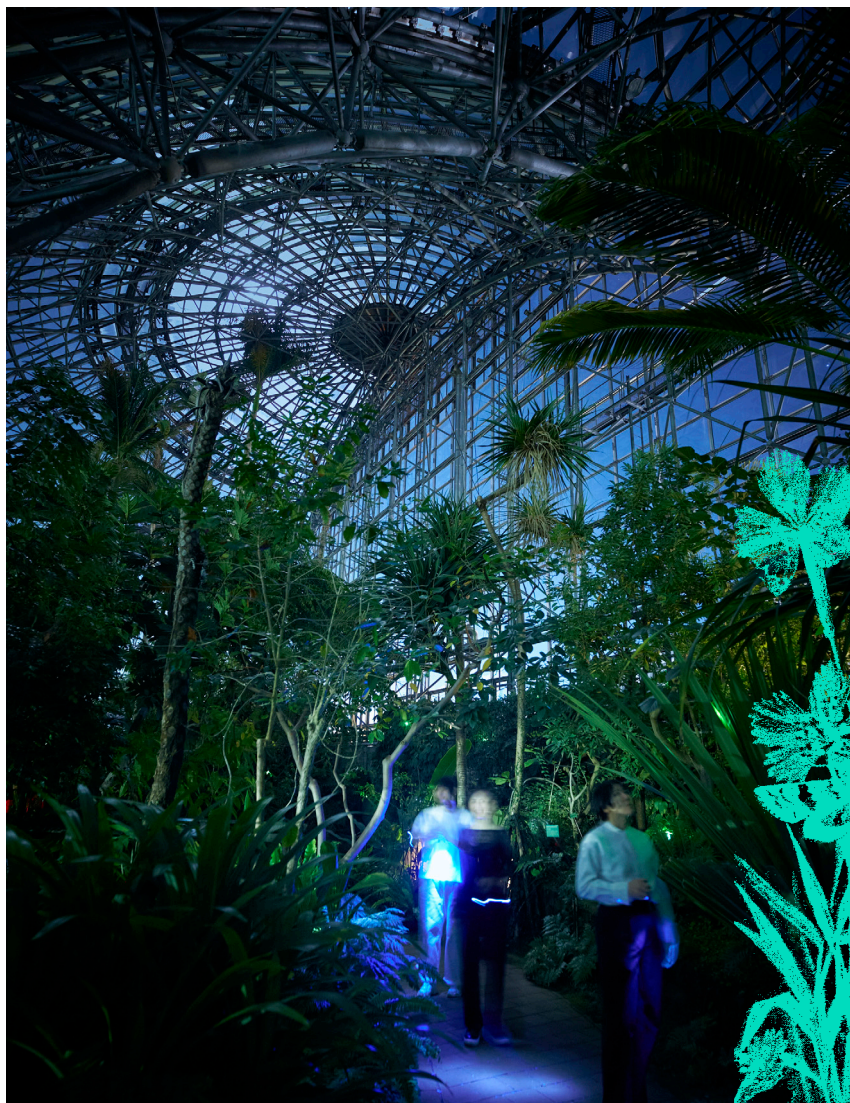


GUIDEBOOK

Olfacto- politics

The Air as a Medium: Maki Ueda



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We tend to understand the world through sight and thought. However, what if we were to close our eyes and simply breathe? The air reveals things we rarely notice: the changing of the seasons signaled by the scent of flowers, the trace of someone's perfume who has just passed by, and changes in humidity. They are the signs of events unfolding beyond our sight. Smell allows us to perceive what lies just beyond our immediate surroundings and, at times, even what is yet to come. In an age defined by uncertainty, what role might olfaction play?

This book serves both as an archive and a guide to *Olfacto-Politics: The Air as a Medium*, developed as part of the 2025 Artist Fellowship at Civic Creative Base Tokyo (CCBT) in response to the annual theme *Commons to Come*. In this project, olfaction is understood not merely as a sense, but as a force that shapes relationships between people and their environments by attracting and repelling, creating exclusionary boundaries. These dynamics are understood as a form of politics.

