MATERIAL Legacies
Nov 3rd, 2022 — Feb 26th, 2023

Design Lab #13
KUNSTGEWERBEMUSEUM BERLIN

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors/Contributors</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>MATERIAL LEGACIES</td>
<td>CLAUDIA MAREIS</td>
</tr>
<tr>
<td>4</td>
<td>ARTS AND CRAFTS MUSEUMS AS MATERIAL ARCHIVES</td>
<td>CLAUDIA BANZ</td>
</tr>
<tr>
<td>6</td>
<td>RUBBER VIOLENCE</td>
<td>CLAUDIA MAREIS, HELEN PINTO, EMILE DE VISSCHER, AMANDA WINBERG</td>
</tr>
<tr>
<td>8</td>
<td>ARCHITECTURAL YARNS</td>
<td>IVA RÉSETAR, CHRISTIANE SAUER, MAXIE SCHNEIDER, JOSEPHINE SHONE</td>
</tr>
<tr>
<td>10</td>
<td>THE BARK SPHERE</td>
<td>CHARLETT WENIG, JOHANNA HEHEMEYER-CÜRTEN, ROBERT STOCK</td>
</tr>
<tr>
<td>12</td>
<td>TESSELLATED MATERIAL SYSTEMS</td>
<td>MASON DEAN, KAROLA DIERICH, LENNART EIGEN, JOHN NYAKATURA, FELIX RASEHORN</td>
</tr>
<tr>
<td>14</td>
<td>INFAUNA</td>
<td>A BIOMATERIAL CULTURE</td>
</tr>
<tr>
<td>16</td>
<td>VASCULARIZATIONS</td>
<td>EMILE DE VISSCHER</td>
</tr>
<tr>
<td>18</td>
<td>SELF-SHAPING TEXTILES</td>
<td>LORENZO GUIDUCCI AND AGATA KYCIA</td>
</tr>
<tr>
<td>20</td>
<td>ASSEMBLING THE COAST</td>
<td>MICHAELA BÜSSE, ANDREAS KÜHNE, KONSTANTIN MITROKHOV</td>
</tr>
<tr>
<td>22</td>
<td>PARTICIPANTS</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>IMPRINT</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>FLOORPLAN</td>
<td></td>
</tr>
</tbody>
</table>
Anthropogenic climate change has made it clear that, among other things, we need new ways of dealing with materials, that is, a new material culture. How can we make better use of waste and leftover materials? What can we learn from biological processes when considering material processing? What do materials and artifacts teach us about our relationship to the environment or history? Design Lab #13: Material Legacies at Kunstgewerbemuseum Berlin explores these questions by relating experimental approaches to materials research, design, technology, and architecture with traditional crafts and objects from the museum’s collection. The exhibition results from a close collaboration between the museum and design researchers from the Cluster of Excellence “Matters of Activity. Image Space Material” at Humboldt-Universität zu Berlin. In this interdisciplinary network, researchers from more than forty disciplines in the humanities, natural sciences, design, and architecture explore how a new material culture can be fostered by understanding active material structures and properties.

However, the ambition of fostering a new material culture cannot be limited to a biomimetic approach or a technological rationale if it is to address the massive ecological and societal challenges we face today. Rather, there are also entangled societal, political, and historical dimensions of active materiality that need to be explored in order to understand how worlds are imagined, produced, and destroyed alongside materials and material politics. In this context, materials are the starting point and driver of complex historical developments and dead ends, including bio- and geopolitical struggles and unexpected resistances. Last but not least, materials also tell of futures: not only of futures lost to extraction and consumption, but perhaps of alternative futures that are more sustainable, diverse, careful, and solidary than what we experience and expect today, through a different understanding of materials, their potentials, and legacies.

Material Legacies is, thus, above all, a programmatic perspective that asks by example about the historical, present, and future conditions under which materiality unfolds. By engaging with a range of different materials, artifacts, and techniques, the exhibition encompasses both the problematization of unsustainable pasts and presents and the imagining of speculative material futures. Starting from materials such as sand, water, rubber, seashells, or plant-fibers, each exhibit explores its sociocultural, economic, and political context to unravel the multiple interrelationships that arise from and with material potentials and legacies.

For materials and materiality are not simply given by “nature”, but instead they are always in the process of de/f_ining, transforming, and becoming: Through various techniques of categorization, scaling, valorization, extraction, and design, materials might become either natural resources, raw materials, industrial commodities, cultural symbols, or useless waste. To take the example of materials-as-resources: “Resources come to exist both through technical invention and physical production, as well as through acts of epistemological and ontological creativity”. Anthropologists Tanya Richardson and Gisa Weszkalnys go on to explain: “Resource making has been conceived as a process of turning nature into culture par excellence.” However, it would be misleading to conceive of materials merely as passive entities that can be cultivated, shaped, exploited, and controlled at will. Instead, they possess vibrant qualities, that is, material activity, stubbornness, and resistance that make them uncontrollable agents of the scientific, economic, and sociopolitical structures and processes in which they are involved. It is thus a
MATERIAL LEGACIES

MATTER OF “THE USES AND POSSIBILITIES THAT MATTER AFFORDS TO US – WHAT MAY BE REFERRED TO AS MATERIAL AGENT OR POTENTIALITY”.  

Moreover, as Anna Tsing has argued, materials create resistance and friction by both enabling and resisting mechanisms of their control and exploitation: “Consider rubber. Coerced out of indigenous Americans, rubber was stolen and planted around the world by peasants and plantations, mimicked and displaced by chemists and fashioned with or without unions into tires and, eventually, marketed for the latest craze in sports utility vehicles. [...] Industrial rubber is made possible by the savagery of European conquest, the competitive passions of colonial botany, the resistance strategies of peasants, the confusion of war and technology, the struggle over industrial goals and hierarchies, and much more that would not be evident from a teleology of industrial progress. It is these vicissitudes that I am calling friction. Friction makes global connection powerful and effective. Meanwhile, without even trying, friction gets in the way of the smooth operation of global power. Difference can disrupt, causing everyday malfunctions as well as unexpected cataclysms. Friction refuses the lie that global power operates as a well-oiled machine.”

In this sense, materials are never either natural or artificial. Rather, materiality emerges in the fusion of nature and culture dichotomies, past memories, and speculative futures. Accordingly, the material legacies that this exhibition attempts to tell are stories of inextricable entanglements and traces of potentiality and friction.

ARTS AND CRAFTS MUSEUMS AS MATERIAL ARCHIVES
CLAUDIA BANZ I CURATOR OF DESIGN AT KUNSTGEWERBEMUSEUM BERLIN

Materials innovation has a strong potential for transforming society and the environment, both positively and negatively, if researchers consistently push the boundaries of what is feasible. Materials research can enable new generations of products, open new living environments and thus bring about unique social, economic, ecological, and cultural interactions.

