

The Living Aroma



Introduction: Smell as the Forgotten Archive

In an era increasingly shaped by screens, synthetic realities, and algorithmic memory, the senses that once grounded us in the physical world are often reduced to aesthetic garnish or ignored entirely. The dominance of the visual and auditory in digital culture has led to a forgetting of our more primal ways of knowing—touch, taste, and especially smell. Yet it is scent, more than any other sense, that accesses the deepest parts of the human psyche. It is scent that brings us home.

“The Living Aroma” is a response to this cultural amnesia—a design-led research project that positions scent not as peripheral, but as a central medium for emotional continuity, memory preservation, and speculative storytelling. It proposes a new kind of archive: one that cannot be cataloged in libraries or hard drives, but is instead carried in the air, the skin, the breath. This archive is alive, intimate, and embodied. It lives not in data, but in the subtle traces left on a grandmother’s pillow, in the incense of ancestral rituals, in the volatile molecules that shape our emotions and shape us.

The foundation of this work lies in the unique neurobiological properties of the olfactory system. Unlike sight or sound, which pass through complex cognitive filters, scent travels directly to the limbic system—the emotional core of the brain, home to the hippocampus and amygdala. This direct neural pathway makes smell uniquely capable of triggering autobiographical memories, emotional flashbacks, and somatic responses. A single breath can collapse the boundaries between past and present, evoking people, places, and feelings long thought forgotten. This is what neuroscientists call the “Proust effect,” named for the famous passage in *Remembrance of Things Past* in which a madeleine soaked in tea unleashes a flood of childhood memory. This scientific principle forms the emotional infrastructure of the project.

But “The Living Aroma” does not stop at remembrance. It is not simply an attempt to preserve the past; it is also a speculative inquiry into how we might design for the future of emotional memory. In an age marked by environmental collapse, digital overload, and the increasing abstraction of human experience, how might we reclaim sensory depth? How might scent become a tool for healing, ecological awareness, or even planetary empathy?

The project offers a poetic and technological answer. By combining traditional incense-making techniques from Chinese cultural heritage with artificial intelligence, expired Chinese medicinal herbs, and speculative scent design, “The Living Aroma” crafts a new category of object: the aromatic memorial. These are not just artifacts to observe, but sensorial tools to be worn, touched, and burned. They are living vessels of memory, capable of evolving with the wearer and returning to the Earth after fulfilling their function.

This is not merely an aesthetic exercise—it is an intervention into how we remember, how we mourn, and how we imagine futures grounded in intimacy, ecology, and care. It invites us to imagine a world where memory is no longer a static image on a screen, but a living aroma breathed into being, transformed through ritual, and released back into the cosmos.



Incense as Inheritance: Tradition Reimagined

Before scent became commodified in the form of atomized perfumes and commercial air fresheners, it was ritual. Incense, especially within East Asian cultures, served as a sacred medium that bridged the material and immaterial worlds. In ancient China, it was not only burned to perfume the air but to consecrate space, to focus the mind, to signal status, to communicate with the divine, and to align human action with cosmic rhythm. The lineage of incense-making is as much philosophical and spiritual as it is botanical and artistic.

“The Living Aroma” is deeply rooted in history. Drawing inspiration from Chinese incense-making practices that date back to the Tang (618–907 CE) and Song (960–1279 CE) dynasties. During these periods, incense was integral to imperial court ceremonies, Daoist and Buddhist rituals, medical healing, and the aesthetic pursuits of the literati class. Historical texts including “Incense Studies” by Zhou Jiazhou (Ming Dynasty) “Incense Manual” by Hong Chu (Song Dynasty) and (Chen’s Incense Manual” by Chen Jing (Song Dynasty” reveal a sophisticated understanding of aromatic substances, their seasonal properties, their effects on the body and mind, and the symbolism they carried. Incense was not merely scented material—it was a sensory philosophy.

In this project, incense is not treated as a finished product, but as a living medium—a carrier of cultural memory, biological intelligence, and artistic experimentation. To ensure that this exploration is not merely derivative or extractive, I work in close collaboration with recognized Inheritor of Chinese Intangible Cultural Heritage (ICH) in incense-making, who represents generations of knowledge in crafting natural incense from traditional Chinese medicine recipes, and time honored methods. Together, I revisit traditional techniques—including sun-drying, botanical classification, stone-mill grinding, and hand-kneading with secret organic binders—to produce incense beads of extraordinary integrity, resilience, and scent complexity.