Drawing on workshops, field research, and exhibitions, this book also takes the form of a recipe book. Its "recipes" invite readers to experiment with these ideas, treating the knowledge generated through the project as a knowledge commons to be shared.

Throughout the fellowship, I explored ways of making the elusive presence of air tangible. Rather than presenting finished artworks, I sought to create instruments that enable people to perceive their environment through their own sense of smell. Because the act of smelling exists only as a phenomenon within a particular place and moment, it cannot be fully captured in images and recordings. This book therefore serves as a guide to re-enacting those unique experiences.

Air is continually transformed by the activities of humans and non-humans alike. We, too, participate in these shifting dynamics. As long as we are alive, we remain both contributors to and participants in an ever-changing olfactory politics. (Maki Ueda)

Olfacto-Politics Archive:

<https://ueda.nl/category/olfacto-politics/>





Amuse: Education

Olfactory Awareness



What happens when invisible phenomena such as smell and scent are treated as a medium of expression: as artistic materials in their own right?

SMELL LAB, an intensive seminar in olfactory art, selected sixteen participants through an open call to explore the fundamental concepts and practices that underpin artistic work with smell.

Resources:



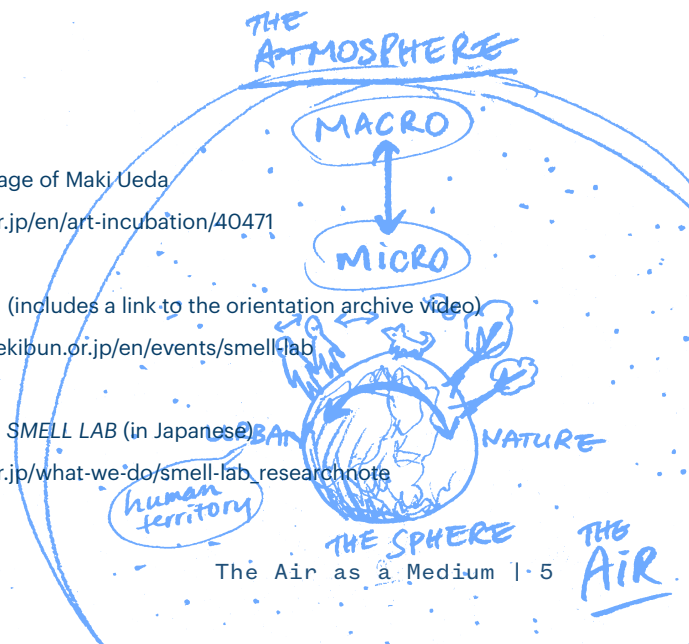
Artist Fellow Project Page of Maki Ueda
<https://ccbt.rekibun.or.jp/en/art-incubation/40471>



SMELL LAB Open Call (includes a link to the orientation archive video)
<https://renewal.ccbt.rekibun.or.jp/en/events/smell-lab>



CCBT Activity Report | SMELL LAB (in Japanese)
https://ccbt.rekibun.or.jp/what-we-do/smell-lab_researchnote



Experiment: Air as a Medium

Smell is deeply personal and subjective, yet it is also shaped by its surroundings. By presenting the same scent under three different combinations of temperature and humidity, this experiment explores how the environment alters perception. Perhaps olfaction is less a sense than a phenomenon.



1: Outdoors



2: Indoors



3: Humidified Tent

Try it yourself and follow these steps:

- 1. Choose two or more environments with different temperatures and humidity levels.
- 2. Smell the same scent in each environment using the same method (e.g. a scent strip).

	Location	Temp.	Humidity
1	Outdoors	+/- 10°C	20-40%
2	Indoors	+/- 22°C	20-30%
3	Humidified Tent	+/- 22°C	40-50%

Observations:

First Half of the Exhibition

Geosmin (1%)

Often described as ‘the smell of rain’, geosmin was perceived very differently in each environment. Outdoors, many visitors found it fresh and easy to recognise. Indoors, it was commonly described as earthy. Inside the humidified tent, some associated it with summer tap water or mould. Although the scent itself never changed, its perception clearly differed.