The splendor and wealth displayed by the “Wunderkammern” (cabinets of curiosities) of the Renaissance and the Baroque ages show how closely power, politics, and status are related to the representation of materials. Materials often stemmed (and still do) from foreign and predominantly colonial contexts that processed extracted goods into jewelry and other luxury objects. Opened in 1724, the Green Vault in Dresden, the treasury of Augustus the Strong, is one of the most prominent examples. Its eight rooms are named after materials such as the Amber Room, Ivory Room, White Silver Room, etc., and were instantly open to the public.

Founded in 1867, Kunstgewerbemuseum Berlin (Berlin Museum of Decorative Arts) is Germany’s
oldest of its kind. It received collections from the Royal Chamber of Art, founded in 1603, whose holdings were distributed to the Berlin museums in 1875. These once “royal” objects included “exotic” materials such as coral, mother-of-pearl, ostrich eggs, ivory, or the nautilus shell and were intermingled with other objects acquired from private collections. However, the most important source of new acquisitions were the world exhibitions which presented, among many other things, handicrafts and designs from contemporary production. In this period, the focus of the collection shifted to materials that were economically relevant in the respective local industries, such as metal, wood, glass, ceramics, and textiles.

Over the past 150 years and due to their specific collection spectrum, decorative arts museums have grown into complex material archives. Their particular strategy of ordering, showing, and representing continues to be closely linked to the founding idea of the collection. The classification of objects by genre, geographical origin, and material intends to build a cross-epochal collection of models with well-designed products that include times of industrialization, the beginning of mass production, and the loss of quality of products.

Arts and crafts museums have always been viewed as alternative places of learning. A school of arts and crafts was often located under the same roof as these museums to promote active exchange between students and museum colleagues, facilitating access to the exhibits in the collection. The archive system known as “role model folders” was a forerunner of contemporary image databases that helped expand the museum’s capabilities as a learning institution.

Through their collections, arts and crafts museums represent a colossal knowledge repository concerning materials, handicraft techniques, and tools. These abundant and centralized resources can thus offer enormous potential for designers, artists, and material researchers. Understandably, in times of global crises, the focus needs to be not only on developing more sustainable design practices and the rediscovery and revitalization of historical approaches but also concerns the renaissance of the haptic, the sensual quality of the tangible in the digital age.

It is precisely at this interface that our Design Labs are located. Design Lab is conceived as a series of collaborative projects that materialize in research, discourse, exhibition, and mediation formats. It invites outside actors to engage with the museum’s complex collection to tap into their artistic research and connect, update and expand the archive as a repository of knowledge. After all, materials will continue to structure our society in political, economic, ecological, social, and cultural terms and the museum will continue to inspire new generations of thinkers and makers.
Rubber Violence consists of several pieces of raw rubber and an audio track that takes us on a critical investigation into the violent history of rubber and design.

The chunks of rubber are compact, bouncy and emit a heavy odor. With their ambiguous shape, almost flesh-like texture and gory colour, they invite the viewer to think about corporeality, force, and violence embedded in the history of rubber. The concentrated work of bodies and people can be sensed in its compressed appearance, while the separated parcels, in their industrial shape, recalls the dehistoricization of materials within Western colonial and industrial practices.

To the sight of the rubber chunks, the audio track provides a historical context. A voice describes how the rubber industry, during the 19th century, changed everything from Western consumption to transportation systems, while recalling the industry’s colonial and reductive view of the Meso- and South American peoples and their longstanding knowledge of working with rubber.

The audio takes us back to the 1851’s Great Exhibition in London, where vulcanized rubber was prominently displayed. Meant to function like a “lesson in taste”, the Exhibition showed raw materials next to agricultural machinery, technical instruments, porcelain, textiles, stuffed animals, weaponry and many more things. With this history in mind, the audio evokes a reflection on how indigenous knowledge has been expropriated and commodified for the purposes of Western consumer culture in the past, and on how this violence act extends up to the present.

The voice takes us further into its investigation by calling into question some deep-seated problems in Design history. A connection between the aim of the World Fairs and the design disciplines’ complicity in the rise of material cultures and its modes of subjectivity is suggested. Making two examples of places where commercial interests and cultural standardization intersect, the World Fair and the discipline of Design are identified as two equally symbolic as concretely influential instances of where new orders of global capitalism and its production of knowledge has been developed and achieved.

By the time of the Great Exhibition in London, rubber was still cultivated by harvesting wild rubber trees in the Amazon basin. It became attractive for manufacturers, designers and retailers due to its material properties, such as its elasticity and impermeability to water. However, rubber showed itself hard to handle for the European manufacturers. While the idea of the rubber as an empty, abstract and passive material, stripped of qualities, histories and connections to particular territories, people and knowledges, gave rise to the expectations that the material could easily be handled and shaped in any desired fashion, the rubber was in fact hard to control and responded actively to its immediate surrounding.

Due to its active thermoplastic properties, the rubber changes consistency depending on the external temperature. As the European manufacturers lacked this knowledge, the rubber often behaved in unpleasant and uncontrollable ways: it became sticky or leaking, started to stink or rot in the warehouses. The voice suggests that we could learn something from this story about how dehistoricized “raw” materials and “naturalized” resources, such as rubber, has been utilized within the prospects of colonialism, slavery and their racist legitimization.

The rubber that was ordered for the exhibition, Material Legacies, was produced and distributed by the global trading company Corrie MacColl, a subsidiary of Deutsche Bank. While Corrie MacColl promises a sustainable and socially responsible mode of production at their plantations in Cameroon and Malaysia, we must not forget that the company is entangled in a larger capitalist system, responsible for violent orders of power and a violent logic of extractivism and consumption, intact since colonial times.
Nabukonya Allen, aka Njola, is a Ugandan multimedia artist, founder of NJOLA Impressions and co-founder of Compose Collection. She works with recycled industrial waste and advocates community-based design practices. Njola’s design process begins with the collecting of discarded tires, plastic bags and sandals in places where poor waste management has led to toxic and, at times, dangerous living conditions, primarily in the slums of Kampala. Using the skills she learned from her mother, who worked as a traditional palm mat weaver, she finds beauty and potential in the under-valued and misunderstood. In this way, waste is given new life through the method of upcycling.

To make the shoes, a piece of a tire’s profile has been cut off using a knife and joined with the repurposed soles of old flip flops. She describes that, faced with the initial problem of not being able to afford real leather while at the same time noticing the abundance of discarded material in the slum area near her family home, she naturally turned to different practices of upcycling.
“As an alternative form of design and making that is distinctly modern in the field of textile art, textiles are explored here as a path of environmental regeneration and repair within conflicting legacies of modernism in architecture.”

