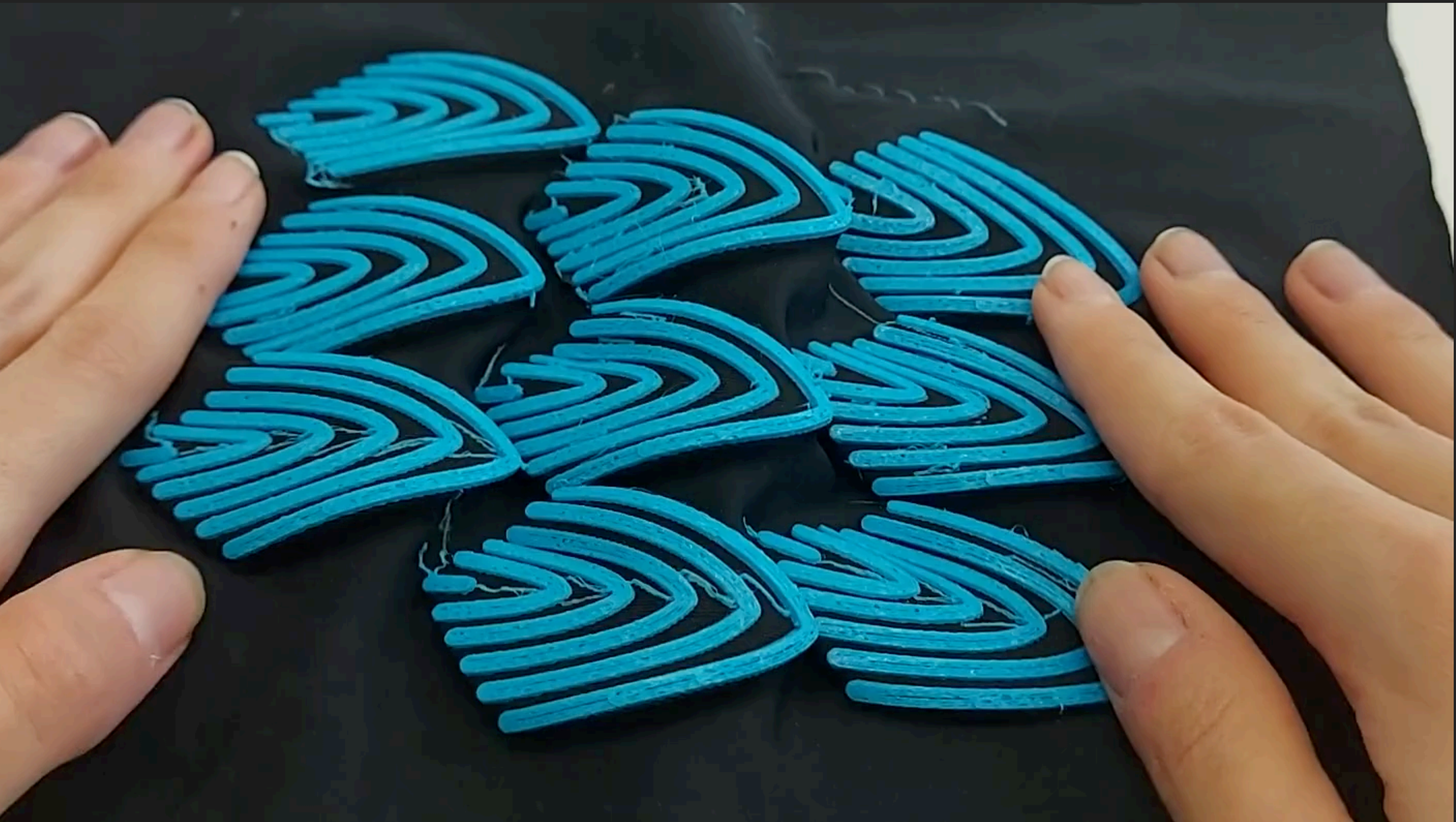












Actuator	Process	Geometry	Motion
SMA wire	Lasercutting	Origami	Expansion/ contraction
Pneumatic	Heat fusing	Inflatable constraints	Inflation
Electromagnet	3D printing	Scales	Bending
Vibration Motor	?	?	Irregular

APPLICATIONS

VISUAL AND HAPTIC FEEDBACK
ENGAGE SENSE OF TOUCH IN NOVEL WAYS
AFFORDANCES OF BODY PROXIMITY