Second Half of the Exhibition

Menthol (10%)

Menthol, commonly found in chewing gum and toothpaste, stimulates not only the olfactory system but also the trigeminal nerve by activating the cold-sensitive receptor TRPM8.

In milder environments (2 and 3), visitors often reported a pleasant cooling sensation. In the cold outdoor environment (1), however, the cooling sensation became almost painfully intense, making the scent itself difficult to perceive. By contrast, in the humidified tent, the scent was frequently described as fresh or juicy.

Have you ever sensed snow or rain before it arrived? Before snowfall, the air often feels sharp and taut; before rain, heavy and swelling. What we assume to be olfactory perception may sometimes be a tactile sensation mediated by the trigeminal system.

Environmental odours also became part of the experiment. Outdoors, aromas from a nearby Italian restaurant drifted into the space, while inside the tent, visitors noticed the smell of the plastic enclosure. Rather than treating these as interference, the setup embraced them, framing olfaction as a phenomenon inseparable from its environment.



The background image shows an art installation in a gallery space. On the right, there is a large, transparent, tent-like structure made of plastic or vinyl, supported by a metal frame. It has a dark interior and is partially open. In the foreground, there are two white, rectangular pedestals of different heights. The floor is made of dark wood. The overall lighting is dim, with a blueish tint. The title 'Olfacto-politics' is overlaid in large, white, lowercase letters, with 'Olfacto-' on the top line and 'politics' on the bottom line. Below the title, the subtitle 'The Air as a Medium' is written in a smaller, white, sans-serif font.

Olfacto-politics

The Air as a Medium

13 February–1 March 2026

Maki Ueda: Olfacto-Politics - The Air as a Medium -

Civic Creative Base Tokyo (CCBT)



(mouillettes) and distribute one to each participant simultaneously.

3. Working in silence, describe the scent using ten words, writing one word on each sticky note. (3–5 min)
4. Within each group, discuss and organise the words into categories. Rearrange the sticky notes on the table and agree on the principles underlying your classification. (5 min)
5. Visit the other groups' tables during a short gallery walk. (5 min)
6. One representative from each group should present how their categories were formed. (5 min)
7. Finally, representatives from all groups should combine their sticky notes, develop a new shared classification, and arrange them together on a blackboard. (5 min)

Tips:

- Groups work best when participants

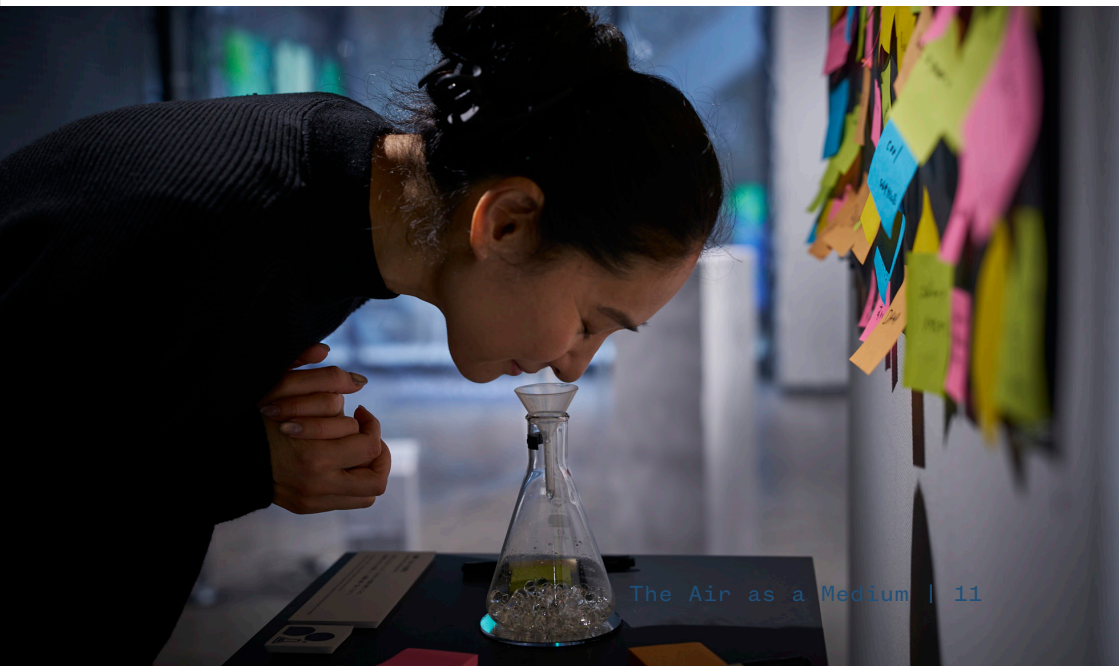
have diverse backgrounds, such as people of different age groups with different native languages.