Architectural Yarns negotiate between the scales of textiles and architecture and the different timescales and life cycles of building elements. As a design intervention into the existing built space, in contrast to solid construction, they are less concerned with permanence and more with adaptation and flexibility of use.

Yarns show the possibility of building differently – with thermally active phase change materials or with plant fibers. Various textile techniques are explored in this experiment to create soft, provisional architectures. Through the tactile practice of making, yarns are formed into a structure with many possible arrangements, only to be unraveled again later. Such bodily engagement with the textiles conveys a “tangible thinking,” similar to how Jessica Güsken pictures handcraft techniques of tapestries and carpets, particularly the concept and practice of knotting.¹ This technique, Güsken notes, does not merely provide examples. Instead, it serves as a model of “mixed layers and intermingled bodies,” in the case of our experiments – a sensual mode of interconnecting plants, things, bodies, and environments, which find their contact surface in fiber, yarn, and the built fabric.

HOW DID THE OBJECT FROM KUNSTGEWERBEMUSEUM COME TO INTEREST YOU?
Tapestry “Exotica III” by Rizzi Jacobi was part of international exhibition “Textile Objects” (Textile Objekte) held at Kunstgewerbemuseum in 1975, which radically questioned historical textile techniques, especially their decorative and gendered aspects, defining an open and critical field of works between sculpture, architecture and textile art. As designers/researchers, we are interested in the turning point when a generation of craftswomen broke with artistic conventions to explore tapestry as a medium for constructing (material) histories and experimenting with its sensorial, performative, and spatial dimensions.

IN WHAT WAY DO YOU SEE CONGENIALITY, SIMILARITIES, CONTINUITIES, OR DISCONTINUITIES BETWEEN THIS OBJECT AND YOUR PROJECT?
Like Architectural Yarns, Jacobi’s work moves in the ambiguous space between plane and three-dimensional space as well as between the scale of textile and architecture. By weaving together unusual combinations of materials – a “mixture” of wool, silk, sisal, goat, and horse hair – “Exotica III” suggests how plant, animal, and human-made materials find their contact surface and coexist in textile environments.

IS IT POSSIBLE TO SPEAK OF MATERIAL CONTINUITIES BETWEEN THE OBJECT AND YOUR PROJECT, THAT IS, OF A HISTORICAL DEVELOPMENT OF OR IN THE MATERIAL YOUR OBJECT CONCERNS? IF YES, HOW COULD THIS DEVELOPMENT OF THE MATERIAL BE DESCRIBED?
Architectural Yarns explores the legacies of different “mixtures” – that is composites, overlaps, intermingled bodies – by making fibrous structures from biological materials. Some resemble industrial plants from Jacobi’s sculpture, such as flax or linen, which are being rediscovered as a building material in today’s ecological crisis. Other structures further emphasize the temporality of textiles and their climate-modulating qualities, using phase change materials – beeswax and plant fats – to create temporary thermal boundaries in the exhibition space. Jacobi’s work emerged during the period of Modernism and International Style in architecture, known for its standardized materials and indoor climates. This was a moment when textiles productively challenged and contrasted architectural materiality. Tapestries of architectural scale, such as Le Corbusier’s “Le Mural Nomade” (Muralnomad), clothed and enveloped interiors temporarily in dialogue with often representative, institutional architectures they inhabited. As an alternative form of design and making that is distinctly modern in the field of textile art, textiles are explored here as a path of environmental regeneration and repair within conflicting legacies of modernism in architecture.

Being one of the European pioneers of the 1960’s New Tapestry Movement, Rizzi Jacob played a key role for the international flourishing of thread-based material work in expansive, gestural, and impulsive installations.
In her relief-like tapestries, Jacobi explores the sculptural possibilities of filament: a yarn-like fiber structure usually made out of animal or plant material, by three-dimensionally drawings and the usage of fiber cables and balled coiled threads for effects of light and shadow. With their “shaggy” mass and monumental size, often composed out of goat and camel hair or sheep’s wool, Jacobi’s works convey a raw physicality reminiscent of her Transylvanian homeland mountains. They suggest reflections on nature, archaic realities and on the fundamental qualities of conscious and unconscious experiences.

Rizzi Jacobi.
Wool, silk, goat and horse hair, sisal in tapestry and mixed techniques.
Provenance: Purchased from the artist. Inv. no.: 1976, 37
MATERIAL LEGACIES

Bark, the boundary between trees and their environment, comprises about 10–20% of their total volume. These layers form the interface between the environment, the vital cambium, and wood. What does this protection feel like? Can bark take on protective functions for humans as well? These questions arise when peeling bark off a tree for the first time. The bark sphere installation aims to allow one or more people to stand inside and experience the sensation of being surrounded by the material. The use of tree bark with a woven structure enables the use of the protective function of the bark while also controlling the object’s stability through the use of different weaving patterns. The inherently complex round shape of the sphere is meant to explore the limits of formability and leave room for the viewer’s interpretation.

THE BARK SPHERE - THE EXPLORATION OF A FORGOTTEN MATERIAL FOR THE DEVELOPMENT OF FUTURE DESIGN APPLICATIONS

JOHANNA HEHEMEYER-CÜR TEN, ROBERT STOCK, CHARLETT WENIG

The bark sphere is made out of mirror pine bark. The bark is peeled in the Brandenburg forest and flexibilised and woven at the MPI. The image shows the final sphere photographed in the area where the used pine bark was peeled.

Inside the bark sphere. The inner side of bark is a smooth surface which looks like a mix between wood and leather. The smell inside the sphere is reminiscent of forest.
HOW DID THE OBJECT FROM KUNSTGEWERBEMUSEUM COME TO INTEREST YOU?
Tree bark is an almost forgotten material. While wood is a prominent example of a biomaterial that has been used since ancient times and is well established in today’s applications and research, the bark is a by-product and is often considered as waste. The canoe model is the only object made of bark we found in the collection of Kunstgewerbe-museum. However, it is an object often to be found in collections of ethnographic museums in Europe, whose colonial legacies are currently widely discussed.

IN WHAT WAY DO YOU SEE CONGENIALITY, SIMILARITIES, CONTINUITIES, OR DISCONTINUITIES BETWEEN THIS OBJECT AND YOUR PROJECT?
Tree bark is often perceived in connection with the tree. Removing the bark and transforming it into a different shape creates a new way of looking at this material. The canoe model is probably inspired by a large birch bark canoe as built by first nations in the territory of Canada. The use of tree bark for canoes is rather unusual from a Western perspective. The use of bark for boats or, as in our case, for the production of a walk-in installation, makes use of the size of bark and transforms it into new forms and applications. Additionally, bark is a material that can grow several meters high. The transformation from a protective layer of the tree to a canoe takes advantage of the material’s length.

