




thalassic

PROTECTIVE MASK

FILIPPO NASSETTI . VINCENZO REALE
STRATASYS . EMPA . PROFACTOR . HARATECH . UFG

 HUB LINZ

THALASSIC:

*OF, RELATING TO, OR SITUATED OR
DEVELOPED ABOUT INLAND SEAS*

THE WORK THALASSIC IS INTERESTED IN RADICALLY RE-THINKING THE RELATIONSHIP BETWEEN TECHNOLOGY, IN THE FORM OF WEARABLE OBJECTS, AND THE HUMAN BODY. THIS RESEARCH AIMS TO FURTHER EXPLORE THE INTEGRATION BETWEEN THE FUNCTIONALITY OF MEDICAL DEVICES AND THE DESIGN CRITERIA USUALLY ASSOCIATED WITH ART AND FASHION.



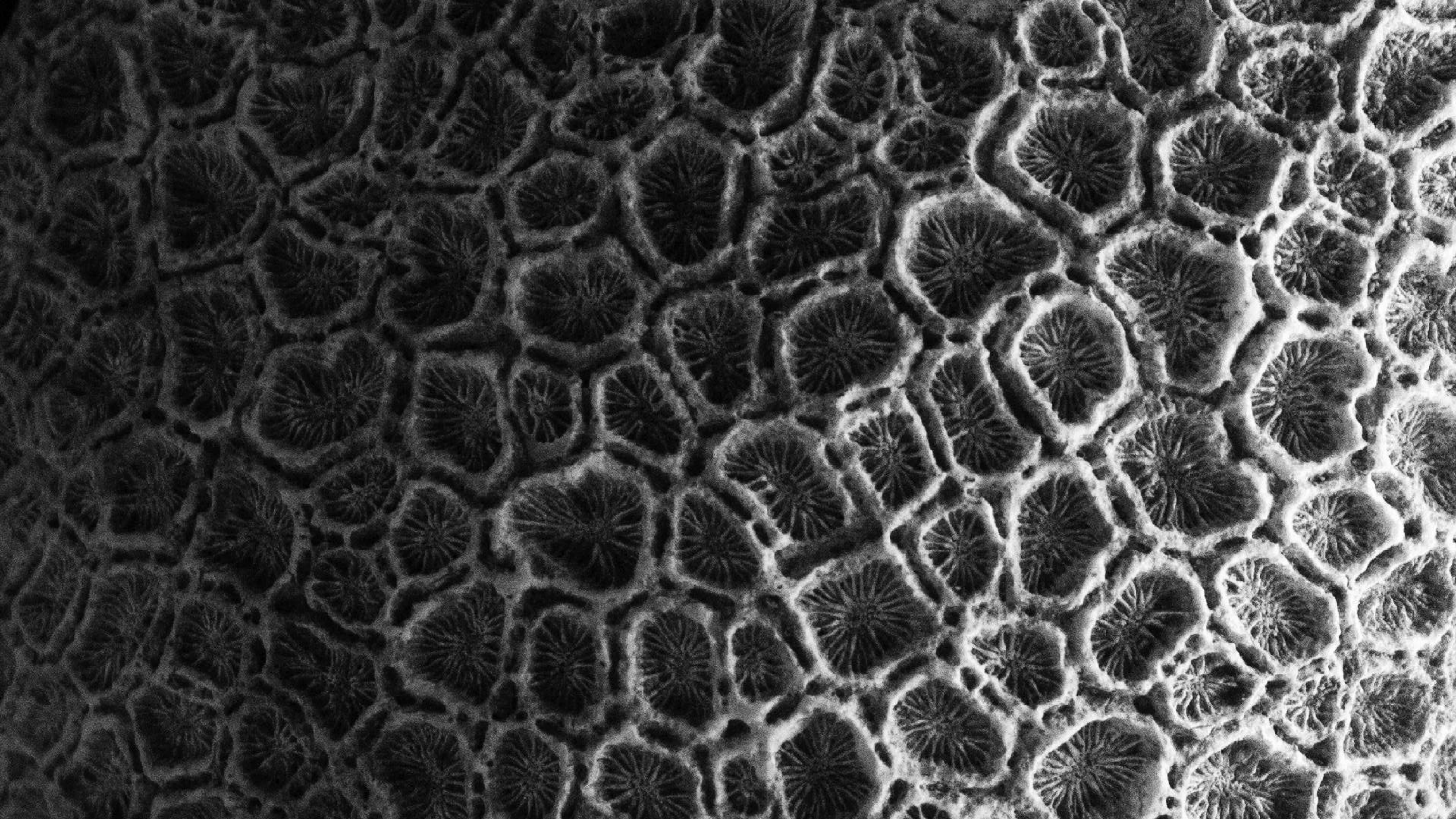
IN THE CONTEXT OF THE CURRENT PANDEMIC, OUR ATTENTION HAS BEEN NATURALLY DRAWN TO THE URGENT NEED FOR RESPIRATORY PROSTHESES. PROTECTIVE MASKS WITH MICROBIAL FILTERS ARE INCREASINGLY BECOMING AN ESSENTIAL DEVICE, A BODY INTEGRATION REQUIRED TO ENGAGE WITH THE URBAN ENVIRONMENT AND TO ALLOW INTERPERSONAL INTERACTIONS.



BEYOND COVID-19, WE FORESEE THAT FURTHER IMPLICATIONS OF THE DISRUPTION OF ECOLOGICAL ENVIRONMENTS AND CLIMATE CHANGE, SUCH AS AIR POLLUTION AND TRANSFORMATIONS IN THE ATMOSPHERE, WOULD SEE PROTECTIVE DEVICES TO BECOME AN ESSENTIAL EXTENSION OF THE HUMAN BODY. THE MASK AS PROSTHESIS OF THE RESPIRATORY SYSTEM, THAT WILL BE NEEDED FOR LONGER THAN INITIALLY EXPECTED, NOT ONLY AS A MEDICAL DEVICE BUT ALSO AS A FASHION PRODUCT, MANIFESTATION OF NEW PANDEMIC AND POST-PANDEMIC IDENTITIES.

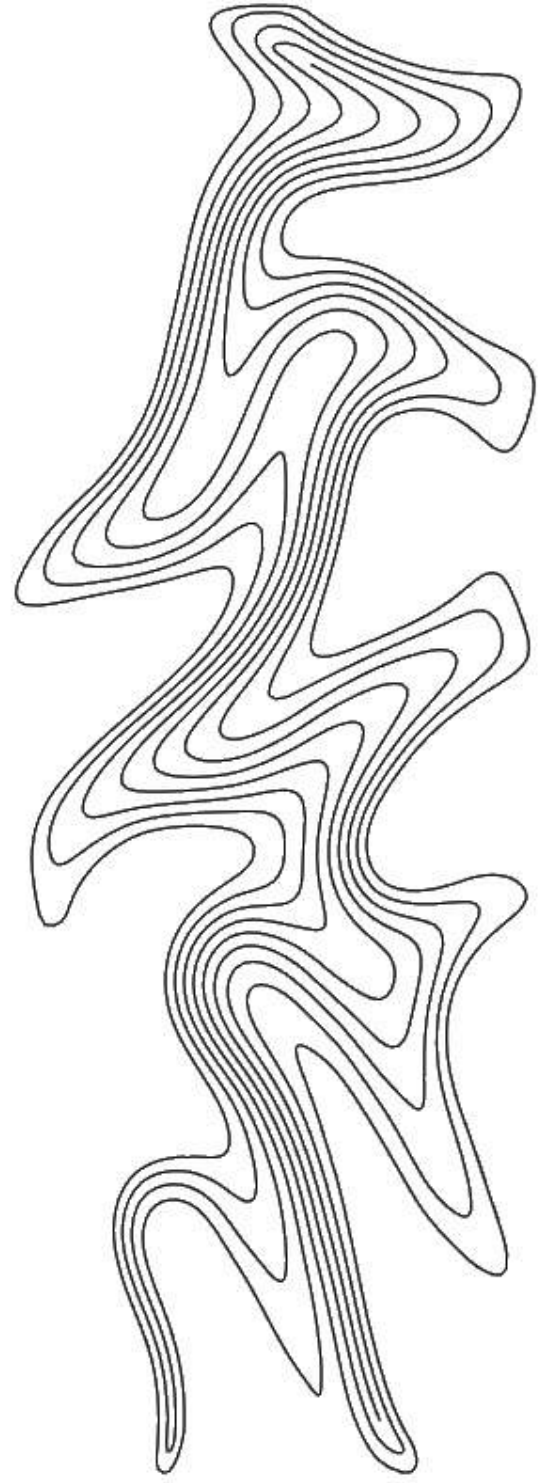
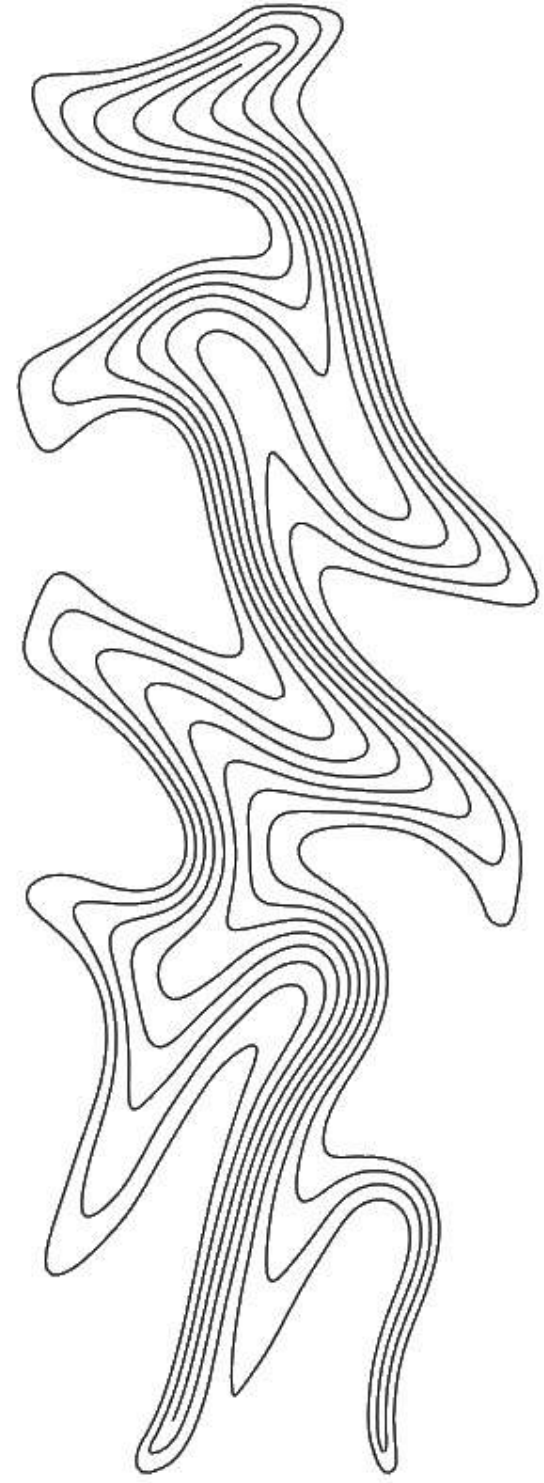


THALASSIC EXPLORED THE STUDY OF SEA FORMS' STRATEGIES. WE WERE PARTICULARLY INTERESTED IN SEA ORGANISMS THAT ARE CAPABLE OF FILTRATING THE WATER IN ORDER TO SURVIVE. MARINE LIFE FORMS, SUCH AS CORALS, JELLYFISH AND SEA ANEMONES, ACT AS BIOLOGICAL FILTERS, EXTRACTING OXYGEN AND NUTRIENTS THANKS TO THEIR INNER STRUCTURE AND IN TURN ACTIVELY MODIFYING THE ENVIRONMENT THEY LIVE IN. THIS INTEGRATION BETWEEN FUNCTIONAL REQUIREMENT AND THREE-DIMENSIONAL FEATURES HAS BEEN A FOCUS OF THALASSIC.



AQUATIC ORGANISMS OFTEN RELY ON THEIR DECEPTIVE APPEARANCES TO HIDE, OR PRAY, WITHIN THE UNDERWATER ENVIRONMENT THEY ARE IMMERSED IN. APPEARANCES THEN BECOME PART OF THE SURVIVAL STRATEGY.

ANOTHER ASPECT OF FOCUS FOR THE RESEARCH HAS THUS BEEN THE CONCEPT OF CAMOUFLAGE AND, IN TURN, IDENTITY.



THE FIRST STEPS OF THE RESEARCH FOCUSSED ON IMPLEMENTING DIFFERENT SURFACE STRATEGIES BY MAKING USE OF STRATASYS POLYJET 3D PRINTING TECHNOLOGY ON FABRIC.