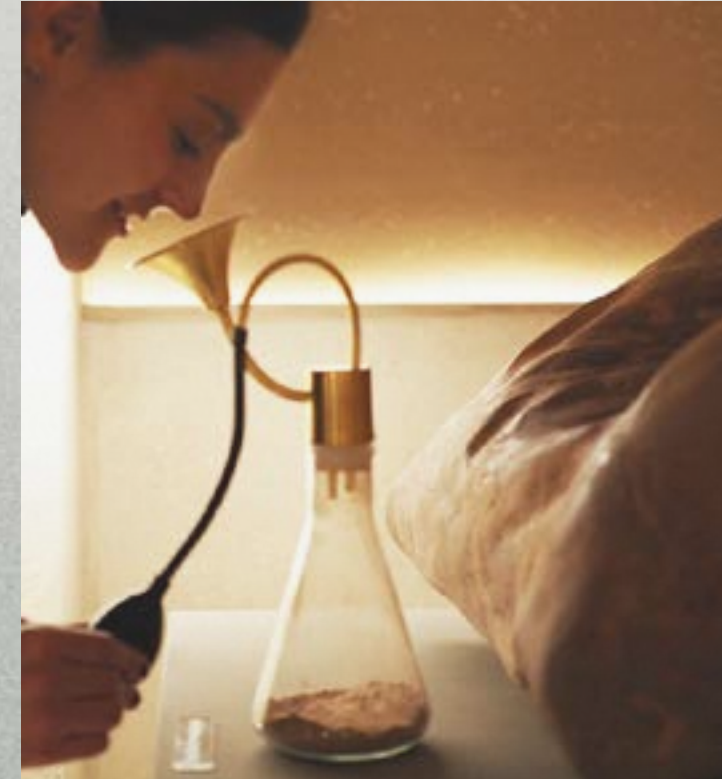
These beads are not mass-produced nor standardized. Each one is a small alchemical vessel, shaped by time, labor, and a sensitivity to both human and environmental rhythms. Their slow production process stands in sharp contrast to industrial manufacturing, emphasizing slowness, care, and respect for natural cycles. They are meant to be handled, worn, and burned in ways that evoke both ancient rituals and new rituals yet to be invented.

But to inherit is not to replicate. “The Living Aroma” seeks to not only preserve this vanishing tradition but to actively reimagine it for contemporary and speculative futures. We develop experimental scent blends inspired by personal memory, ancestral stories, and future ecological imaginaries. These formulations are more than olfactory compositions—they are narrative architectures.

This experimentation extends to the physical form of the incense. Drawing on typologies from Buddhist prayer beads, Qing Dynasty scholar artifacts, and contemporary jewelry language, we sculpt incense into wearable forms that can be warmed by the skin, touched during moments of anxiety, or worn close to the heart like relics. These forms are poetic but functional—anchoring the ephemeral nature of scent in a tangible, intimate object.

What emerges is a new genre of incense—not one defined by spiritual orthodoxy or commercial trends, but by a desire to remember through sensation, to mourn through material, and to imagine through smell. This is not incense for altars alone. It is incense for grief. Incense for transformation. Incense for futures we cannot yet name but can begin to sense. By honoring incense as a dynamic inheritance—one that holds space for both continuity and change—we create not only new objects but new rituals of relation, resilience, and remembrance.

The Grandmother’s Pillow: A Method for Embodied Memory



At the emotional and methodological center of “The Living Aroma” is an object both ordinary and sacred: a pillow. Specifically, a memory object modeled on the impression left by my late grandmother’s head, infused with her scent—a multi-sensory archive of presence.