IS IT POSSIBLE TO SPEAK OF MATERIAL CONTINUITIES BETWEEN THE OBJECT AND YOUR PROJECT, THAT IS, OF A HISTORICAL DEVELOPMENT OF OR IN THE MATERIAL YOUR OBJECT CONCERNS? IF YES, HOW COULD THIS DEVELOPMENT OF THE MATERIAL BE DESCRIBED?
The use of bark has significantly lessened through the industrialization process. To build a tree bark canoe, the bark was peeled off in its entirety. In today’s timber production, tree bark is mainly shredded and used to produce extractives or as bark mulch. Large amounts of the material are burnt in sawmills. With the use of long woven surfaces for the bark sphere, the installation reconnects with the original
In nature, tessellated morphologies appear convergently across species and on different scales. These Tessellated Material Systems (TMS) are evolutionarily successful because they unify diverse properties in one functional system. Whereas the hard tiles act as stiffening building blocks, the joints that connect them function as a soft carrier membrane allowing for flexibility. To understand the structural and functional complexity of natural tessellations, our TMS project team is comprised of researchers from morphology, engineering, material science, and design commonly interested in relating form to function. In order to create biologically inspired design solutions, design research, parametric design and experimental prototyping were applied.

The exhibition comprises two parts. PART ONE consists of three case studies conducted by students of weißensee kunsthochschule berlin, as part of Matters of Activity Design Research Studio – Designing Matter 2 “From Tile to Tessellation”. The studies are based on natural specimens, including shark skin, mosquito eggs and armadillo armor, all of which have been sourced from the Tessellation Archive¹. The exhibits show material samples and 3D printed models next to the biological samples from the Zoological collection of Humboldt-Universität zu Berlin and Museum für Naturkunde Berlin. PART TWO is an in-depth case study of tessellation growth based on a study of growth of boxfish, where 3D printed material samples will be exhibited in relation to natural specimens. The material selections are accompanied by a video work and an interactive installation that makes the Tessellation Archive accessible. Fine art prints show macro images of both natural and artificial tessellations.

¹https://tessellated-materials.mpikg.mpg.de
How did the object from Kunstgewerbemuseum come to interest you? Nature’s patterns have always inspired design and engineering; principles such as tiling have found application as building strategies and decoration from antiquity onwards. Tiling evolved as a building strategy to cover and decorate walls and curved surfaces. We specifically looked for objects in the collection that employ tiling techniques on curved and double-curved surfaces. The handcrafted nacre-decorated carafe and tray explicitly demonstrate what fascinates us when dealing with tessellated surfaces. These objects are crafted from an isometric material, probably metal, and later processed with the nacre piece. The way the nacre is arranged to cover and fit the host surface depends on various parameters: The size, shape, and thickness of each nacre configure, the curvature of the host surface and the technique of assembly. The resulting pattern leads to the comprehensibility of the object’s geometry for both viewer and maker, resulting in an aesthetic quality that elevates it.
This project is a space for collaborative experimentation that allows exploring new morphological, sensory, and narrative possibilities around biomaterials that use sea shells (Mytilus chilensis) as the main resource. The ongoing exploration of INFAUNA proposes a DIY device that yields a series of morphological pieces created from a system of tensions. These tensions contort bioceramic shells into new shapes, creating curves and counter curves, reproducing textures while generating boundaries and finishes of new sculptural objects. The resulting geometries are a reflection of the experimentation with different variables, which include: the biomaterial recipe (granulometry and density), the denier of the textile (elasticity and texture resolution), the frame (size and degree of tension of the assembly of the fabric) and the tensioning buttons (button geometry and the force/weight of the tension). The explorations under this matrix result in unique and irreproducible pieces that give a new value to domestic and industrial waste. INFAUNA is a collaborative project between LABVA (Laboratorio de Biomateriales de Valdivia), the designer and ceramist Heidi Jalkh, and architect Nicolás Hernandez. Together, they executed various analog and digital manufacturing exercises to open replication possibilities at different technological levels.
HOW DID THE OBJECT FROM KUNSTGEWERBEMUSEUM COME TO INTEREST YOU?

HEIDI JAKUL LABVA and I started a self-commissioned collaborative work in 2021 that resulted in an eggshell biocalcification project called Ovo-filia. Dr. Lorenzo Guiducci became aware of our project while we worked together in Berlin. When he visited Kunstgewerbemuseum he saw the nautilus cup which sparked a connection to him due to the base material and the biocalcification process. So at the time, we started thinking about what other materials we could use that were more closely related to the nautilus cup. We were able to replace the main ingredient given that it provided the calcium calcinate needed to create a similar biocalcification process. With that in mind, it was important to look for a species/resource that could be found in abundance and used in a domestic setting, hence _Mytilus chilensis_, a species of mussel native to the coasts of Chile, Argentina, and Uruguay.

DR. LORENZO GUIDUCCI INFAUNA’s material biography is that of mineralized biogenic materials (shells). In the museum’s nautilus series, noble metals and the finest techniques are used to “elevate” a bare, otherwise seemingly worthless shell. They represent an old narrative of abundance: of materials (silver), of time (taken to fabricate the fine cups), of means (through patronage). With INFAUA, on the other hand, a seemingly worthless object like a seashell becomes valuable thanks to the biomaterial recipe developed by LABVA. With today’s raw material scarcity as a boundary condition, re- and upcycling becomes an urgent matter.

IN WHAT WAY DO YOU SEE CONGENIALITY, SIMILARITIES, CONTINUITIES, OR DISCONTINUITIES BETWEEN THIS OBJECT AND YOUR PROJECT?

On congeniality: Both objects are one of a kind, in our project each piece is also handmade. The shape is given by the tool in relationship with accessories and parameters; any variation of these elements yields different and unique shapes. This craft process also embeds value in the base material and the final piece.

On continuities: According to Kunstgewerbemuseum, “Natural materials with unique qualities were transformed by human artifice into prestigious objects.” We can see that this is true in both cases through the use of seashells as the main element (although from different species). They are objects of contemplation, and the functional use is hardly important. The precious materials and striking designs suggest that the function of such goblets was purely feigned (simulation), and that these precious objects were “never used for drinking”, as Kunstgewerbemuseum also describes. In the INFAUNA project, the objects are designed as tiles to create a three-dimensional decorative surface.