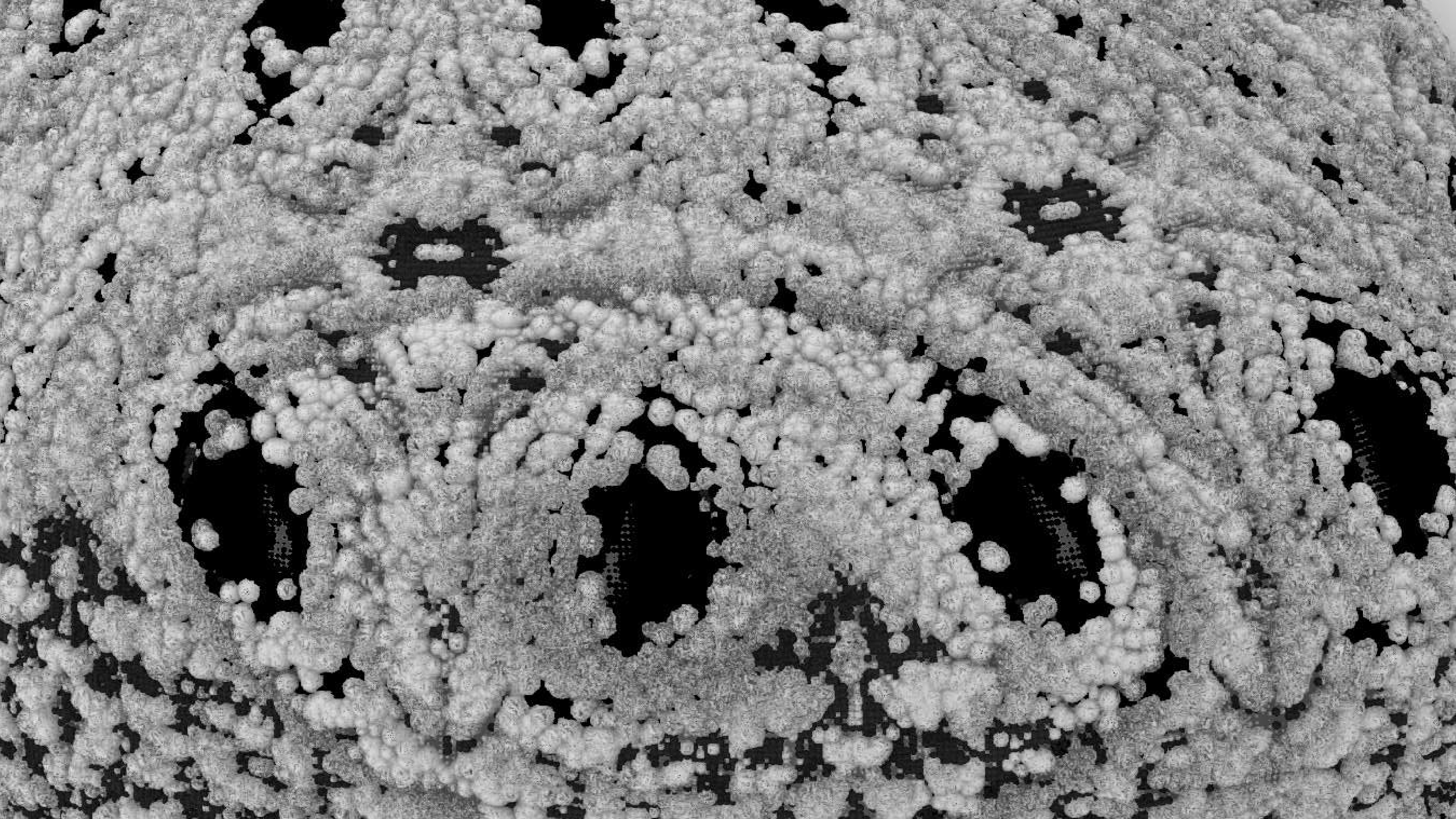
THE TECHNOLOGY ALLOWS TO AUGMENT A TEXTILE BY PRINTING THREE-DIMENSIONAL STRUCTURES ONTO IT, WHOSE SHAPE, COLOUR, TRANSPARENCY AND FLEXIBILITY CAN BE CONTROLLED THROUGH A DIGITAL 3D MODEL, AT THE RESOLUTION OF THE PRINTED PARTICLE.

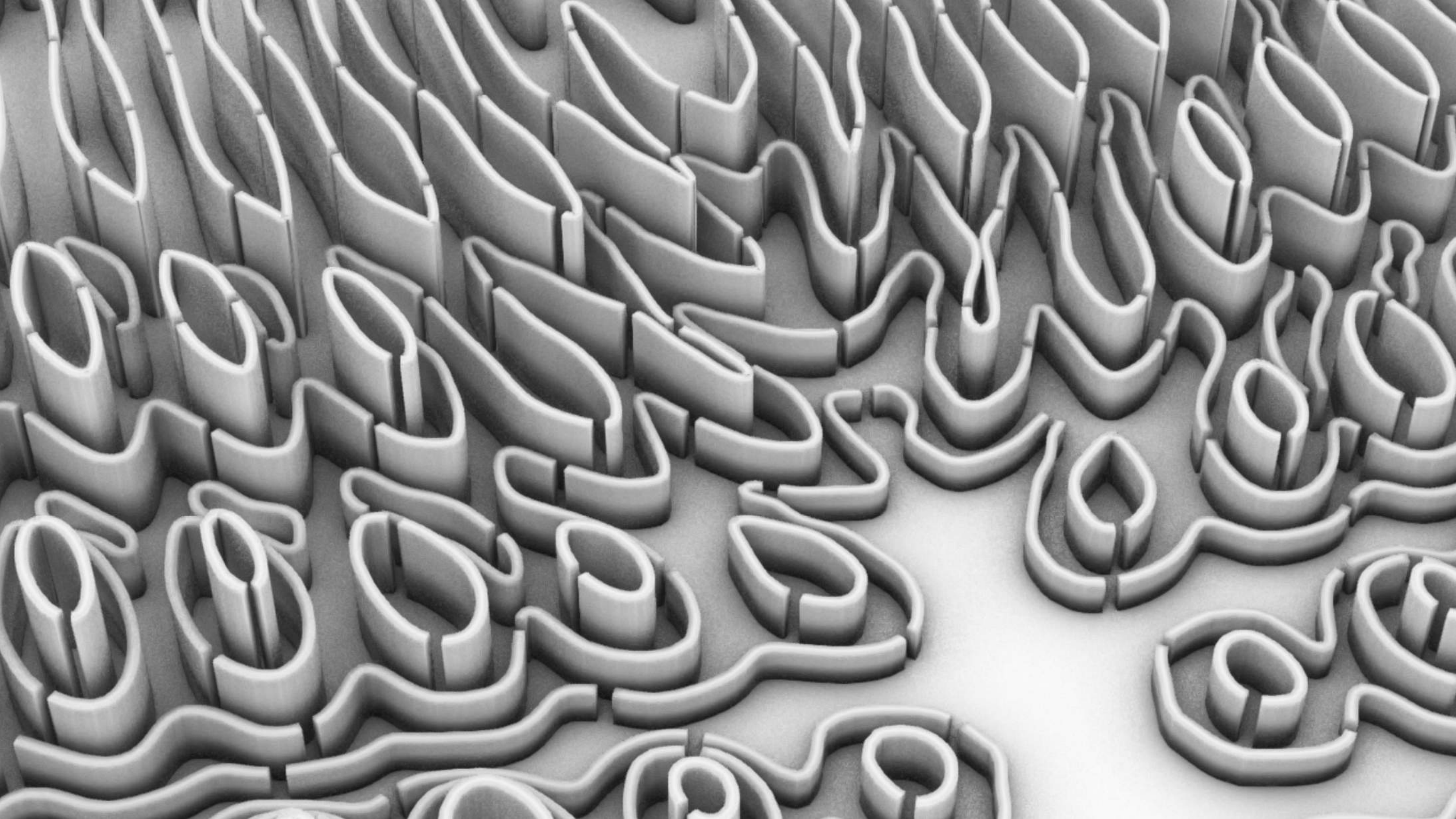
WE WERE INTRIGUED BY THE ABILITY OF THE TECHNOLOGY TO FABRICATE SUCH COMPLEX FORMATIONS,
AND THE POTENTIAL TO CONTROL THE MATERIAL AT A GRANULAR LEVEL TO INTERWEAVE FUNCTIONALITY
AND AESTHETICS.

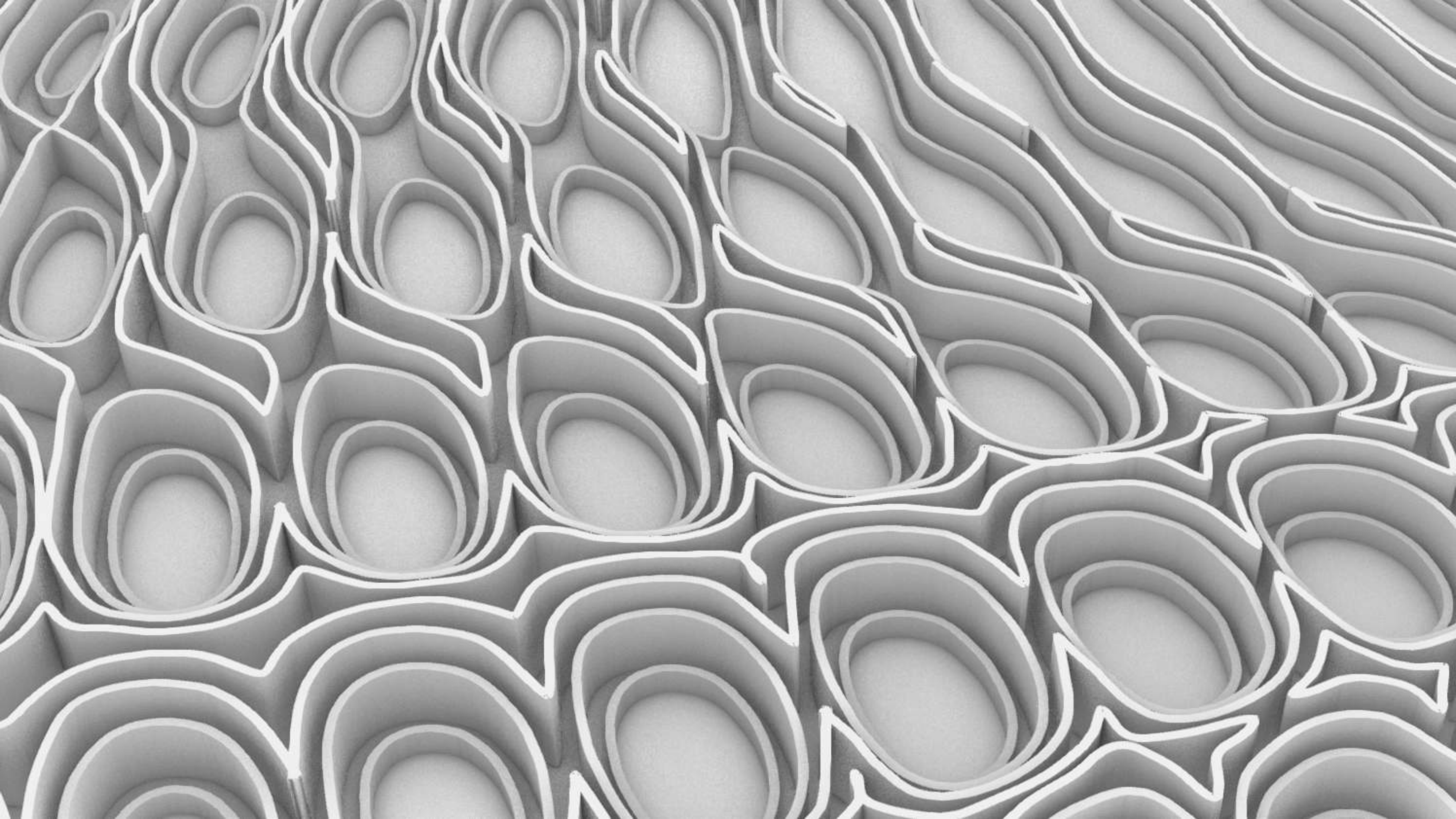
BIOLOGICAL EXAMPLES WERE AGAIN A DRIVER FOR THE RESEARCH.