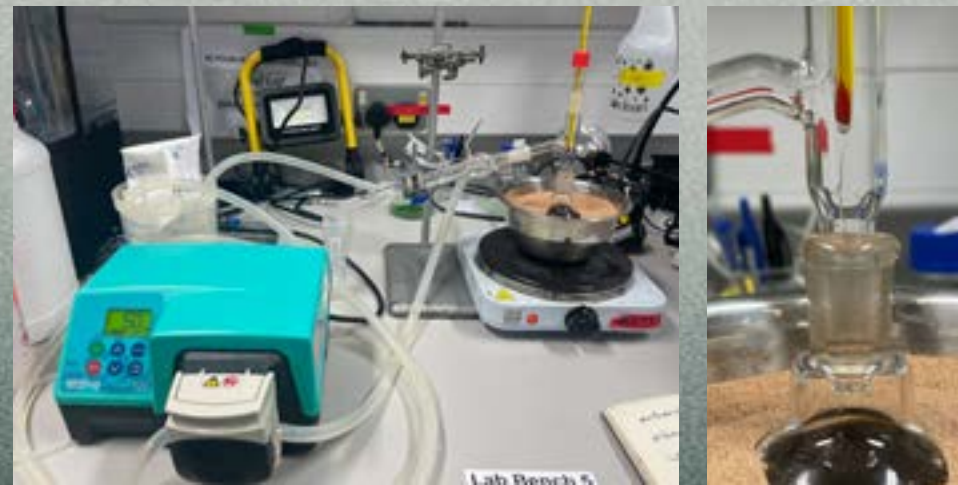
After her passing, it became clear that no photograph, video, or heirloom could recreate her presence as vividly as her scent. That quiet moment when an old scarf released her perfume into the air. That jarring, beautiful ache of remembrance. This realization sparked a question central to the project: what if we could preserve scent the way we preserve images or sound?



Process



An intimate collection of materials was gathered on site: strands of hair, traces of sweat absorbed into her pajamas, remnants of consumed food, and the lingering fragrances of her personal care products—her shampoo, toothpaste, and lotion...etc Each element captured a fragment of her presence, weaving a sensory portrait of her daily life.



Distillation process at Grow Lab CSM

To capture this olfactory memory, I collected DNA-bearing materials—hair, clothing, body oils—and subjected them to headspace analysis using gas chromatography-mass spectrometry (GC-MS) and distillation process. This broke down the complex volatile organic compounds that constitute the personal scent into digital signatures. These molecules were then recomposed into a synthetic formula—an olfactory portrait as unique as a fingerprint. But the scent alone was not enough. It needed form. The pillow was sculpted from biodegradable clay made from expired Chinese medicinal herbs—a poetic repurposing of material associated with care, illness, and healing. The shape replicated the depression her head left on her pillow—a physical record of daily intimacy and bodily memory.

The result is a multi-sensory object of grief and continuity. It can be held, smelled, pressed against the face. It is not a static memorial but a living ritual artifact—an interface through which memory becomes tactile, aromatic, embodied.

This object also offers a methodology that extends beyond the personal. It suggests new forms of mourning, new memorial typologies that do not sanitize or abstract death but allow us to remain in relation. Rather than encouraging closure, it fosters what psychologists call a “continuing bond”—a transformed, but ongoing connection to those we have lost.