On discontinuities: In the museum’s nautilus, the main material is the natural form consisting of an identifiable shell. INFAUNA is a biomaterial composed of many shells whose source can only be recognized up close. Otherwise, it can be mistaken for other types of material (such as ceramic or cement). The nautilus became a scarce and endangered species. Its value lies in its shape and rarity. It was brought from remote locations to be crafted and used in Europe. In contrast, _Mytilus chilensis_ is found in abundance, on the coasts of Chile and Argentina, allowing it to be locally sourced, eaten, and then repurposed as a material. The nautilus is a standalone element. INFAUNA, on the other hand, is a system: the material, the tool, the piece, and the spatial arrangement of multiple pieces. The nautilus was and still is luxurious, exotic and a symbol of opulence as well as status. In INFAUNA, the material comes from the ordinary, the austere, and tradition as it is a cultural symbol of southern Chilean gastronomy. The nautilus shell is crafted with metallic ornaments that add value to the object, while INFAUNA tiles are made with just the shell composite. Therefore, our project shifts “value” to the tool that shapes the material. The INFAUNA tool is created through digital fabrication. When looking at the nautilus, the focus is centered on its external properties i.e. the exposed nacre (mother pearl). Whereas in our project, the focus lies on internal properties of the shell, and its ability to become recalcified.

Corresponding object from the collection

The figurative decor of the goblet recalls the genesis of the nautilus shell. Its shaft features a female fish and the goblet is crowned by a dolphin-riding spirit. During the 16th and 17th century in Europe, goblets containing nautilus shells were one among the most treasured objects collectors desired to add to their cabinets of curiosities. They can be considered to reflect the great interest for the, at the time, new and exciting materials from distant lands and they usually depict some artistic appropriation of nature by man. The nautilus, a close relative to the octopus, was and remains today an interesting object for most natural history collections, as it is one of a few living fossils around us, dating back many millions of years. Today, the nautilus still makes a prestigious souvenir and is considered to be endangered due to the continued passion for collecting and possessing it.

Nautilus Goblet with Insects
(Oncom title: Nautilusgoblet mit Insekten)
Gdansk and Amsterdam, possibly Jean Bellicotin.
Nautilus shell (nautilus pompilius) engraved, silver gilt.
Second half of the 17th century.
Provenance: Acquired 1835 from the collector F.P. Nagler.
Inv. no.: K 3465
Vascular structures are paradigmatic examples of the biological realm. Organs, corals, or mycelium all exhibit complex tubular geometries which optimize exchanges and provide room for healing, evolution and activity. Although slow to grow, these systems are extremely efficient and rely on little energy compared to mechanical or electrical alternatives.

Vascularizations explores different methods to generate vascular structures in biocompatible materials. It sparked from the scientific work of Igor Sauer, surgeon and Head of the Experimental Surgery Lab at Charité Hospital, and Marie Weinhart, biochemist at Freie Universität Berlin, who collaborate to find innovative ways of producing artificial organs with hopes to alleviate donation scarcity. Extending this research in oncology and biochemistry to design and architecture. The project investigates spontaneous tubular material formations.

One experimental setup developed during this research relies on a surprising natural phenomenon: fulgurites. When lightning hits a sandy ground, the sand melts in specific tubular patterns. This principle, known as electrical treeing, has been reproduced at much smaller scales in several polymers. The samples are then exposed to an electron beam with high velocity, trapping electrons in the insulative material which are then released by hitting a nail on the sample. The electrons escape instantly, vaporizing the polymer in the shortest path possible and creating an optimized dendritic network, similar to the matrices of human organs.

“As it turns out, the process at stake in my work is closer to growth than shrinkage, and if there is one typical dendritic structure generated by growth, it is the coral.”
IN WHAT WAY DO YOU SEE CONGENIALITY, SIMILARITIES, CONTINUITIES OR DISCONTINUITIES BETWEEN THIS OBJECT AND YOUR PROJECT?

Presenting a coral in relation to my work made sense to me. First, because, fundamentally, corals are architectures for microorganisms. In the same way as vascular networks, corals are composed of complex tubular structures, which help optimize exchanges with their environment and allow microorganisms to populate and interact. Furthermore, I was interested in the object’s provenance, as it is part of “Wunderkammern”, the cabinet of curiosity. Cabinets of curiosity combine scientific and theatrical aspects, precede modern disciplinary divisions, and thus contribute to making natural, artificial, craft, scientific, and playful processes commensurable. My work links technical and scientific dimensions with aesthetic, symbolic, and political considerations. Furthermore, it associates different design regimes made graspable through exhibition and performance. Thus, my work is intrinsically related to the tradition of “science de salon” or cabinets of curiosity.

IS IT POSSIBLE TO SPEAK OF MATERIAL CONTINUITIES BETWEEN THE OBJECT AND YOUR PROJECT, THAT IS, OF A HISTORICAL DEVELOPMENT OF OR IN THE MATERIAL YOUR OBJECT CONCERNS? IF YES, HOW COULD THIS DEVELOPMENT OF THE MATERIAL BE DESCRIBED?

The materials are obviously very different, and I don’t believe can be linked. However, an interesting question raised by this association concerns bio-inspiration and its legacy. Coral, like the nautilus shell, has been one of the most powerful natural inspirations when considering the “intelligence of nature”. You can also find bio-inspiration extremely present in the history of design and architecture. In a way, Matters of Activity follows this tradition as well. History tells us that bio-inspiration has often been conducted in a formal, non-processual manner. In the context of the exhibition, there is undoubtedly a link made between biology and technology, but this link is based on self-generation processes of forms by the potential energies stored in matter, and not by form copies. The topographical optimization, found in coral as well as in the structure of organs, is due to an internal process rather than to an aesthetic reconstruction. I look forward to discussing the evolution of the concept of bio-inspiration, as well as its limits and dangers in scheduled discussions and events.

ARE THERE OTHER TYPES OF LEGACIES BETWEEN THIS OBJECT AND YOUR PROJECT? IF SO, HOW WOULD YOU DESCRIBE THEM?

In the work I present, I consider myself as a complete amateur. I have had the chance to collaborate with surgeons, physicists, nuclear engineers, and biochemists. Although I tried to understand what they do, it was quite impossible for me to access their scientific knowledge. So, I acted as an amateur, as a go-between to create dialogues. I tried to make objects, discoveries, and materials travel from one discipline, one laboratory, to another. In addition to the coral and my vascular networks generated by electric discharge, the amateur sculpture by one of the surgeons of the Laboratory of Experimental Surgery at Charité Hospital will be presented. Initially, this researcher started to cast resins in his specimens only for himself. Gradually, he developed a technique and produced more and more of them in his spare time. Through encouragement by his colleagues, he has come to display his casts in the display cases found in the laboratory’s corridors. It is an honor to invite him to present his work in a museum. Overall, I see a strong connection between the amateur designer/researcher, the amateur sculptor/surgeon, and the curiosity cabinet of the amateur scientist/collector.