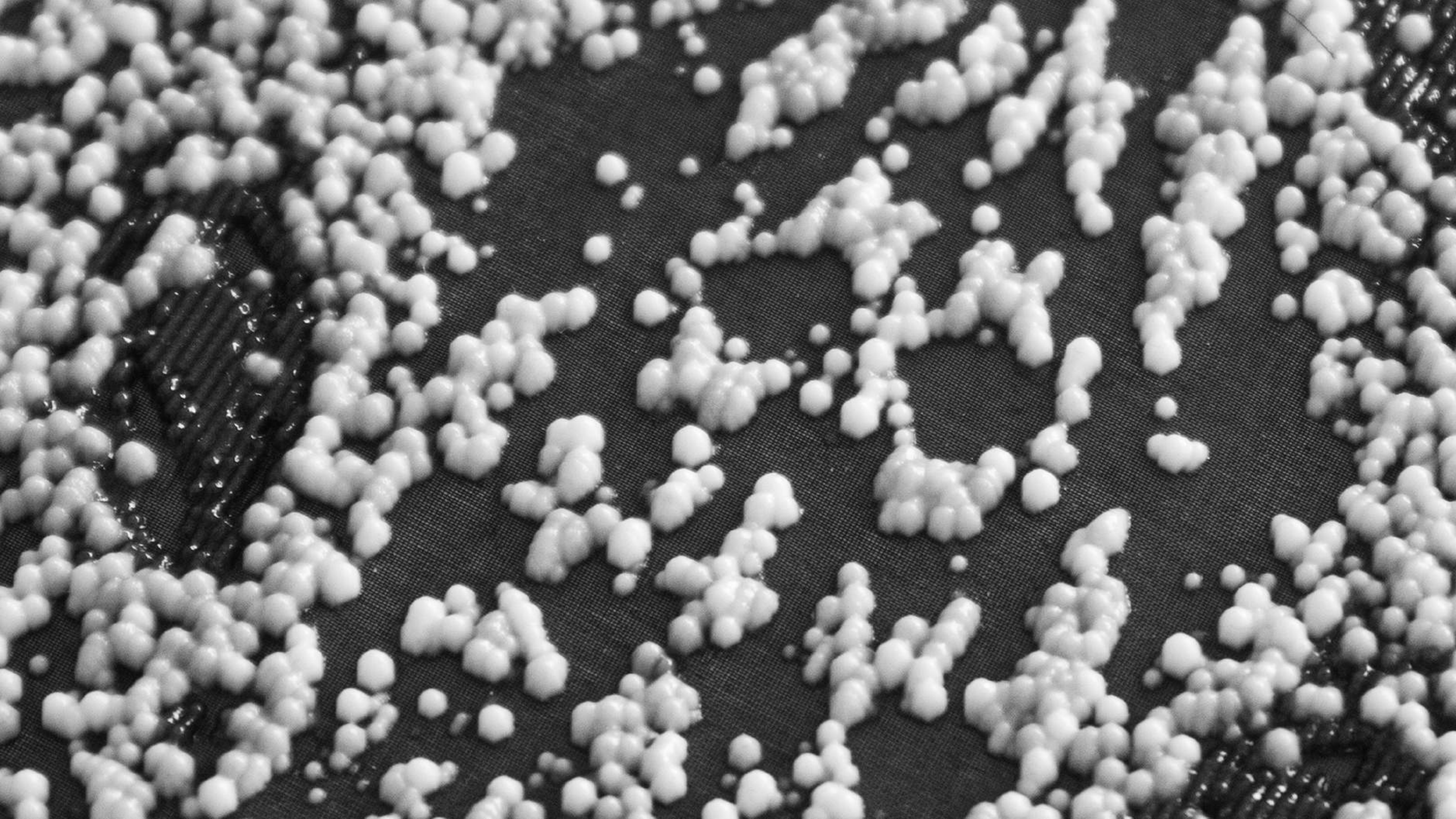




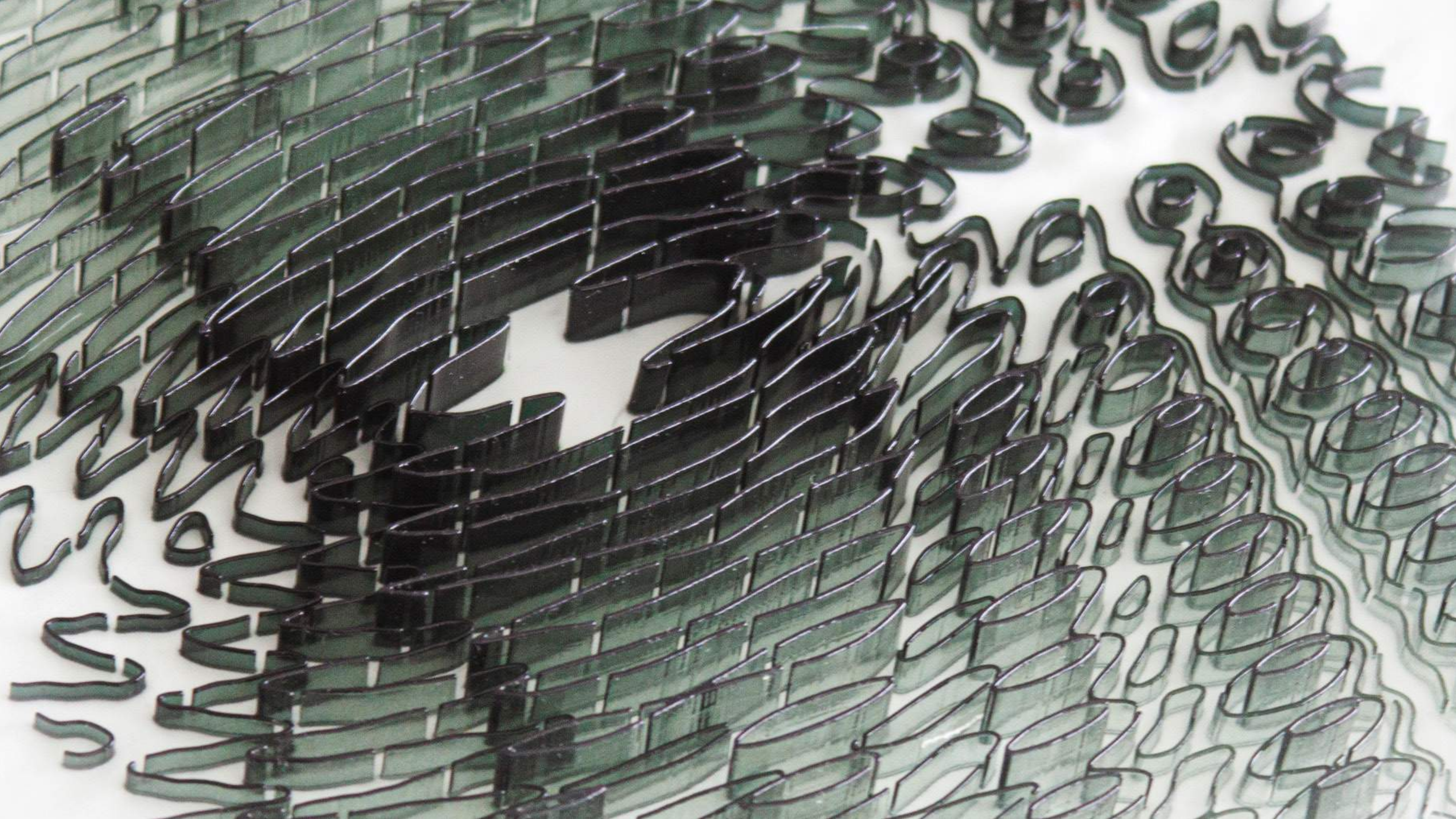


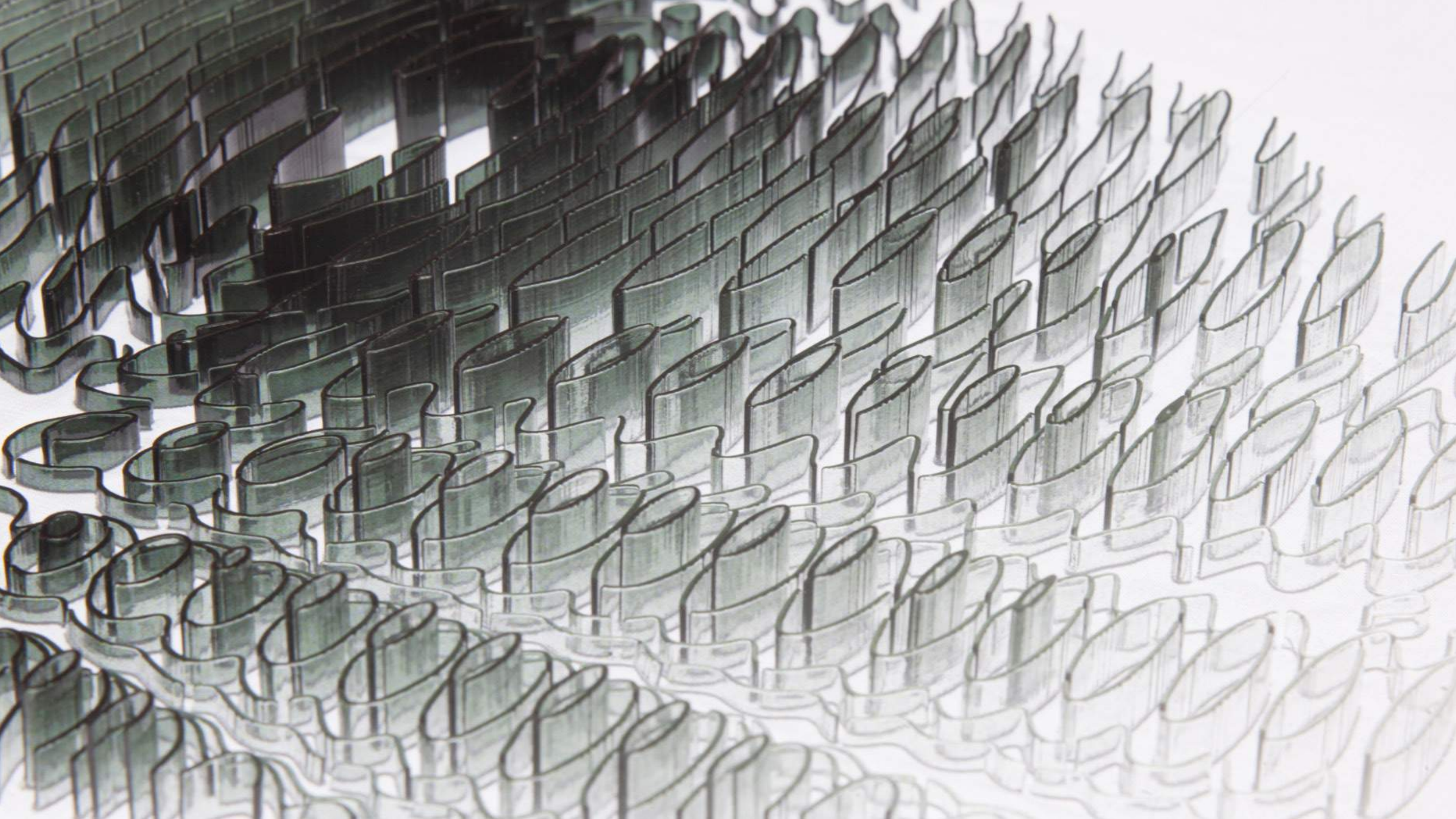
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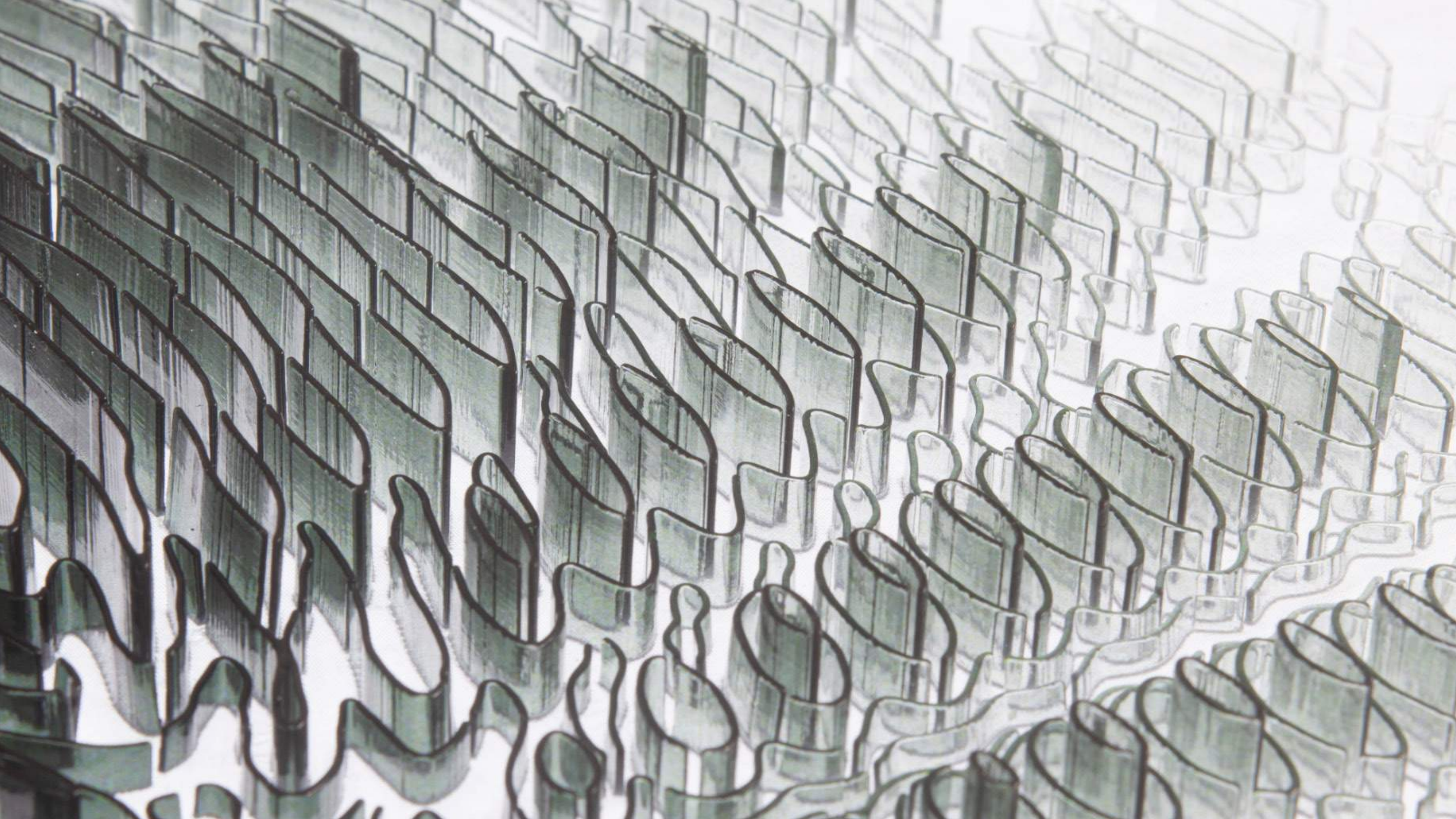
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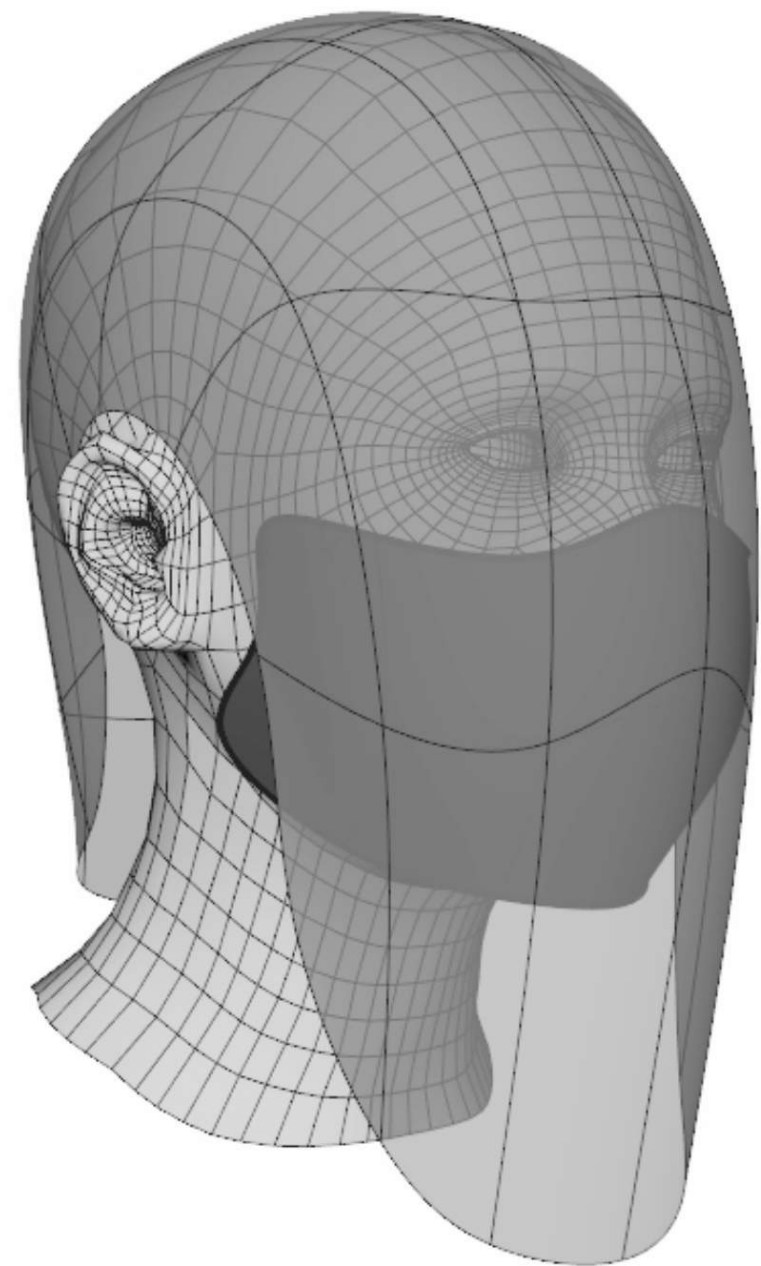
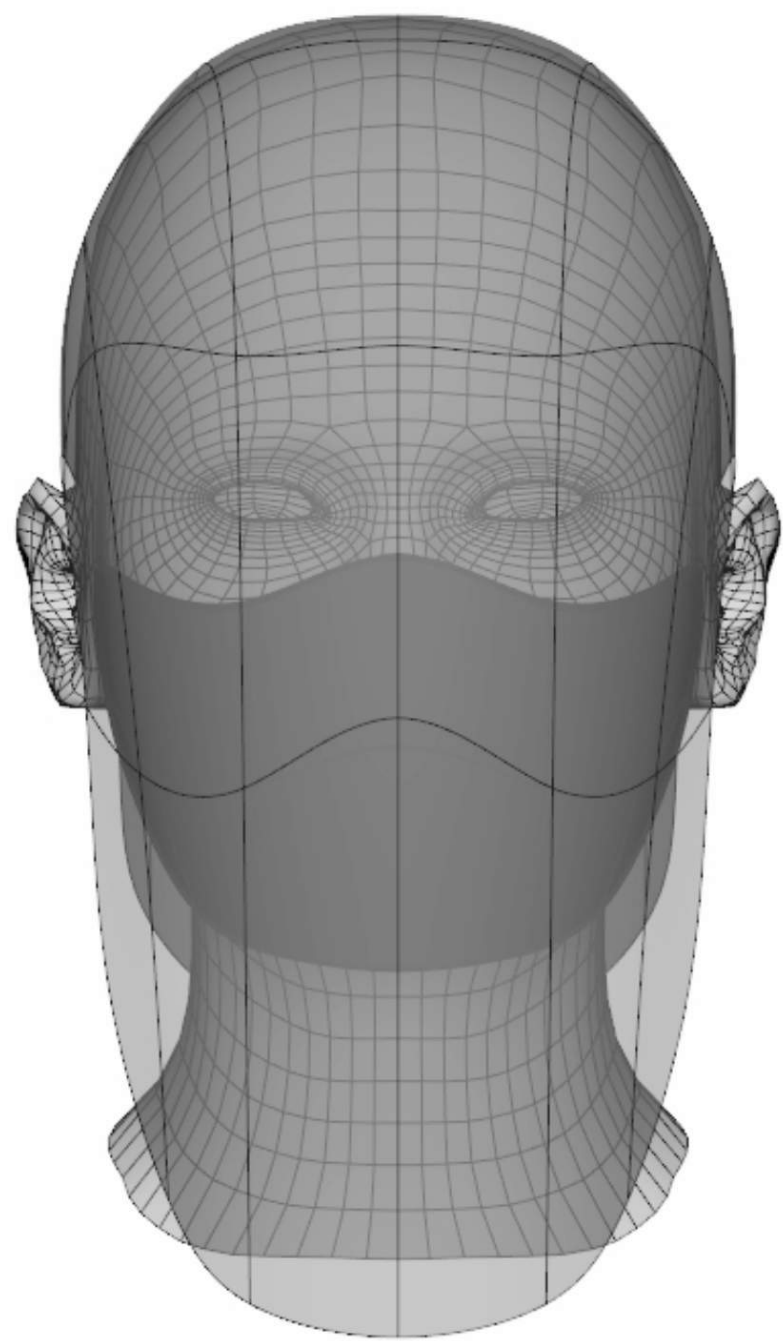