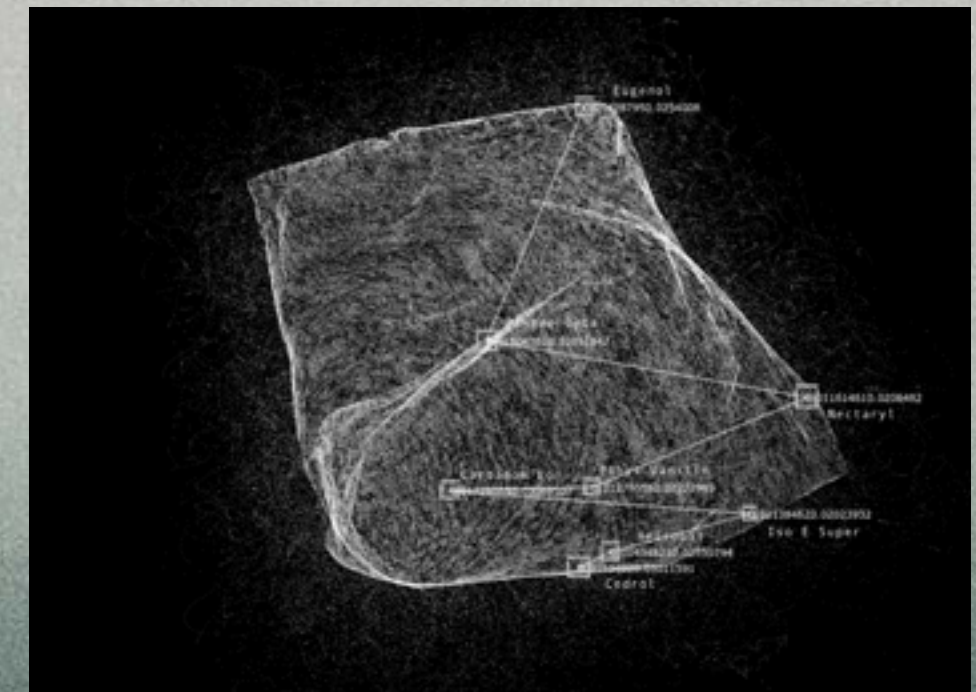
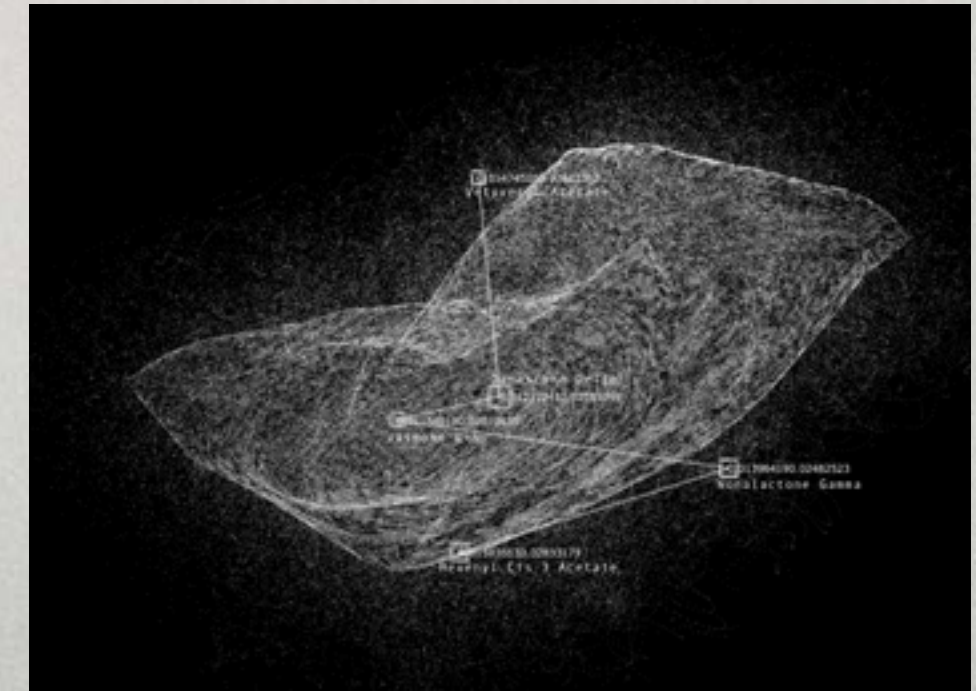
expired CTM & various herbs are collected
ground into powder form
Add the special binding powder from Chinese Elm tree bark



I switched the process of adding water with the previous distilled scent and DNA to knead into a scented dough
keep kneading to blend all ingredients smoothly
here I don't have enough material to make a mold and cast so I decided to cover the 3D print with this material. Ideally the entire object is made with this “scented clay”



Highlight the creases and dents with new clay and fix any cracks because the clay will shrink when air dried, here I went over at least 5 layers with hours in between waiting for it to set.



visuals of the ingredients created by touchdeisnger

Bio-Circular Design: Expired Medicine, Living Objects

In the logic of modern production, expiration marks the end of value. “The Living Aroma” upends this logic by sourcing expired Traditional Chinese Medicine (TCM) ingredients—cast off by hospitals and pharmacies once they pass regulatory shelf-life—and giving them new life as materials for memory objects.

Although these herbs may no longer be fit for consumption, their scent, texture, and energetic qualities often remain intact. We treat these discarded substances not as waste, but as repositories of knowledge, history, and vitality. Ground into powder and mixed with natural binders, they form the clay bodies for our incense beads, sculptures, and diffusers.

This practice transforms waste into ritual. It forges a circular design model in which the discarded becomes sacred, the forgotten becomes fragrant. Each object has a built-in life cycle—it will slowly degrade, lose scent, return to the soil. This is intentional. In contrast to industrial permanence, we propose biodegradable impermanence as a form of ecological ethics and poetic realism.