Corals are both natural and artificial. As such, their material properties reflect the two overarching categories of every Baroque cabinet of curiosity: “Naturalia” and “Artificilia”. Their ability to transform from transient to permanent together with their blood-red color also charged them with special meaning within the context of Christian symbolism.

Today, coral jewelry can still be seen worn, often under the assumption that it protects against the “evil eye”. However, the existence of over 75% of the world’s coral reefs is now threatened due to the effects of environmental pollution.

Knife from a Set of Coral Cutlery
[Germ. title: Messer aus einem Prunkbesteck.]
Metal, coral (Corallium rubrum).
17th century.
Inv. no.: MM924
Our project focuses on creating meter-scale surface structures by transforming 2D surfaces into 3D wrinkled structures. Inspired by morphogenetic processes in plant leaves, we propose using 3D printing on pre-stretched textiles as an alternative, material-based form-finding technique to obtain meter-scale surface structures for architectural elements such as facade panels and shading elements. In particular, we explore the design space of non-intersecting lines that self-organize into visually complex macroscopic patterns and surface textures upon fabric tension relaxation. In their morphed state, these textiles exhibit various optical and elastic properties promoting numerous visual and tactile sensations for the spectator.

The large format prints featured in Design Lab #13: Material Legacies are both an opportunity to establish a dialogue with the spectator while constituting "fieldwork" experiments to test the effect of additional external conditions (i.e., the shaping impact of residual tensioning due to the fabric weight). Similarly, the dress by Madame Grès stages a dialogue between pure fabric and external conditions, represented by the female body. A new perception of the female body and femininity is achieved by stripping the dress of all traditional tailoring solutions and customs. Remarkably, in both our and Madame Grés' work, what seems "simple" conceals a much more complex phenomenon (the self-shaping of the textile as active matter) and deeper consideration of all aspects at play (light, sound, gravity, space, body, customs).
“We want to put our work (...) to create space for discussions on textile materiality and, specifically, the future role of textiles in fashion, architecture, and technology.”

HOW DID THE OBJECT FROM KUNSTGIEßEBERGMUSEUM COME TO INTEREST YOU?
Very simply, the fact that the dress is made of fabric – the same material we work with. The dress displays a unique use of textile (up to that time at least): The material itself defines the aesthetic attributes of the dress. The textile shine, the fine-scale folds, are combined with simple shapes that envelop the female form. The shape is not imposed from the outside (with crinoline for instance), nor is there adherence to traditional custom. To be honest, we do not consider ourselves fashion experts. Still, we can see a clear split between this dress and the earlier fashion styles, even if from a few years before – this dress is a clear anti-conformist statement. This ability to create shape with the materiality of the textile, rather than imposing it, is what connects our research and physical prototypes. In our prototypes, we integrate stiff plastic materials into the fabric: in this way, we augment the textile and leverage its elastic properties to obtain 3D shaping without sewing or cutting. This stiff plastic is integral to the textile – unlike the crinoline used in dresses in the early 1900s, which create a prefixed shape and serve as a scaffold for the textile to be deployed on. The stiff plastic beams in our prototypes deform under the action of the stretched textile: a wavy, wrinkled, three-dimensional shape emerges. Our interests lie in understanding such spontaneous shape generation, controlling, and envisioning applications in the architectural domain. We see our prototypes as textile composites (consisting of the fabric and the deposited thermoplastic material), which blend together and become one.

IN WHAT WAY DO YOU SEE CONGENIALITY, SIMILARITIES, CONTINUITIES, OR DISCONTINUITIES BETWEEN THIS OBJECT AND YOUR PROJECT?
The 3D printed textile surfaces we display in the exhibition should work as a vision for the role of textiles in architecture – as soft, permeable and reconfigurable elements. This is quite a departure from the usage of stable materials such as steel and glass, which are still dominating today. Similar to the way that the dress creates a discontinuity with the past. Attention to how the textile’s material properties (weight, stretch, shine, etc.) create the final shape and appearance inherently relates to the dress. We want to put our work in dialogue with the dress to create space for discussions on textile materiality and, specifically, the future role of textiles in fashion, architecture, and technology. Another aspect that can be mentioned in regards to congeniality is the idea of a shape reacting to its context. In case of the Madame Grès’ dress, it follows the curves of the female form. In the case of our prototypes, the shape of the large-scale textiles depends on spatial parameters such as the force of gravity, the anchor points where it is hung, and its own weight. These aspects work together with the programmed undulations to define the final form. In both cases, the softness and elasticity of the fabric allows it to continuously change: the dress taking different shapes as the person moves, our textile changing shape depending how it is hung and variations in transparency levels depending on the lighting conditions/viewer’s perspective.

IS IT POSSIBLE TO SPEAK OF MATERIAL CONTINUITIES BETWEEN THE OBJECT AND YOUR PROJECT, THAT IS, OF A HISTORICAL DEVELOPMENT OF OR IN THE MATERIAL YOUR OBJECT CONCERNS? IF YES, HOW COULD THIS DEVELOPMENT OF THE MATERIAL BE DESCRIBED?
There is an obvious continuity of the material used – textile – in the dress and our prototypes, although historically speaking, the textiles themselves are quite dissimilar. The dress is made of jersey, and the prototypes are made of Lycra, a 100% synthetic fiber based on polyurethane. Both are knitted fabrics and have a certain sheen. Still, over the centuries, there have been many technical improvements in weaving/loom technology and even chemistry to create new synthetic fibers. We use Lycra mainly for its elasticity as it can be stretched up to 150% and still recover its stretch. In the Madame Grès dress, it seems that jersey has been used mainly for its softness and weight. In fact, a very long textile piece was folded into small and very dense folds at the waist, allowing the skirt to smoothly fall down. I believe that the technological development of textiles and/or fabrication methods have always opened both new fashion trends and specialized applications. Consider the spacesuit of the Apollo missions made with high-tech fabrics or the use of 3D printing on textiles in high couture today: textiles are as ornamental as technical, and this has always been the case, even in antiquity. Another important aspect is the idea of local differentiation in the material, which we try to obtain through the different patterns of the 3D printed filament. This allows for varying levels of stretch in the fabric, thus resulting in different undulations. In the case of the dress, it is done through the special folding. In both cases, the chemical composition stays the same; what changes is the structure.