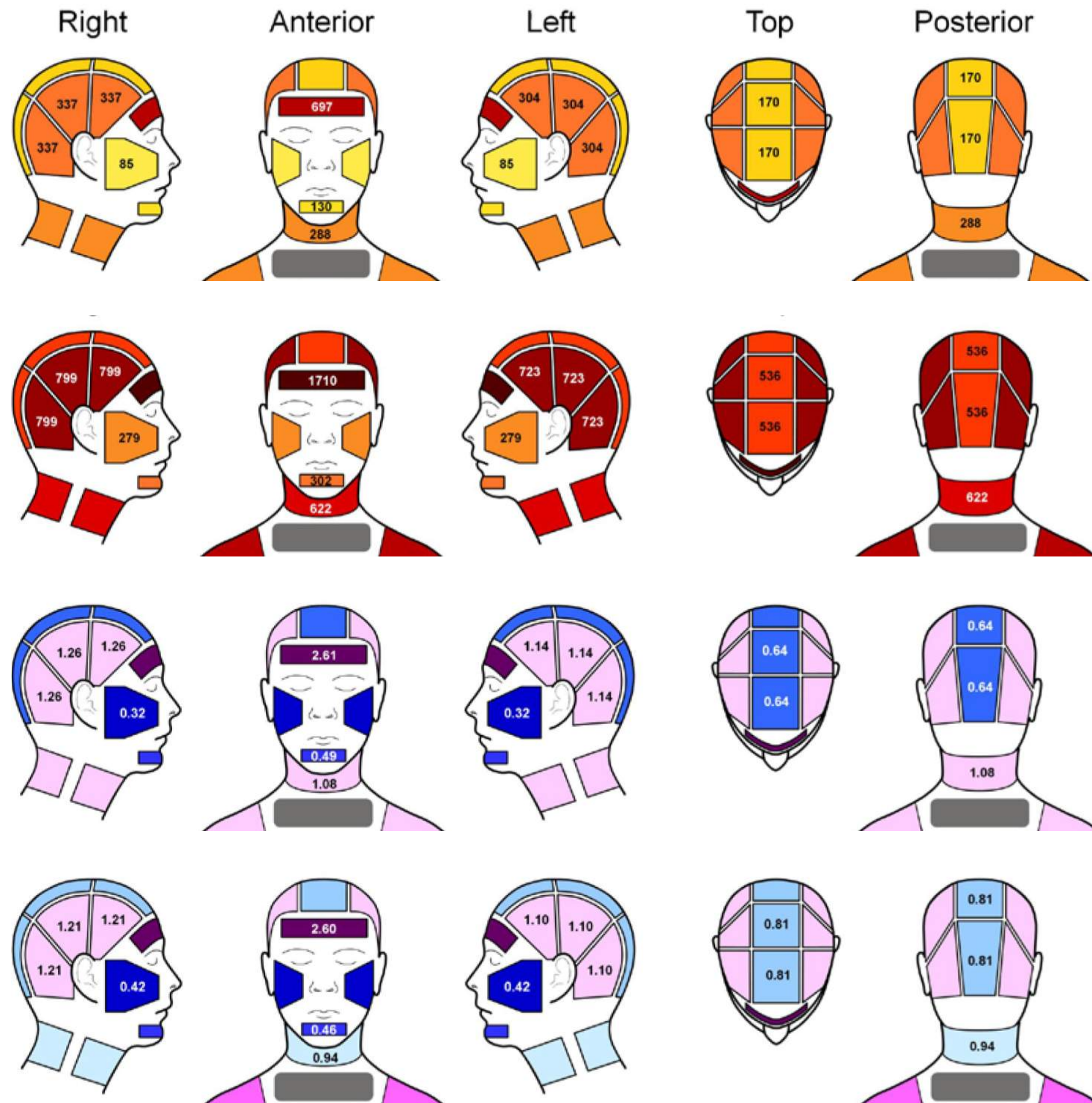




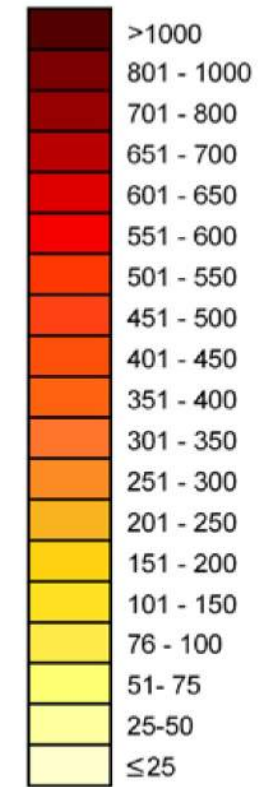
ONCE THE AESTHETIC AND FUNCTIONAL POTENTIAL OF THE TOOLS WERE EXPLORED THE FOCUS OF THE RESEARCH RETURNED ON THE INTEGRATION BETWEEN THE HUMAN BODY AND THE TECHNOLOGY.

TOGETHER WITH AESTHETIC AND FUNCTIONAL REQUIREMENTS THE DESIGN OF THE PROTECTIVE HEADPIECE WAS AUGMENTED THROUGH THE USE OF STUDIES OF TEMPERATURE MAPS PROVIDED BY EMPA AND OF HUMAN HEAD TOPOLOGY PROVIDED BY UFG.