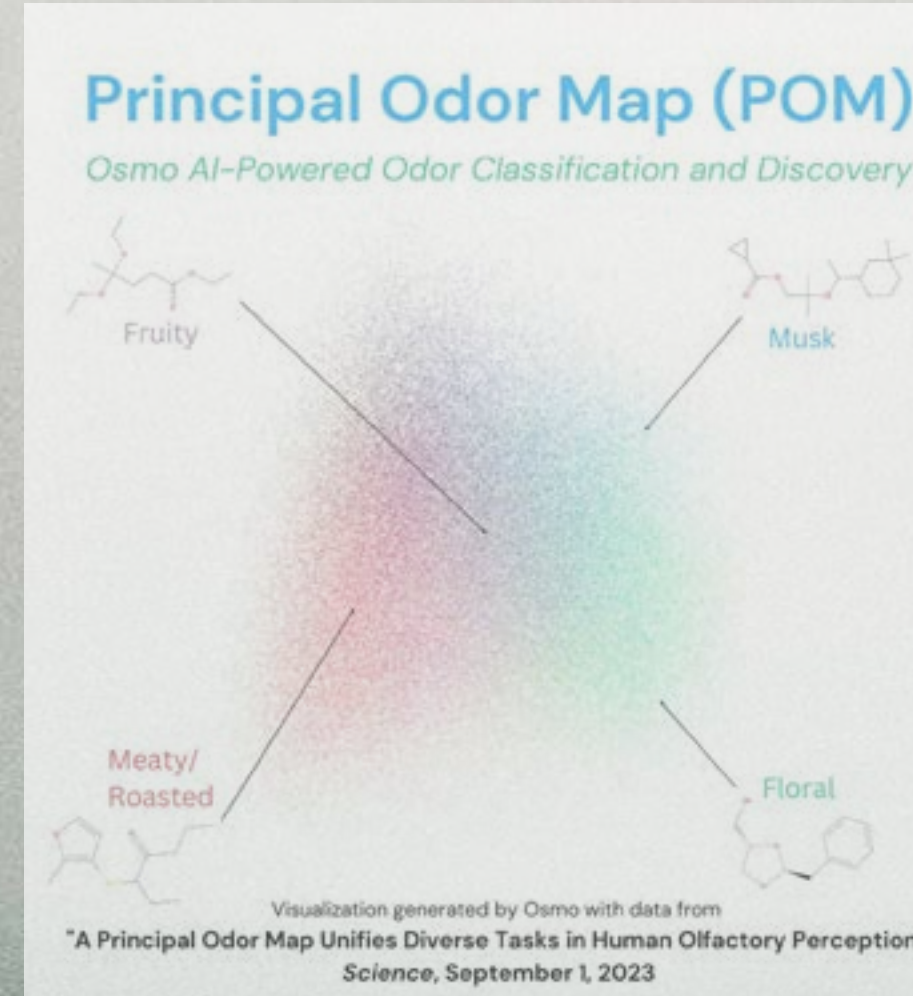
These objects teach us to value the temporal: to embrace the patina of wear, the fading of fragrance, the eventual dissolution. In this way, they resonate with Buddhist teachings on impermanence, Daoist cycles of transformation, and the urgent realities of material sustainability.

Memory, too, is biodegradable. It lives, shifts, fades, and returns. Our materials reflect that truth.



photo of traditional chinese medicine shops taken in Hangzhou

AI x Aroma: Designing the Smell of a Burning Star



While rooted in tradition, “The Living Aroma” also ventures boldly into the speculative—using artificial intelligence to extend human olfactory imagination into realms beyond our biological capacity. In collaboration with OSMO in New York, an AI scent-mapping platform and the Narratus Smellscape AI lab in Shanghai, we have begun crafting what we call speculative aromatics—scents that approximate the unimaginable.

What would a star smell like when it explodes? What scent might emerge from a forest that no longer exists? What does future grief smell like?

The partnership with OSMO brings sophisticated AI technologies to bear on the complex challenge of scent analysis and creation. Using tools like Vertex AI, BigQuery, and Dataflow, OSMO’s system analyzes billions of molecular compounds to discover new, sustainable aroma molecules and combinations. This computational approach allows for exploration of an olfactory landscape far broader than human perception alone could navigate. While a master perfumer might work with several hundred known aromatic compounds, AI systems can analyze millions of potential molecules, identifying novel structures with specific desired properties—whether that’s a particular scent quality, sustainability profile, or therapeutic effect.