- Use a different colour of sticky notes for each group to make the results easier to identify and compare.
- Prepare all scent strips at the same time, as the scent changes over time.
- During Steps 2 and 3, participants should remain silent to avoid influencing each other's responses.

In this workshop, Calone diluted to 10% was used. The concentration also affects the perception; lower concentrations are often easier to perceive.

Exhibition Setup:

- Fill a conical flask to about one-third full with water-absorbing gel beads.
- Place a funnel in the neck of the flask for visitors to smell through.
- Refresh the scent by adding approximately five drops each day.



Invitation to the SMELL LAB

Day 1:
(8 November 2025)

The first day of *SMELL LAB* opened by inviting sixteen participants, selected through an open call, to become consciously aware of their sense of smell.

Ueda opened the session with a simple question: 'Have you noticed the smell of this place?' Participants identified elements that usually go unnoticed: the scent of the nearby sewer, damp air carrying the smell of wet bricks, traces of the toilets, and other odours drifting through the space. Unlike vision, smell is rarely foregrounded in our attention. Yet once we consciously attend to it, hidden layers of the environment begin to emerge. This exercise provided a shared introduction to this mode of perception.

Ueda also introduced the *Smell Diary*, a daily record of olfactory experiences, as a simple method of training the sense of smell. Rather than accumulating knowledge, participants were encouraged to cultivate olfactory awareness through continual practice.

Participants were then divided into colour-coded groups for an exercise in describing scents with words. Working individually and without discussion, each person recorded their impressions of a fragrance applied to a scent strip. The exercise used Calone, a synthetic aroma compound often associated with marine and aquatic notes. The responses proved remarkably diverse, including alcohol, rainy day, lemon peel, watermelon, melon, summer, white shirt, soap, ink, and paper.

The groups organised their words into categories, gradually creating small 'olfactory exhibitions' that visualised their collective perceptions. During a gallery walk, participants visited the other displays, and many questioned whether everyone had smelled the same scent. Finally, all words were brought together and assembled on a large board, forming a collective archive of olfactory language.

The exercise revealed both the deeply subjective nature of smell and its potential to be shared, interpreted, and translated through language. The process itself became the exhibition.

The second half of the day connected the work-



shop to CCBT's 2025 annual theme, *Commons to Come*. Framing air as a shared resource, Ueda introduced the science of greenhouse gases through a lecture supported by handouts and video. Participants learned how molecules such as carbon dioxide (CO₂) and methane influence the Earth's climate. Without greenhouse gases, Earth would be as cold as Mars; in excessive concentrations, these gases would make Earth resemble Venus. They also learned that much of today's global warming is associated with an increase of only 0.03% in atmospheric CO₂ concentration.

Particular attention was given to methane. Although it remains in the atmosphere for a shorter time than CO₂, its short-term warming effect is far greater, making it an important focus area for climate action.