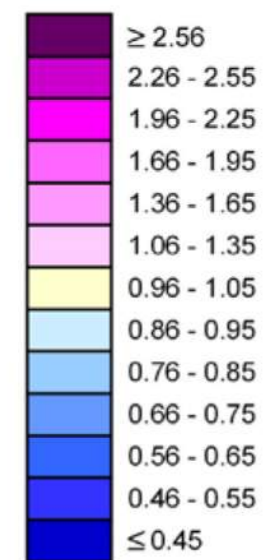


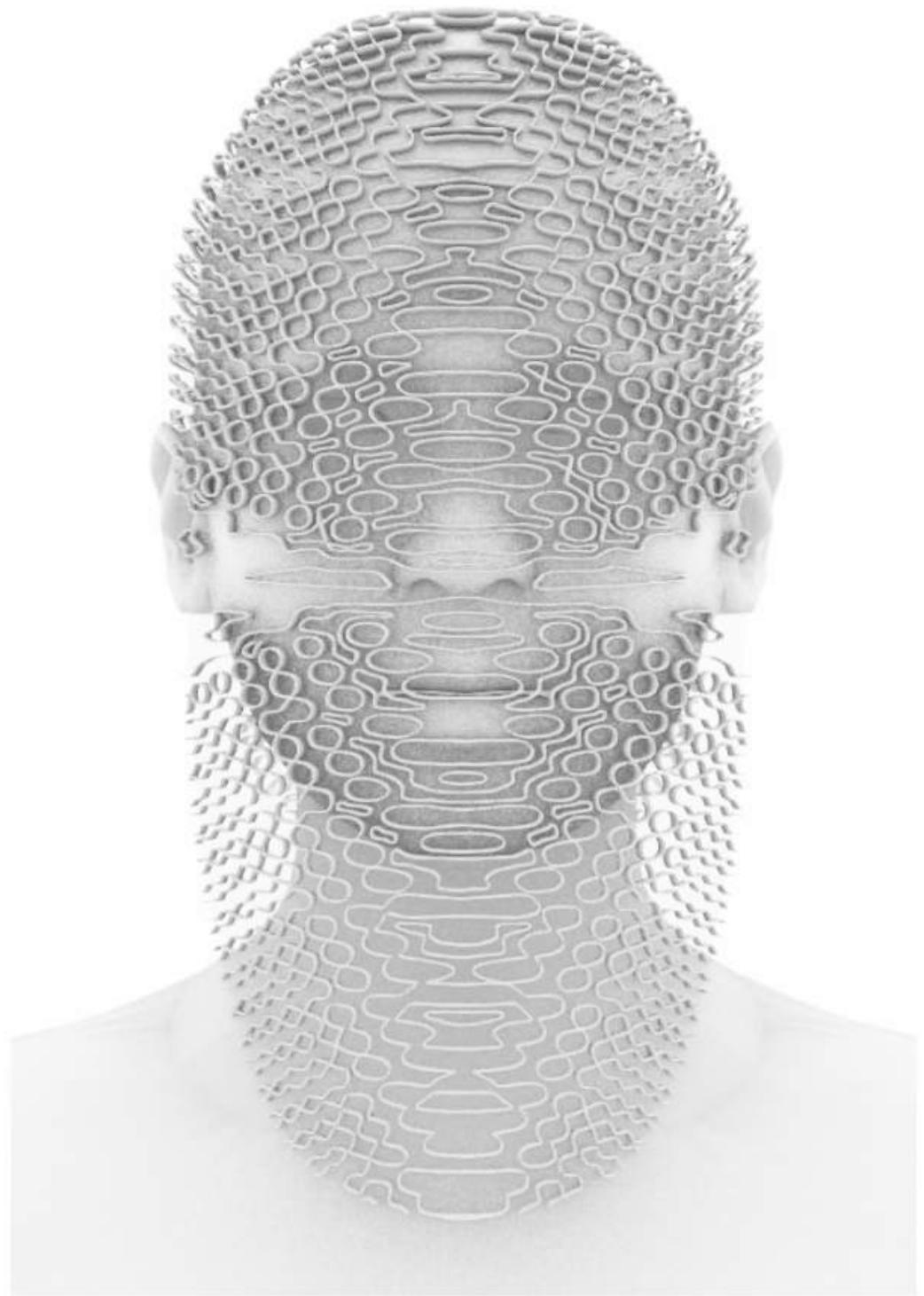
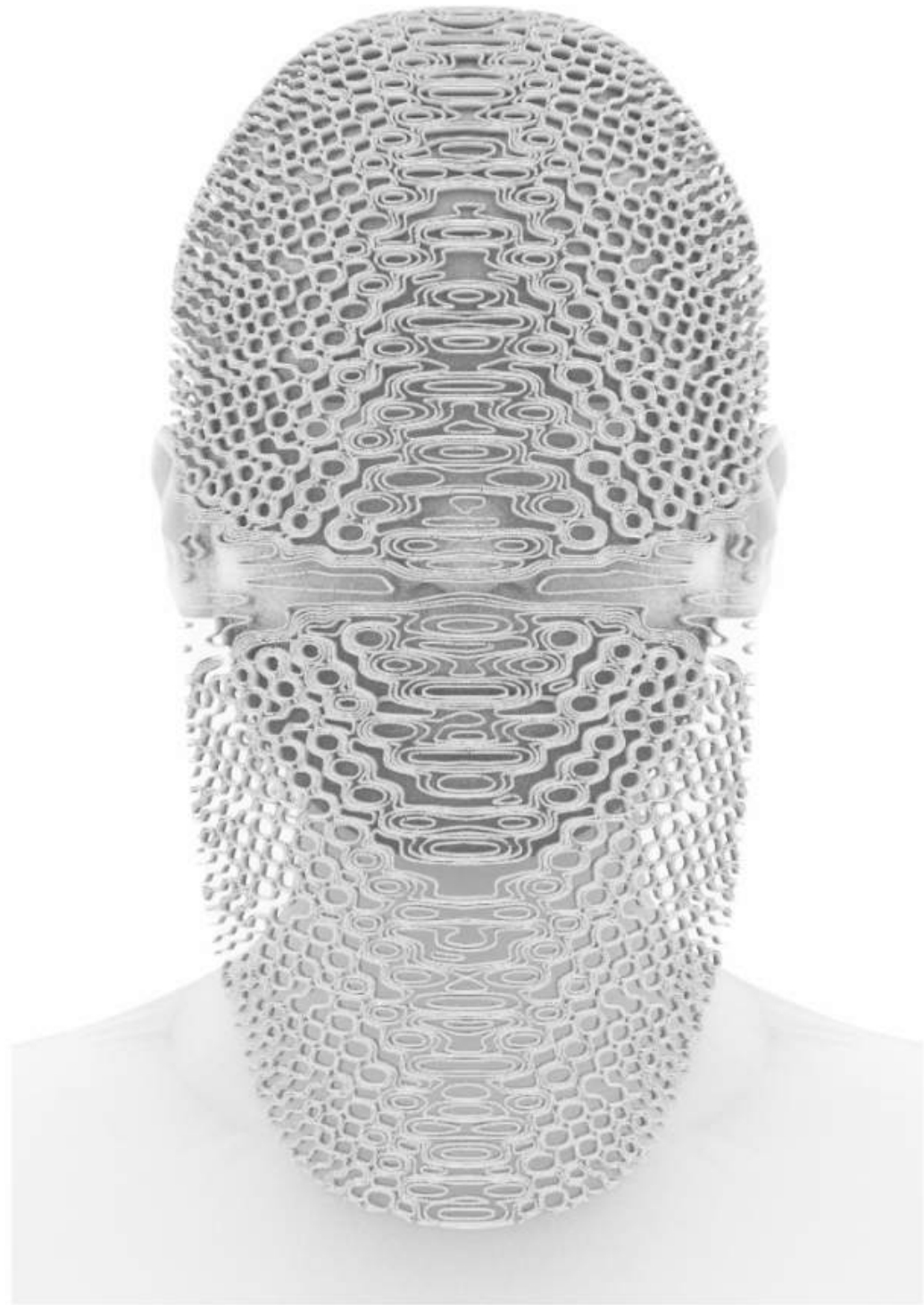
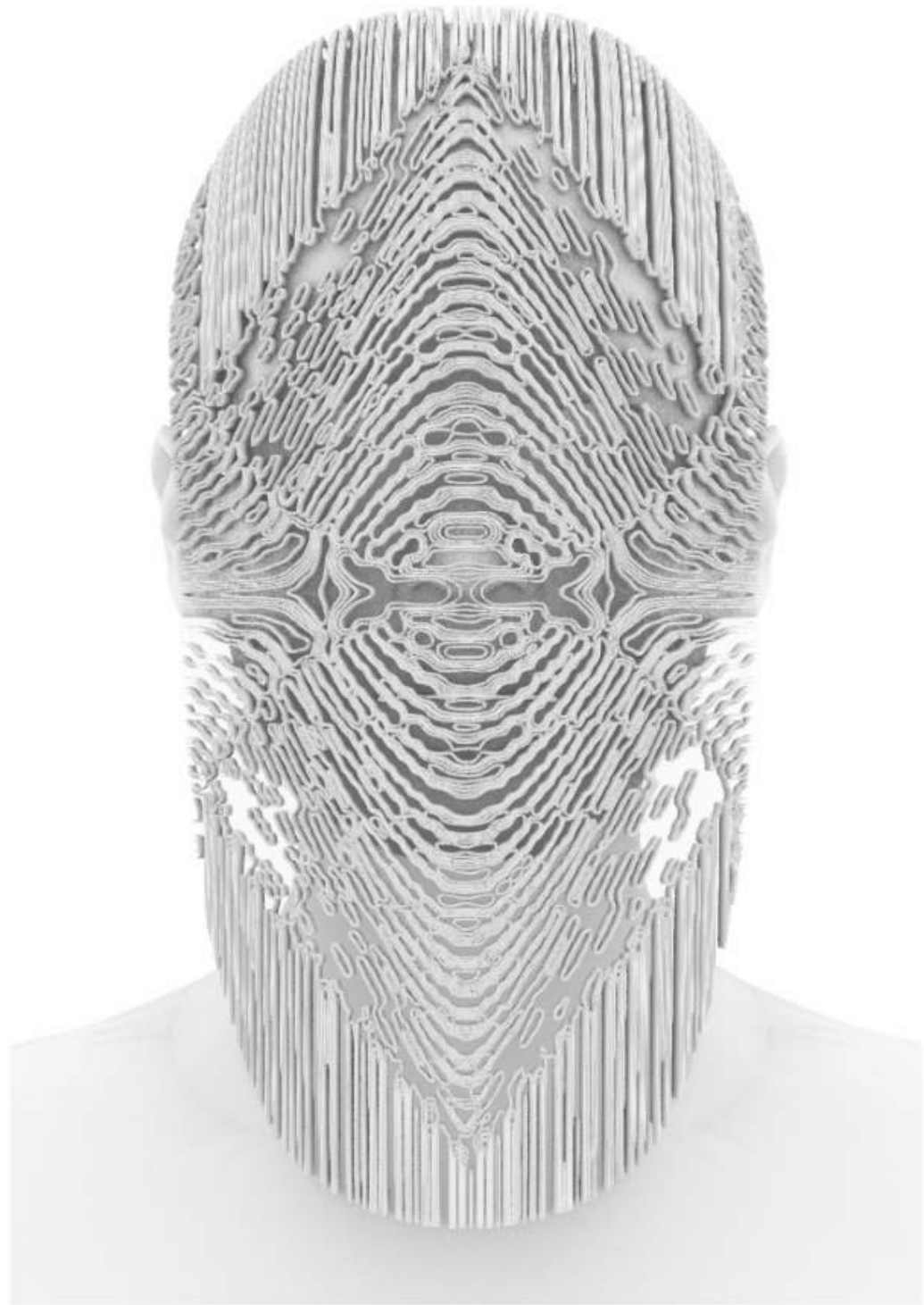


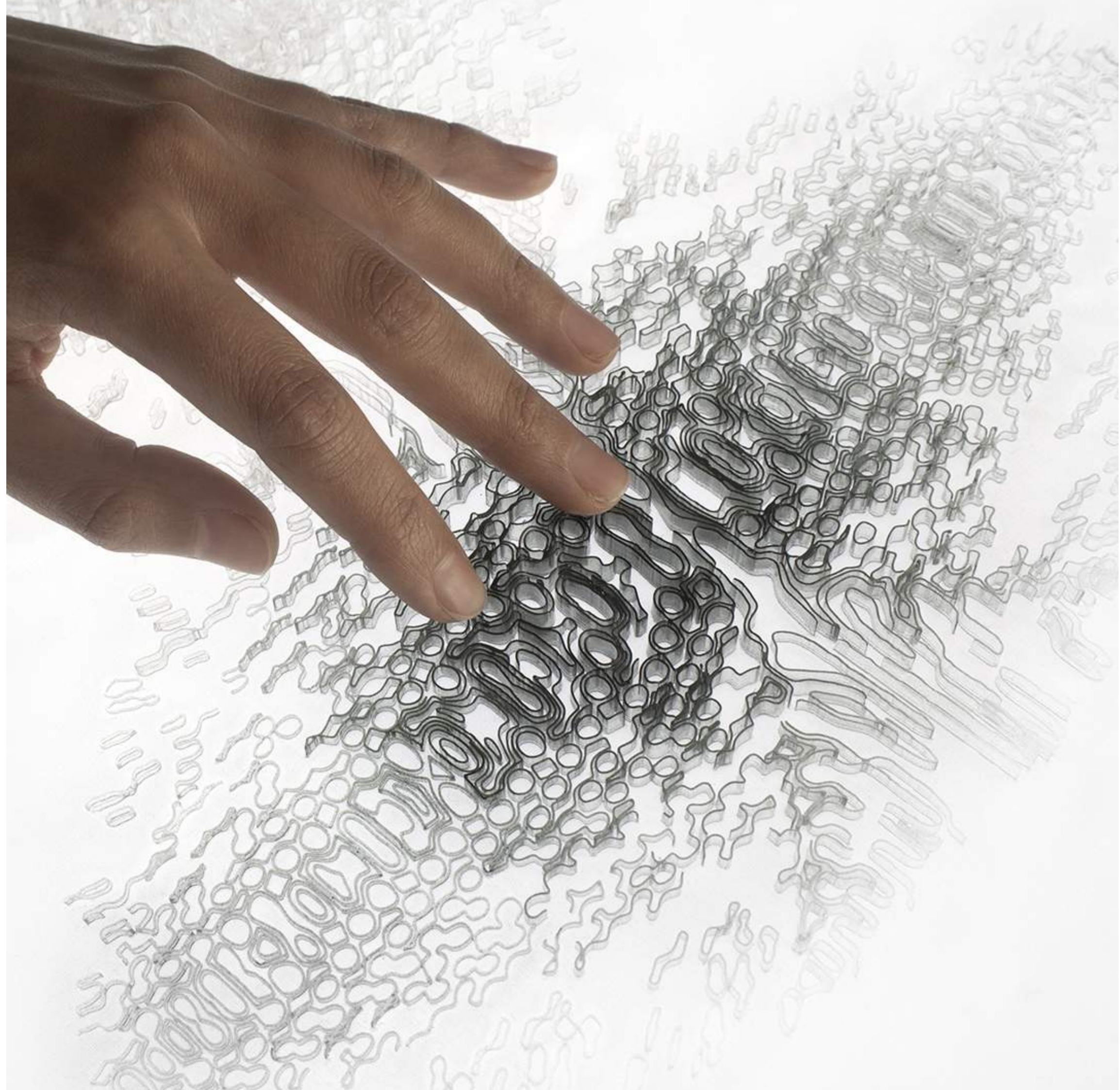
Sweat Rate ($\text{g}\cdot\text{m}^{-2}\cdot\text{h}^{-1}$)