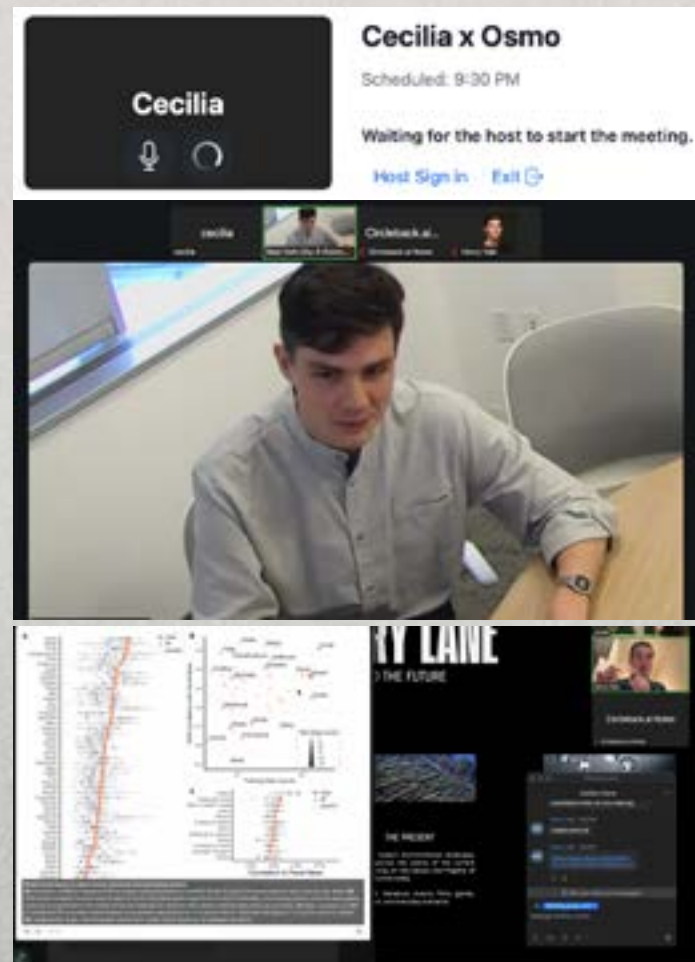
The process of molecular analysis and synthesis begins with the digitization of scent. Specialized gas chromatography-mass spectrometry (GC-MS) equipment analyzes the volatile organic compounds present in collected samples—whether from the grandmother’s personal items or from traditional aromatic materials. These compounds are identified and mapped according to their molecular structure, creating a digital “fingerprint” of each scent. This data is then fed into machine learning algorithms that can identify patterns, similarities, and unique characteristics across vast datasets of molecular information.

What distinguishes this approach from conventional scent analysis is its ability to move beyond simple identification to creative synthesis. The AI systems don’t merely catalog existing scents but can predict how novel molecular combinations might smell, how they might interact with human olfactory receptors, and how they might be synthesized using sustainable methods. This predictive capability allows for the exploration of scent possibilities that might never have been discovered through traditional trial-and-error approaches, opening new territories for olfactory experience.

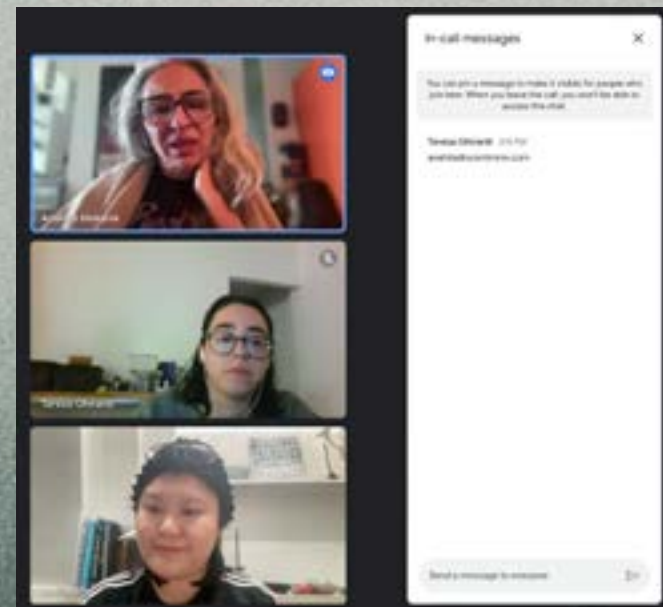
The balance between technological advancement and traditional craftsmanship represents one of the most nuanced aspects of “The Living Aroma” project. Rather than allowing AI to replace human judgment and sensibility, the project positions technology as a collaborative tool that extends human capabilities. Using GC-MS data, astronomical spectral readings, and molecular modeling, OSMO’s algorithms predict novel molecular combinations that could represent such speculative profiles. We feed this AI data on minerals from meteorites and the elemental compositions of stars, and in return we receive suggested aromatic blends that approximate these imagined realities. These speculative scents are then materialized into incense stars—small burnable forms shaped like celestial bodies. When ignited, they release not just smoke but story. They act as symbolic bridges between cosmic scale and human sensation.