Madame Grès
Pure white single jersey, viscose-synthetic blend.
Inv. no.: 2003. KR 634a,b.
“Sand is not just a matter that can be found at beaches around the world, but it is fundamental to our infrastructure, the built environment, and digital technologies.”

Assembling the Coast is a sensorial-ethnographic investigation of a coastal replenishment project on the Baltic Sea, close to Ahrenshoop. Erosion and rising sea level lead to coastal retreat and frequent replenishments are used to counteract this process. The film work captures the interplay of man, machine, and matter as they perform the laborious process of transforming the environment. Intimate shots and on-site sound recording convey an immersive experience that contrasts the violence of land reclamation with the unruly behavior of sand, wind, and water. Our aim is to emphasize that the beach is not just there, but it is made and continues to be remade by competing forces, human and other. As such, the work also functions as a reminder that what we conceive of as “nature” is not self-evident. Most of our surroundings are shaped by technologies processes resulting in landscapes that are both natural and constructed. Assembling the Coast is a collaboration by researcher and filmmaker Michaela Büsse, sound artist and composer Andreas Kühne, and visual researcher and cinematographer Konstantin Mitrokhov.
HOW DID THE OBJECT FROM KUNSTGEWERBEMUSEUM COME TO INTEREST YOU?
Phones are often used as reference objects when talking about rare
earths and exploitative practices that are associated with their mining.
What many people don’t know is that sand is the second most used
resource in the world (after water) and an essential ingredient for many
products, one of them being the phone. The microchip that is built into
the smartphone and into many other electronic devices is made of sili-
con and silicon is made of quartz sand. In fact, quartz is the most com-
mon element of sands. We could have also pointed to the concrete
walls of the museum, or its glass windows – two of the other important
use cases of sand. It’s crucial to understand that sand is not just a mat-
ter that can be found at beaches around the world, but it is fundamental
to our infrastructure, the built environment, and digital technologies.

IN WHAT WAY DO YOU SEE CONGENIALITY, SIMILARITIES,
CONTINUITIES, OR DISCONTINUITIES BETWEEN THIS OBJECT
AND YOUR PROJECT?
The video work deals with the laborious and ex-
tractive processes behind the seemingly natural
phenomenon of the beach. It speaks to the fact
that most of our environments are not just “there”
but are made. These processes are often invisible
to us; that is to say, the massive transformation of
matter that takes place on an everyday basis
gets normalized. But these transformations come
at a cost. Be it for the mobile phone, the beach, or
for concrete production – the world is running out
of sand. There are no international regulations in
place for the mining of sand and many sand trans-
ports don’t get registered which incentivizes illicit
practices. This is most acute in places with a high
demand for sand, e.g. Southeast Asia and India,
and less acute here in Europe, where we have less
demand and more sand deposits.

IS IT POSSIBLE TO SPEAK OF MATERIAL CONTINUITIES BETWEEN THE OBJECT AND
YOUR PROJECT, THAT IS, OF A HISTORICAL DEVELOPMENT OF OR IN THE MATERIAL
YOUR OBJECT CONCERNS? IF YES, HOW COULD THIS DEVELOPMENT OF THE MATE-
RIAL BE DESCRIBED?
On a very fundamental level, the video work challenges thinking in di-
chotomies such as natural/artificial and nature/culture. By recognizing
that what we conceive of as nature is contingent on our framework of
thinking, we might be able to transgress dichotomies and become
more open to other conceptions of nature and culture not typically
aligned with our worldview. At the same time, it is important to ac-
knowledge the exploitative practices shaping our everyday life and the
objects and infrastructures surrounding us. We all know about the mass-
sive amounts of plastic and electronic trash produced by cheap labor,
consumed fast and disposed of elsewhere, where they continue to pol-
lute the environment. Sand extraction comes with a lot of violence, too.
It’s mining leads to coastal erosion, the displacement of people, the
degradation of ecosystems and the disappearance of whole island.
It is not enough to think of alternative materials or more sustainable pro-
duction and by doing so shifting the problem elsewhere. By analysing
material legacies, we come to realise that the understanding of nature
in the Global North is always-already extractive and that we have to
radically challenge this position instead of searching for a technologica
fix. The Fairphone is a fitting example: even though it promises sustain-
able production it still relies on Google’s infrastructure.
PARTICIPANTS

Graphic designer VALENTINA ALLAGA was born in Chile. Following her bachelor’s and master’s studies, Allaga formed a multidisciplinary team with professionals in social and communication design and, more generally, the quality of relationships. Allaga is Co-founder and Graphic Designer at LABVA.

Architect MARÍA JOSÉ BESCHAIN received her Master’s Degree in Landscape Architecture from the Catholic University of Chile and a postgraduate certificate in Spatial Analysis (GIS) from the University of Chile. Beschein is a biosiderealist focused on creating and developing native biomaterials through biofabrication. She also teaches in the Department of Biomaterials, Max Planck Institute of Colloids and Interfaces, an autonomous, self-managed, and citizen kitchen/laboratory focused on the research, experimentation, and prototyping of biomaterials.

MICHAELA RÜßLER is a Research Associate at the Institute of Cultural History and Theory at Humboldt-Universität zu Berlin and Associated Investigator at Matters of Activity. She is interested in the interplay of material practices, technologies, and social imaginaries and the way they (re)configure environments. Her dissertation project analyses land recreation projects in Southeast Asia and the Netherlands and bases them on sand’s granular physics develops a performative reading of design.

MASON DEAN is a City University of Hong Kong professor. As a marine biologist, zoologist, and anatomist, Dean studies the skeletal development, structure, and function in amniotes focusing on fishes. He is also a Guest Scientist in the Department of Biomaterials, Max Planck Institute of Colloids and Interfaces (where he previously led a research group) and Associated Investigator at Matters of Activity, collaborating with designers, engineers, and architects to study anatomy.

EMILIE DE VYSCHER is a mechanical engineer, designer and practice-based researcher exploring new manufacturing methods and materials. Not only does he look for alternative technologies, but also to try and unify the political, ecological, aesthetic and symbolic entanglements that these developments could generate and modify. Emilie De Vyscher is currently Research Associate in Material Form Research group at Matters of Activity.

KAROLI DZIECHOCKI holds the Professorship “Material and Code” at weißensee kunsthochschule berlin as part of Matters of Activity. Previously, she served as a Research Associate at the Institute for Computational Design and Construction (ICD) within the Cluster of Excellence “Integrative Computational Design and Construction for Architecture” (IntCDC). Dietzchok’s interdisciplinary research has led to national and international collaborations, including published works and features in international exhibitions, and has won several awards.