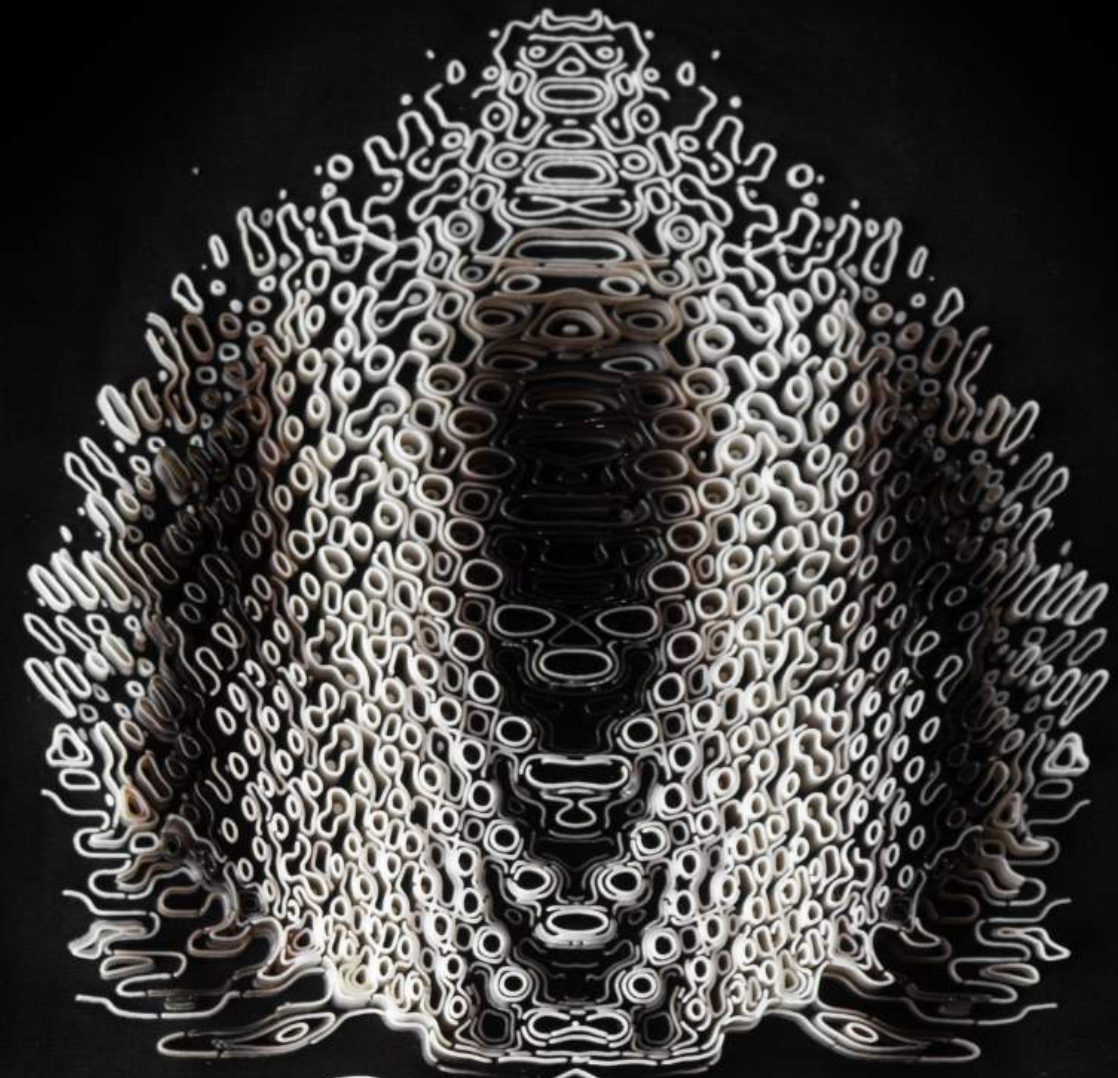


Ratio Values

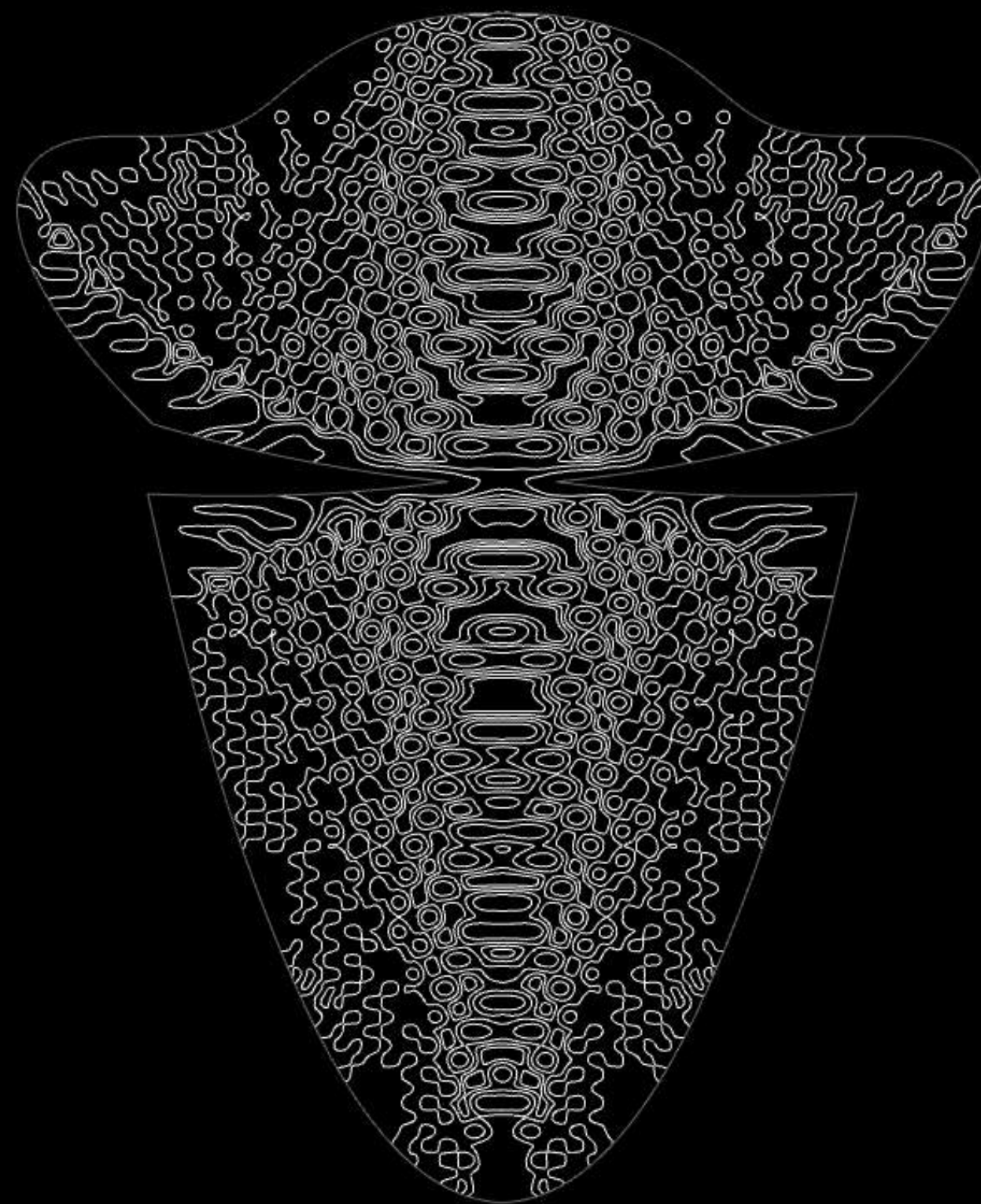
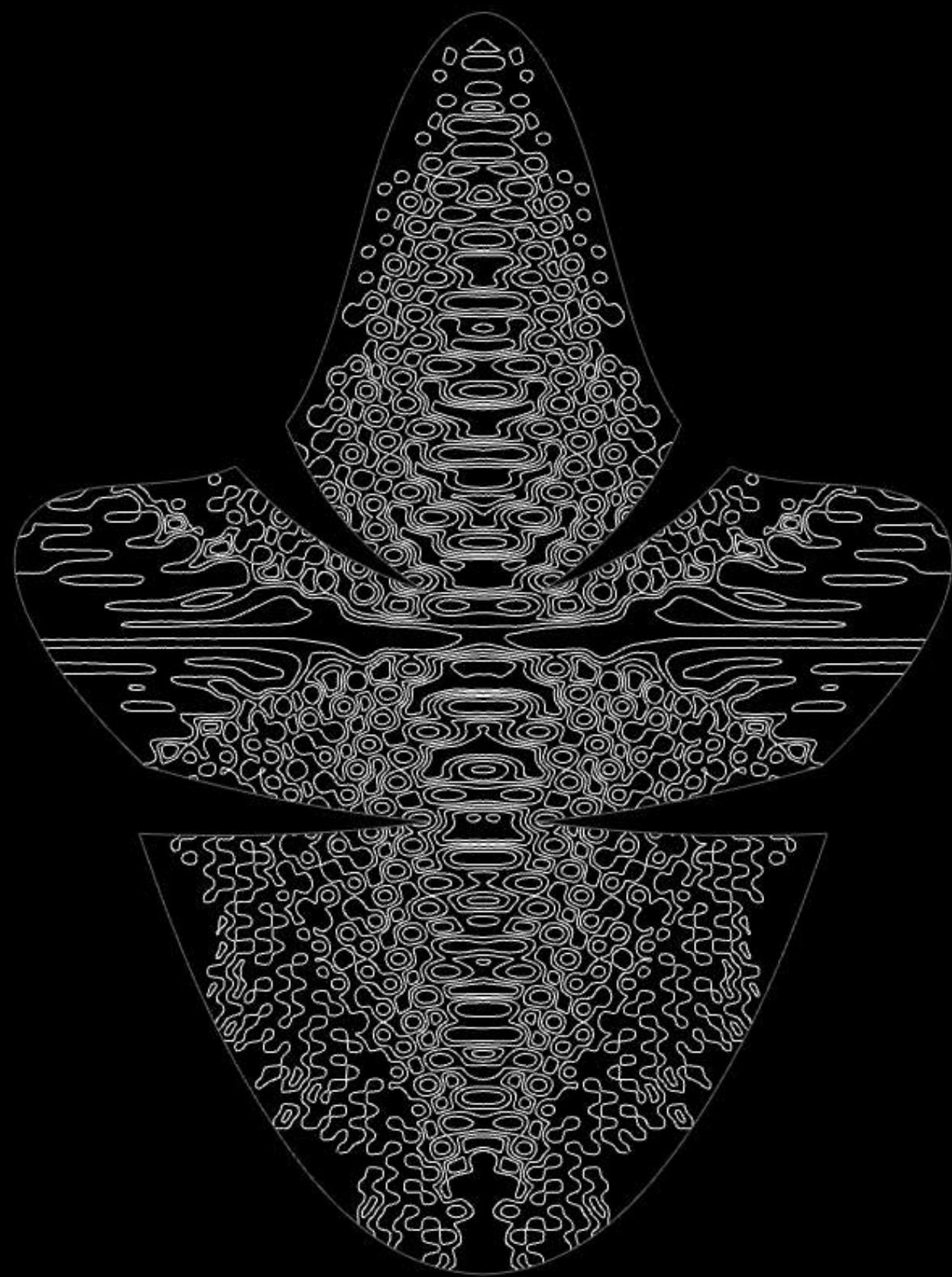