Looking toward future developments, the AI systems are being trained to understand the relationship between molecular structure and psychological effect, creating the possibility of scent formulations tailored to specific emotional or cognitive states. This research direction connects the project to emerging fields like computational neuroscience and affective computing, suggesting how aromatic objects might eventually respond to or influence human emotional states in beneficial ways.

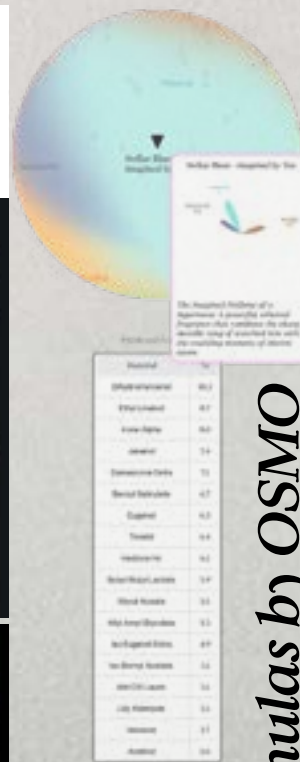
Through these technological innovations, “The Living Aroma” demonstrates how ancient sensory arts can be revitalized and extended through computational tools without losing their essential humanity. By creating a thoughtful integration of AI capabilities with traditional knowledge and craftsmanship, the project offers a model for how other cultural practices might navigate the digital transformation of society. Rather than positioning technology and tradition as opposing forces, it reveals how they can enter into productive dialogue, each enhancing the other’s capabilities and preserving what is most valuable in both domains.



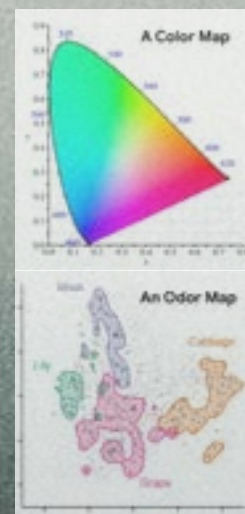
Meetings with Henry Valk (Project manager at OSMO)



Meeting with Anabita Mekanik (founder of Everyhuman Algorithmic Perfumer)



Predicted Formulas by OSMO



Toward a New Material Ritual

If ritual once belonged to religion and memory to the archive, “The Living Aroma” seeks to reunite them in the body. Each object is a proposition: for how we might ritualize remembrance, reframe mourning, and embed care into the material of everyday life.

At the heart of this practice lies a reverence for “Wenwan” - a type of object/playthings once cherished by scholars and spiritual practitioners alike. These objects historically worn and rubbed to absorb the natural oils of the human body, deepening their patina over time and strengthening the connection between the object and the wearer. Through daily contact, these objects become living artifacts, rich with personal scent and symbolic intimacy. This project is born from the belief that the most meaningful adornments are not simply worn, but lived with—gathering stories, emotions and memories as they age. Each piece is a quiet tribute to the complexity of the inner world, offering the wearer a deeply personal, multi-sensory experience.

We bridges the ephemeral and the eternal through our work, incense - once considered transient - is transformed into enduring jewelry that encapsulates emotion in material form. We believe jewelry can serve not just as ornament, but as a memory archive, a spiritual companion, and a scent carrier of one’s personal narrative.

Each piece is handcrafted in limited editions, using natural ingredients and sustainable methods. Our mission is to protect cultural heritage through innovation, and to share with the world the subtle, powerful ways in which scent, memory, and touch shape who we are.