LENNART EGEN is a Pre-Doctoral Researcher at Matters of Activity, with a degree in Organismal Biology, Biodiversity, and Evolution from Humboldt-Universität zu Berlin. He is pursuing his Ph.D. at Bernstein Center for Computational Neuroscience in Berlin, exploring novel imaging techniques and 3D digital visualization in Neuroscience. In his current work, he investigates the form-function relationship and architecture of biological systems and how to use them for engineered structures and synthetic materials.

LORENZO GIUBBUCCHI is a biomaterial engineer teaching and conducting research at the intersection of science, design, and architecture. He earned a Ph.D. in Physics (Max Planck Institute for Colloids and Interfaces, University of Potsdam) for his work on the actuation principles of pressurized cellular tissues in plant seed capsules. He is currently co-leading the Material Form Function research group at Matters of Activity, exploring shape-changing materials and artificial material systems such as 3D printed textiles, auxetics and kirigami.

Architect NICOLÁS HERNANDEZ from the University of Chile focuses on housing design. Hernandez is a collaborator at LABVA where he works on 3D modeling, digital fabrication, and photography, allowing him to experiment with biomaterials through shape and form.

HEIDI ALIKU is an experimental designer, trained in industrial design. She is a specialist in logic and technique of form finding and holds the position of Associated Investigator at the Institute for Computational Design and Construction (ICD) within the Cluster of Excellence “Integrative Computational Design and Construction for Architecture” (IntCDC). Dietzchok’s interdisciplinary research has led to national and international collaborations, including published works and features in international exhibitions, and has won several awards.

As a Composer, Sound Artist, and Drummer, ANDREAS KÜHNE creates electroacoustic music, collaborative audiovisual performances, and interactive installations. Aiming to bridge the organic and the digital, he investigates the form-function relationship and 3D digital visualization in Neuroscience. In his current work, he investigates the role of digital teaching formats through experimental prototyping and robotic fabrication at weißensee kunsthochschule berlin.

CLAUDIA MARES is an expert for Design as well as Cultural History and Theory. Since 2021, she has been Professor of Design and History and Theory in the Department of Cultural History and Theory at the Humboldt-Universität zu Berlin. Her research interests include history, theory and methodology of design in the 20th century, knowledge cultures in design, experimental design and media practices, cultural history of creativity, design and material politics. Claudia Mares is Co-Director of Matters of Activity and co-leads the cluster with Horst Bredekamp, Peter Fratzl, and Director Wolfgang Schaffner.

ROBERT STOCK is an architect, designer and lecturer. He teaches at weißensee kunsthochschule berlin. His research focuses on conceptual design and digital construction as an interdisciplinary field of study and practice. His work combines physical and digital prototyping to develop new building techniques and material systems. He has collaborated on various design-build projects and advanced material experiments into structural implementation. As a Pre-Doctoral Researcher and Ph.D. candidate at Matters of Activity and TU Berlin, he investigates adaptive textile hybrid structures and aspects of the functionalization of soft materials in architecture. He teaches in various spatial context and spatial practice courses at weißensee kunsthochschule berlin.

CHRISTIANE SAUER focuses on developing and designing material systems for the architectural context based on textile materials, active materials, and functional surfaces. She has previously held various international teaching positions, including Professor for Material Design at weißensee kunsthochschule berlin since 2017. She worked as a practicing architect internationally and founded Formade, a studio for architecture and materials in Berlin, and co-founded a research facility, DKM - Design Experiment Material at weißensee kunsthochschule berlin. Sauer currently serves as Principal Investigator and board member of Matters of Activity.

CHRISTINE SAUER is an architectural design researcher. Her work combines physical and digital prototyping to develop new building techniques and material systems. She has collaborated on various design-build projects and advanced material experiments into structural implementation. As a Pre-Doctoral Researcher and Ph.D. candidate at Matters of Activity and TU Berlin, she investigates adaptive textile hybrid structures and aspects of the functionalization of soft materials in architecture. She teaches in various spatial context and spatial practice courses at weißensee kunsthochschule berlin.

ALEJANDRO WEISS received his Master’s Degree in Architecture from the Catholic University of Chile. Weiss is a biosiderealist centered on designing and implementing material systems using local biomass. Furthermore, Weiss has served as Co-founder and Director of LABVA.

CHARLETT WENIG is an interdisciplinary material and product designer. She is interested in waste materials with a current focus on banks of different tree species. In the Matters of Activity research group “Adaptive Fibrous Materials” at the Institute of Cultural History and Theory, Wenig explores potential fields of application, creating various design scenarios for bark use while considering her research findings on structure, properties and functions.
ACKNOWLEDGEMENTS OF MOA IN PUBLICATIONS
The curators and participants acknowledge the support of the Cluster of Excellence “Matters of Activity. Image Space Material” funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) under Germany’s Excellence Strategy – EXC 2025 – 390648296.

KUNSTGEWERBEMUSEUM
THE EXHIBITION SERIES “DESIGN LAB”

HUMBOLDT-UNIVERSITÄT ZU BERLIN
CLUSTER OF EXCELLENCE “MATTERS OF ACTIVITY. IMAGE SPACE MATERIAL”

EDITORS
MICHAELA BÜSSE
AMANDA WINBERG
HELEN PINTO

ART DIRECTION AND GRAPHIC DESIGN
DAVID HEUER, WWW.STUDIOEINSBERLIN.DE

FONT
NEXT, OPTIMO.CH
TEMPOS MONO, SAMARA KELLER

PRINT
EUROPRINT MEDIEN, BERLIN

PAPER
ENVIROSMART 80 GR/M²

EDITION
1ST EDITION, 300 COPIES

COVER IMAGE
VASCULARIZATIONS - EMILE DE VISSCHER
1 - RUBBER VIOLENCE Claudia Mareis, Helen Pinto, Emile de Visscher, Amanda Winberg; 2 - ARCHITECTURAL YARNS / hyphen.case Iva Rešetar, Christiane Sauer, Maxie Schneider, Josephine Shone; 3 - THE BARK SPHERE Johanna Hehemeyer-Cürten, Robert Stock, Charlett Wenig; 4 - TESSELLATED MATERIAL SYSTEMS; Mason Dean, Karola Dierichs, Lennart Eigen, John Nyakatura, Felix Rasehorn; 5 - INFAUNA | A Biomaterial Culture; Valentina Aliaga, Maria José Besoain, Nicolas Hernandez, Heidi Jalkh, Alejandro Weiss; 6 - VASCULARIZATIONS; Emile De Visscher; 7 - SELF-SHAPING TEXTILES; Lorenzo Guiducci and Agata Rycia; 8 ASSEMBLING THE COAST Michaela Büss, Andreas Kühne, Konstantin Mitrokhov.