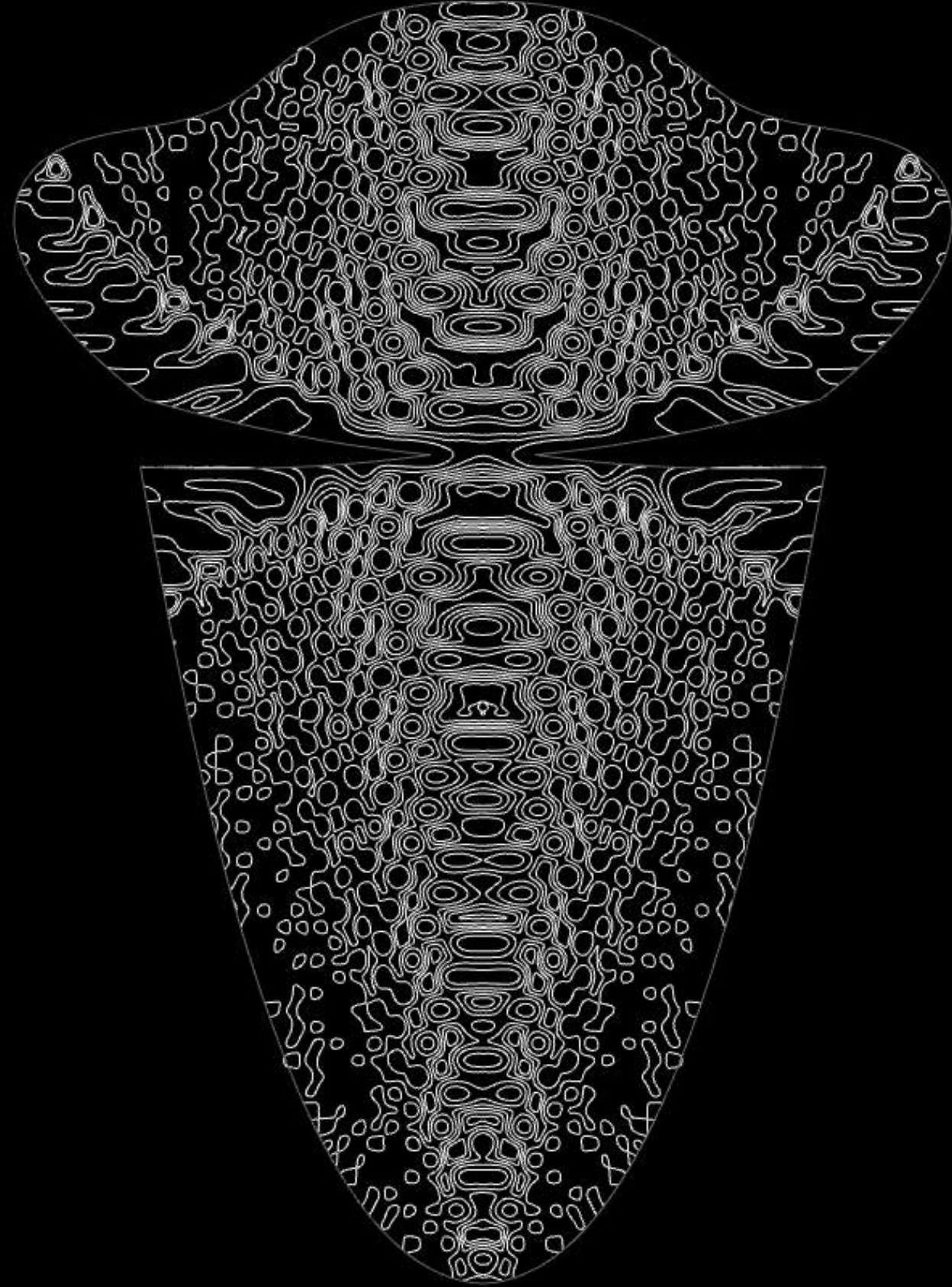




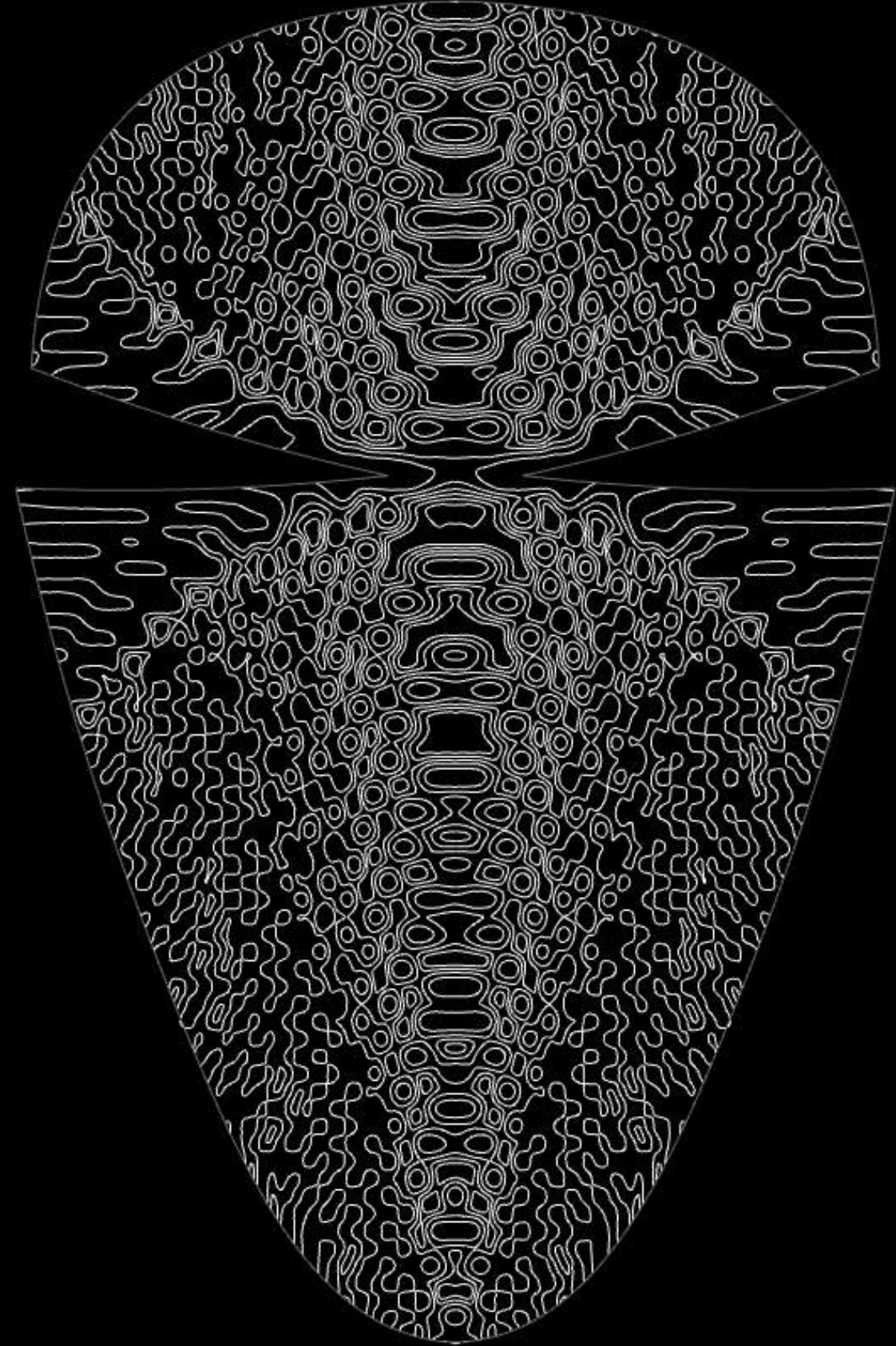


THROUGH THE DEVELOPMENT OF DIFFERENT TOILES A FINAL WORKING PROTOTYPE WAS THEN DEVELOPED
ALLOWING FOR THE DIFFERENT FEATURES TO BE INTEGRATED IN A FULL SCALE WEARABLE HEADPIECE

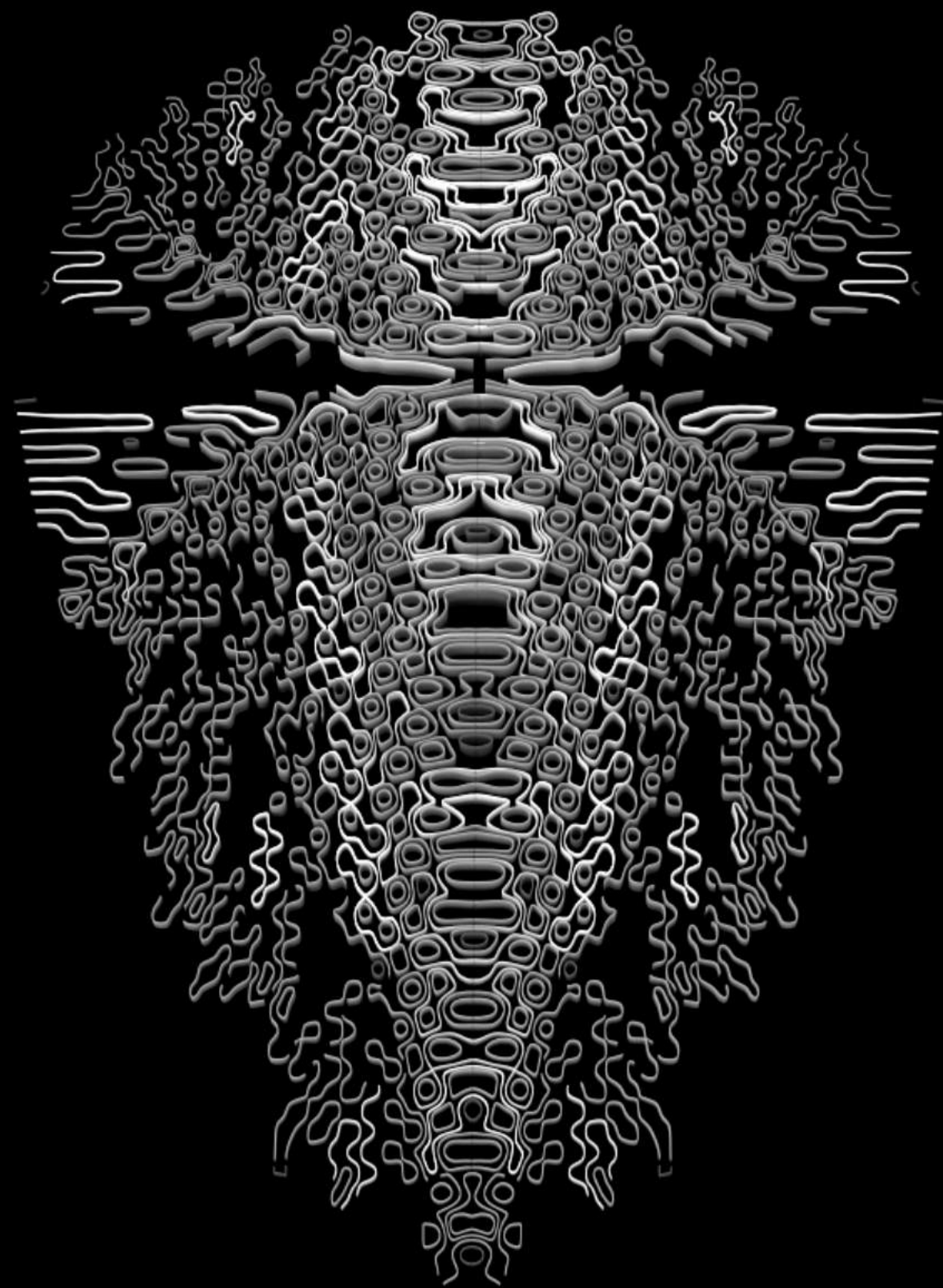
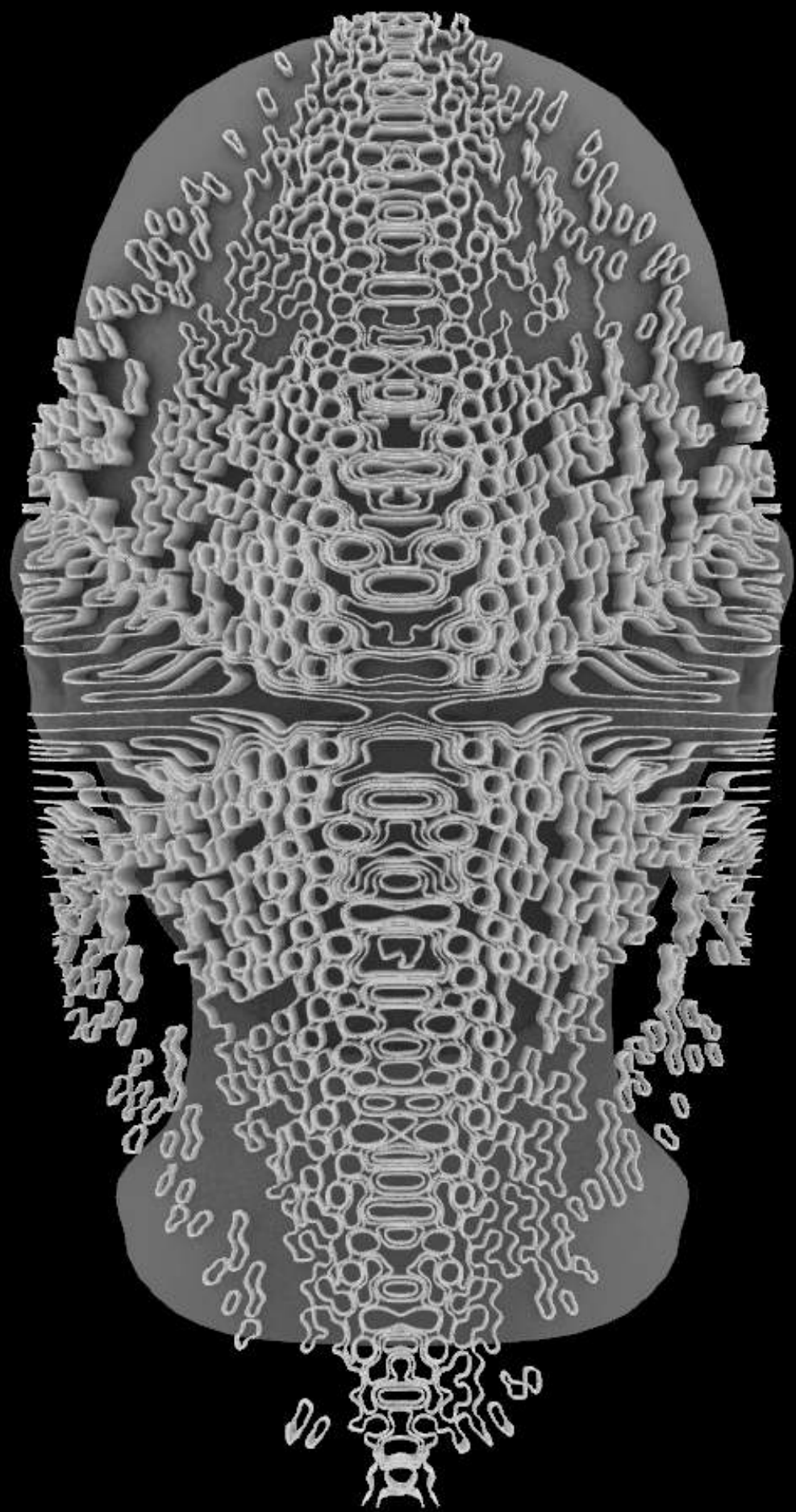


