

Shifting Scales

from microbial matter to microbes that matter

Shifting Scales is a journey through art and research, through life, death, and everything in between. It emerges from ongoing investigations on the importance of taking microorganisms on their own terms. It centres on transdisciplinary practices and more-than-human perspectives.

We invite you to attune to a world full of complex, fragile, and surprising connections. Shifting Scales reflects, provokes and engages in relationships with the living world.

Cracks

Drawing inspiration from Kintsugi, the Japanese art of repairing cracks with gold, we explore the spaces in between established categories of knowledge and being. We work with bacteria to heal the fractures in our understanding, to reveal beauty in breakdown and repair. Through biofilm, co-culture, and mycelium, we examine the cracks where fabricated and crafted life emerges, challenging dominant assumptions about what constitutes existence.

Here the cracks are reimagined as a metaphor together with the use of microbial life forms to mend, heal and transform. The repaired fractures open pathways to new questions: 'Can microbes help us reimagine care, coexistence and collaboration? Can we look beyond the surface of things and embrace biofilm, coculture, mycelium, synthetic lifeforms, and all that lives and moves in the cracks?'

The presented lines of research move fluidly between big and small, constantly shifting scales from the microscopic to the planetary. This investigation highlights the abstract, synthetic, and speculative lifeforms that exist in the spaces between established categories. We attune to voices that have been systematically objectified and instrumentalized to materials or tools for human benefits, learning to take seriously the agency of microorganisms as active participants in the ethics of existence. What happens when we take these microorganisms seriously? Where does the biotic end and the abiotic begin? Are there any "natural" environments left that have escaped human fabrication?

New alliances

At the heart of this investigation lies the recognition of new alliances forming between kingdoms—bacteria, fungi, plants, and humans—creating unprecedented networks of relationship and dependency. These transdisciplinary connections reveal how artistic and scientific endeavours diverge in their approaches and applications, as the work navigates diverse institutional landscapes from sterile labs of academia to the charged spaces of nuclear power plants.

Results

Unlike traditional scientific endeavours focused on applications and definitive outcomes, this artistic investigation privileges process over product. Here, failures become doorways to new reflections and results are found to be the processes themselves, with a focus centering more-than-human perspectives. The journey itself becomes the destination, embracing the messy, uncertain terrain between life and death, between human and more-than-human worlds.

Visitors are encouraged to reflect on the ethics, aesthetics, and systems that shape our understanding of life in its many forms. You are invited to step in, slow down, and reflect. The world is not fixed. It is in progress—always in transformation.

This exhibition aims to contribute to ongoing reflections in bioart and artistic research and features the following projects:

- Bactohealing
- Koelleven
- Mycelium as alternative for paper
- Genetically Modified Art Organisms
- Photovoltarium.

The projects and the exhibition are supported by:



Contributing projects

Bactohealing

Christina Stadlbauer and Nele Buyst

Cracks in ceramics, in disciplines, in binaries are the point of departure for our project Bactohealing. It draws on ‘kintsugi’, the Japanese technique to fix ceramics with gold. Bactohealing proposes to mend cracks with the help of microorganisms: bacteria and fungi grow a solid bond that mimics ‘scar tissue’ over the fracture. This technique creates organic, dynamic, evolving lines of repair that challenge conventional notions of restoration. These living repairs follow autonomous biological timelines—growing, changing, and dying—serving as metaphors for transience while encouraging humility in the face of natural cycles. As we observe the mold establishing itself on broken surfaces, philosophical discussions emerge about the agency of abstract life forms, foundations of care ethics, shared responsibility, and the nature of working with living entities. The work highlights the moral complexities of domesticating microorganisms for human purposes and questions where such relationships fall on the spectrum from exploitation to collaboration. Our work examines how working with microbes challenges anthropocentric views and prompts us to recognize interdependence across species boundaries. It guides us through tensions that develop between traditional values of achieving perfection through conservation and restoration versus embracing the unpredictability of working with living materials that resist complete human control.

(Research into) Genetically Modified Art Organisms (GMAO)

Matthijs De Block

Diluted Forest – Geosmin Yeast was first presented at the Watou Arts Festival and belongs to the larger project Soft Sedation (Geosmin Yeast). At its core lies the genetic modification of brewer’s yeast (*Saccharomyces cerevisiae*), reprogrammed to biosynthesize geosmin—the earthy compound responsible for the scent of soil after rain. This familiar yet elusive smell carries powerful associative weight, often evoking nostalgia, memory, and a profound sense of connection to the natural world. The installation intertwines olfactory and visual registers. Photographs of forests and wetlands were translated into stencils that guide the growth of the yeast. Yet within these constraints, the microorganisms assert their own agency, determining where and how they proliferate. The resulting image slowly shifts over time, becoming a living composition in which human intention and biological autonomy intersect. Through this work, De Block interrogates the ways in which biotechnology reshapes sensory experience, memory, and our relationship to ecosystems. If the scent once emblematic of “nature” is now synthesized within the laboratory, what becomes of its meaning? And how might this transformation alter the ways we imagine and relate to the world around us? The GMO yeast is part of a bigger research towards genetically modified art organisms and their meaning in artistic research & exhibition contexts

This work was created in collaboration with Open Biolab Brussels at Erasmushogeschool Brussels together with Dr. Tom Peeters, Dr Jolien De Munck, Dr Stijn De Graeve.

*The work has used a wild type version of the yeast in stead of the originally exhibited genetically modified yeast due to biosafety regulations.

Koelleven

Bartaku Art_Research

The encounter with the cooling towers of Tihange and SCK Mol, their biofilms, and the emergence of a collaborative space for artists, scientists and philosophers is at the core of the artistic research project ‘Koelleven’. How can we better attune to the hidden microbial world living in and around the cooling towers of nuclear facilities? What new questions or perspectives emerge when we take the biofilm seriously—on its own terms—rather than focusing solely on its potential to damage concrete, steel, or lungs? How might our thinking change if we move beyond seeing these towers as unwanted industrial relics, to appreciate their complex roles as habitats, especially as nuclear facilities are phased out? For Shifting Scales, selected results from this evolving artistic research are presented. These include an intervention-visitation in a cooling tower basin with a modified documentation video and microbial panels and prints; suits for microbial attuning with repurposed second skin suits; an audio lament for microbes and microbial pigment-based glass solar cells.

Mycelium as alternative for paper

Jonas Ghyselen

Sheets of mycelium, grown rather than made. These works explore mycelium as a biobased alternative to paper, connecting traditional art, printmaking, and photographic techniques with new ecological possibilities.

Photovoltarium (2025)

Janne Halme

‘Photovoltarium’ is a growing collection of botanical prints made with solar cell technology. Each work is a glass plate coated with titanium dioxide nanoparticles — the same material used in dye-sensitized solar cells — impressed with fresh or dried plants so their pigments stain the surface, forming a light-sensitive image. Some pieces become functioning solar cells, in which the plant pigments convert light into electricity. The works begin on site — in places planned for solar energy production, at operating power plants, or in natural areas under threat from our rising energy demands. Time spent there opens perspectives and insights that cannot be gained from scientific research or engineering alone. Plants are collected sparingly and with care: never rare species, often just a single leaf or flower so the plant can continue to thrive. The work is a pause for attention, a moment to be with the species and ecological communities whose lives are shaped by industrial energy production — and a quest for how technology and living nature might form mutually beneficial relationships. From these encounters grows a photovoltaic herbarium — a fusion of scientific material and the quiet presence of plants.

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