Rather than treating these molecules as scientific facts, participants were invited to translate them into olfactory expression. Starting from the premise that smell consists of volatile organic compounds, greenhouse gases became subjects for sensory interpretation. Calone, for example, can evoke associations with ozone (O₃), not because it reproduces ozone, but because it suggests an atmospheric quality. Participants were encouraged to move beyond literal representation and transform greenhouse gases into scent through their own sensory imagination.

The session continued with a trial fragrance inspired by nitrogen dioxide (NO₂), followed by introductions to molecules related to greenhouse gases and PM_{2.5}. Each team selected a single gas and composed a fragrance by combining multiple aroma compounds. Molecules such as hydrogen sulphide, associated with ageing infrastructure, industrial accidents, and its distinctive odour, illustrated how closely smell is intertwined with the environment, society, and everyday life.

The day concluded with an assignment for the next session. Each participant selected a gas and investigated how it might be translated into scent. From this point onward, the project of reimagining air through olfaction began in earnest, combining perception, scientific knowledge, imagination, and environmental awareness. (CCBT | Naoko Kusunoki)





Composing Greenhouse Gases

Day 2
(9 November 2025)

Climate change is a phenomenon mediated by air. Greenhouse gases move through the atmosphere, altering Earth's climate. Smell, too, is carried by air. In this workshop, participants used smell to express climate change through imagination. Rather than reproducing the smell of the gas itself, they explored how scent can be used narratively: to communicate an idea, tell a story, or give perceptible form to something that cannot be smelled.

The second day of *SMELL LAB* began by revisiting the previous day's assignment. Participants shared the gases they had chosen as the basis of their fragrances, including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), sulphur dioxide (SO₂), nitrogen dioxide (NO₂), and hydrogen sulphide (H₂S). Their reasons for choosing these molecules varied widely, from concern for environmental issues and fascination with their inherent contradictions to more personal associations. Even before the perfumery began, these invisible gases had already become catalysts for their imagination.

At the heart of the workshop was the recognition that smell is more than a sensory impression. What we perceive as smell is the result of volatile molecules dispersing through the air to be detected by the olfactory system. From this molecular perspective, participants explored how invisible and abstract gases might be translated into perceptible scents through combinations of fragrance compounds.

The session continued with the evaluation of approximately 50 fragrance compounds, including many that were not introduced the previous day. Arranged alphabetically, each material was smelled



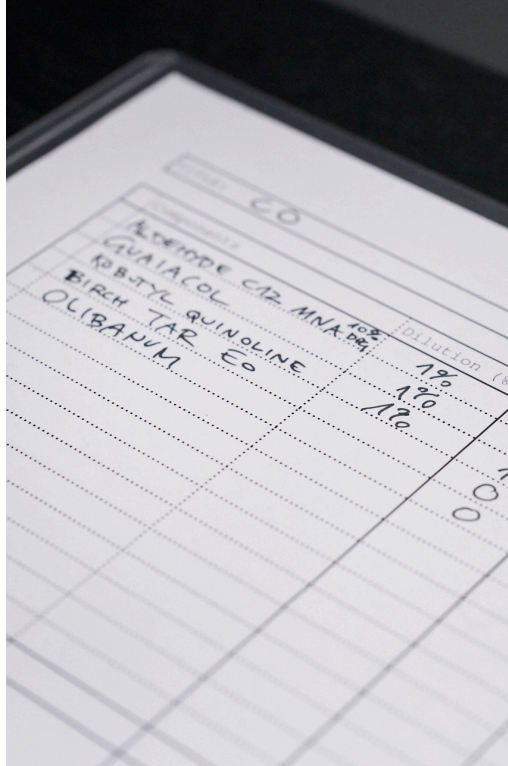
individually while participants carefully recorded their impressions. Ueda emphasised the importance of note-taking in perfumery: these observations serve not only as a record for future reference but also as a way of training oneself to articulate olfactory experience.