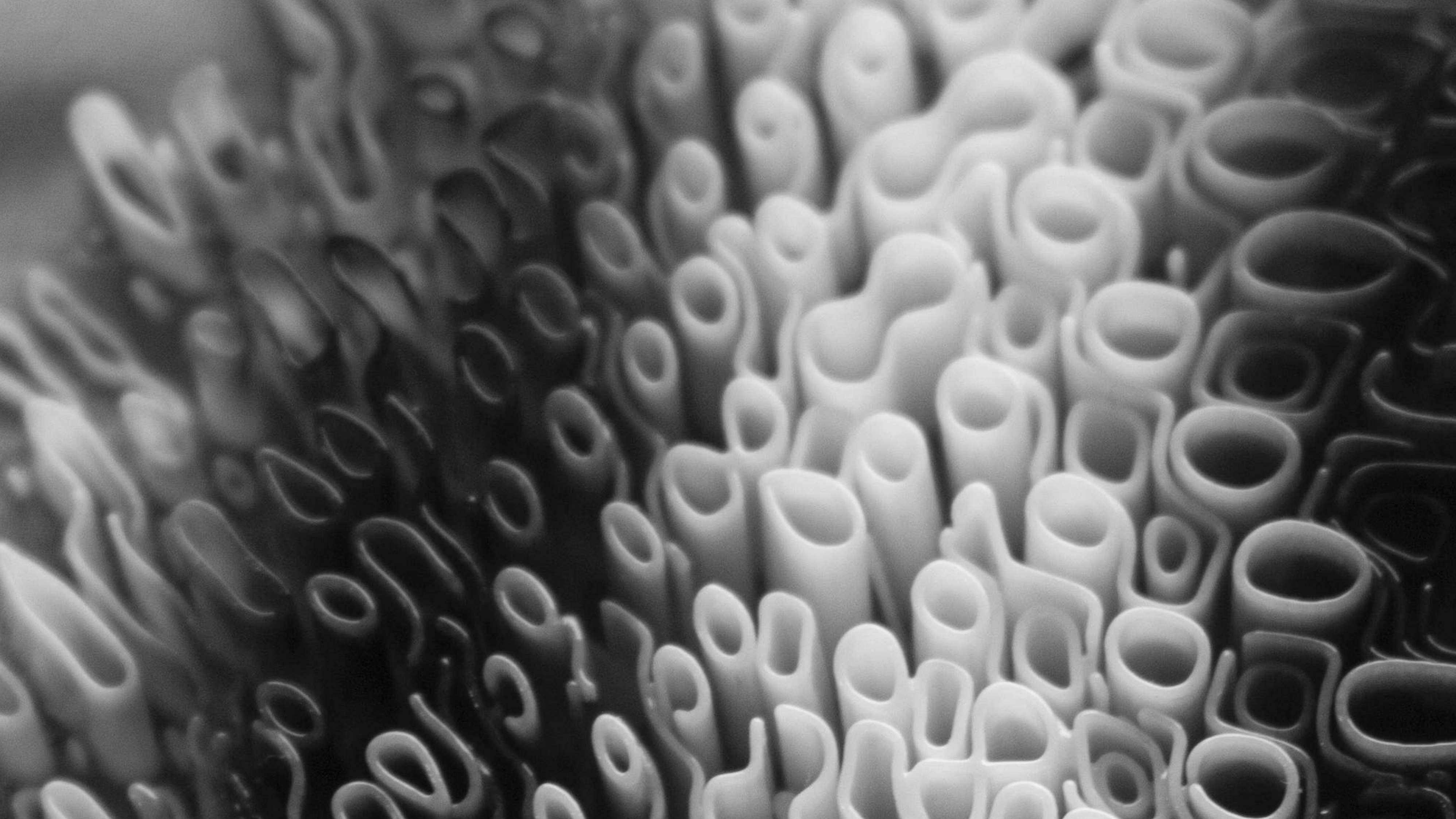


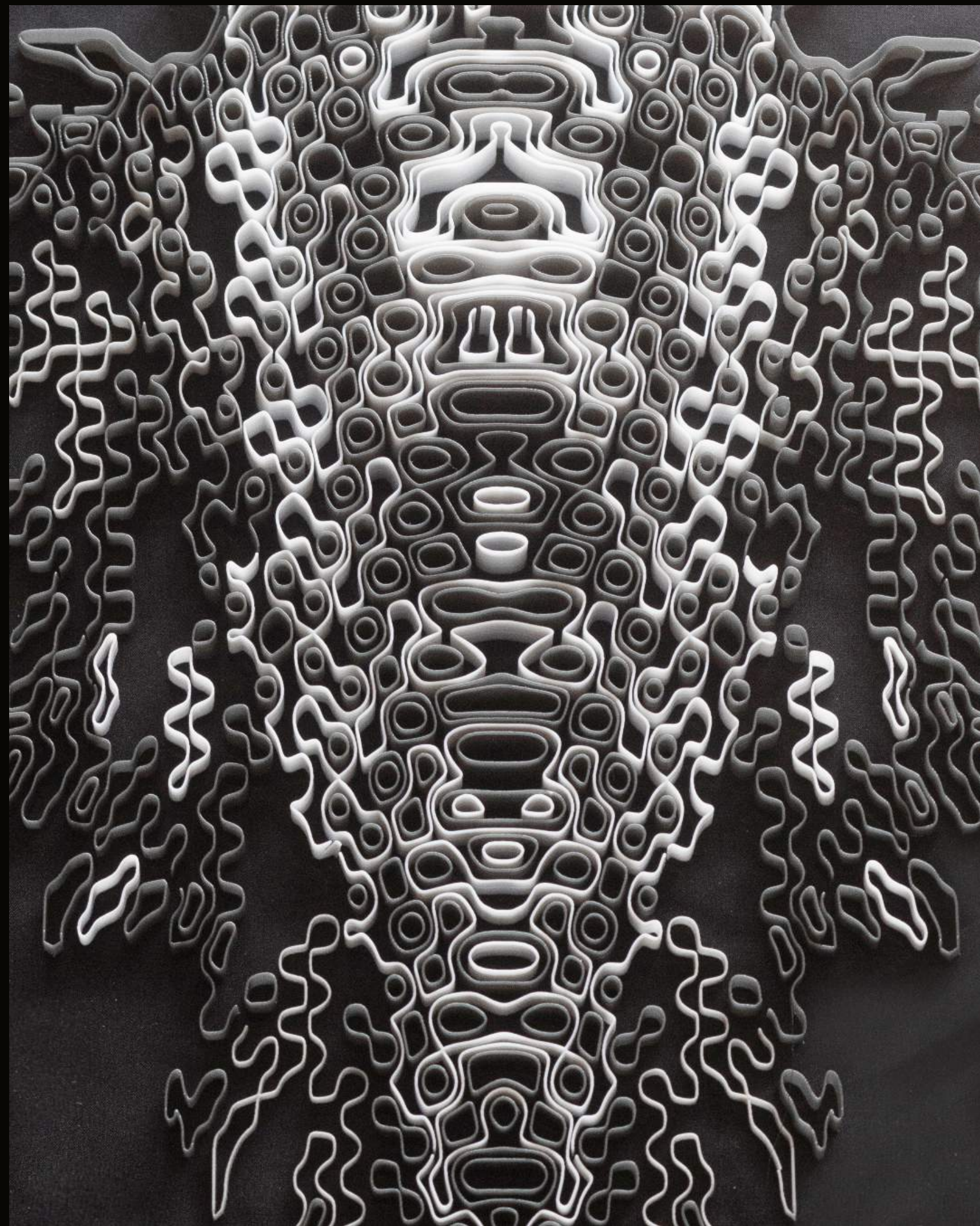
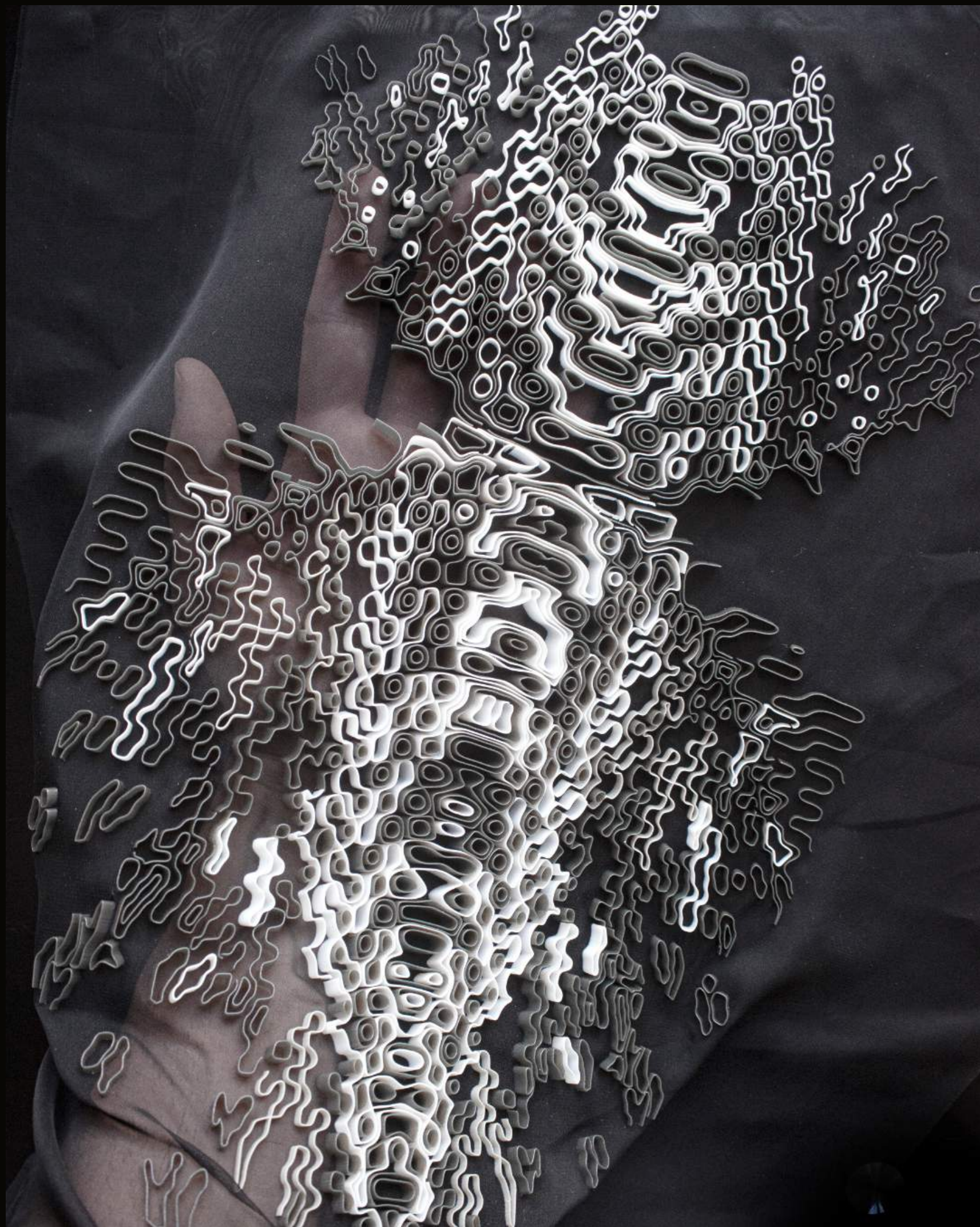
TOILE 2.1



TOILE 3.0







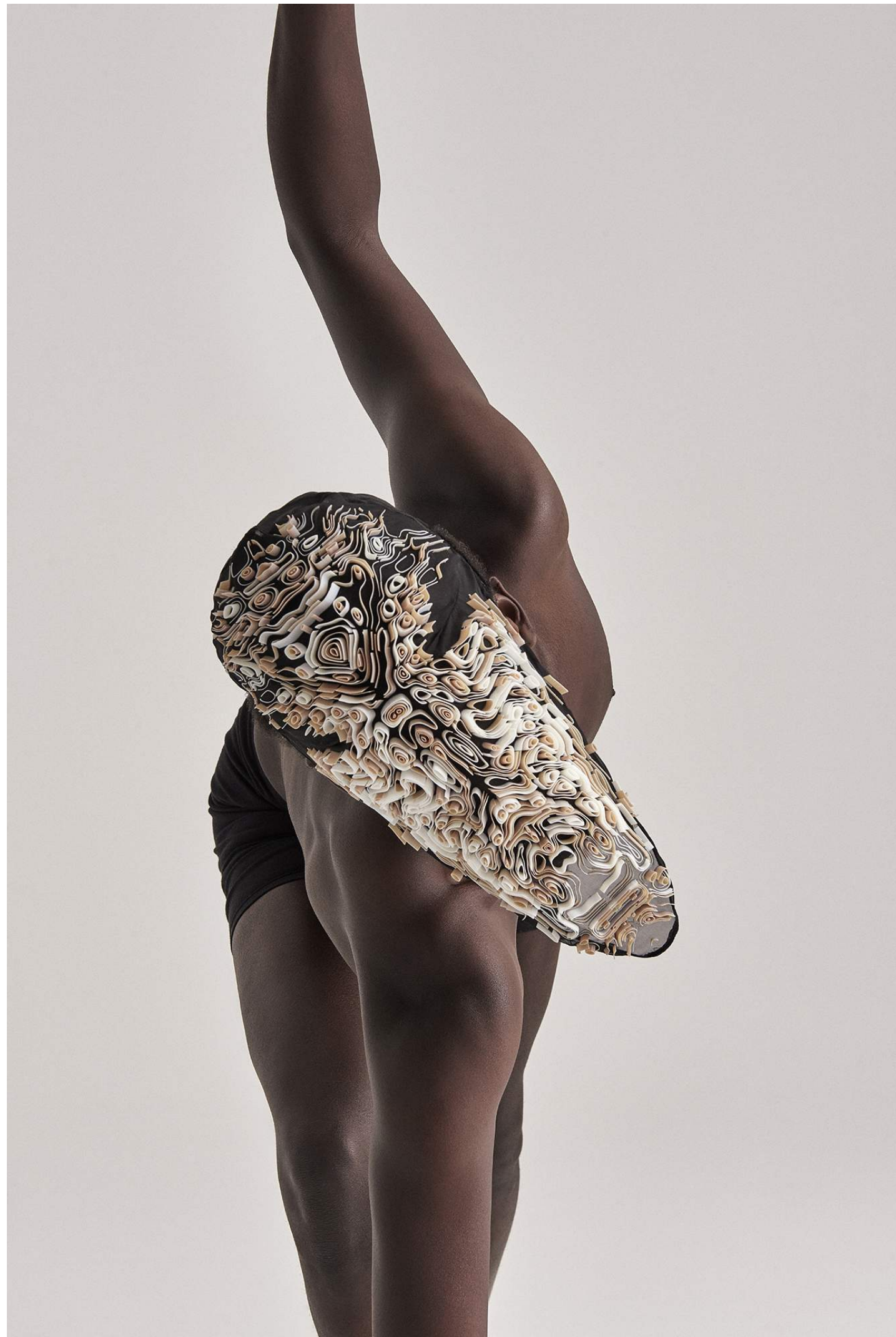
















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