Participants generally worked with only two or three fragrance compounds, as simpler formulations are often more effective for beginners. Although perfumery normally relies on precise measurements by weight, the workshop used droplets for practical mixing. Participants began with equal proportions before gradually adjusting the balance to achieve the desired result. Once they had explored the available materials, each participant collected a bottle labelled

with their name and began composing their fragrance.

During the session, one participant asked whether an “ozone note” should be used to represent ozone. Ueda replied by comparing perfumery to cooking. Just as a dish depends not only on its main ingredient, but also on subtle supporting flavours, a fragrance often relies on unexpected components. Like adding chocolate to an Indian curry, seemingly unrelated ingredients can reshape the whole composition. The analogy encouraged participants to think beyond literal representation.

The completed fragrances were then presented in an informal exhibition. Each participant introduced the gas they had chosen, explained why they had



selected it, and described the fragrance compounds and compositional strategy behind their work.

One participant, inspired by the paradox of assigning a scent to odourless carbon monoxide, combined equal parts Aldehyde C-12 Lauric and Aldehyde C-12 MNA, accented with Menthol. Another sought to challenge the negative image of carbon dioxide by composing it as a positive presence, essential to plant life, using Floralozone, Diphenyl Oxide, and Camphor.

Fragrances inspired by methane combined Indole, Patchouli, Nitrile compounds, and Floralozone, prompting comments that they somehow 'smelled like global warming'. Nitrous oxide compositions drew on associations with

land, sea, air, and medical anaesthesia, using materials such as Vetiver, DMS, and Melonal. Hydrofluorocarbons became the smell of machines; nitrogen dioxide evoked memories of industrial pollution and hydrogen sulphide was interpreted as a solemn, almost spiritual presence.

All the resulting fragrance formulas were archived and are intended to become part of a future exhibition by Ueda.

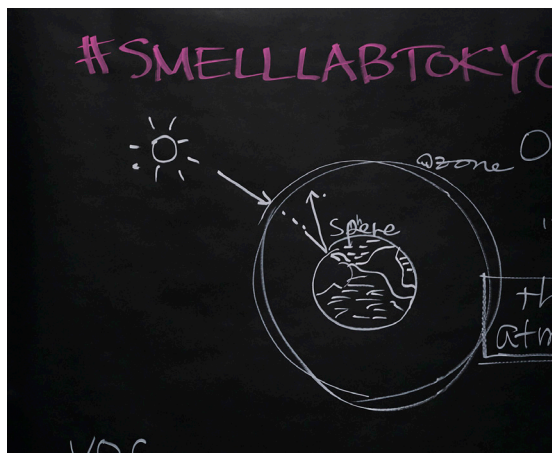
The workshop demonstrated how scientific phenomena can be translated through smell, language, and personal experience. Invisible molecules became perceptible through scent, revealing olfaction as a medium for interpretation. Participants explored narrative approaches to olfactory expression, in which scent was used to communicate



the meaning of something beyond the smell itself.

The following week's *SMELL LAB* turned to distillation. By collecting molecules from the air and transforming them into liquids, participants continued exploring new relationships between olfaction and the environment.

(CCBT Activity Report | Naoko Kusunoki)





一酸化炭素
Carbon monoxide
二酸化炭素
Carbon dioxide
X7
Memor
一酸化二窒素
Nitrous oxide
ハイドロフルオロカーボン
Hydrofluorocarbon
atmosphere

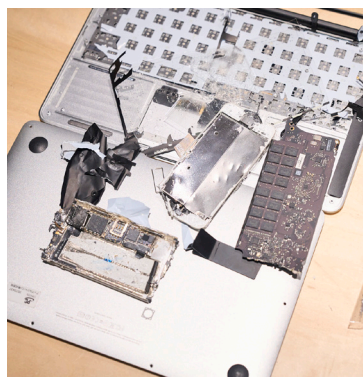
	Dilution	No.1.	No.2
	10%	10	10
	0.01%	5	6
	10% ..	1	2
		↓	↓
		try,	try,



Distilling the Smell of Shibuya

Day 3
(14 November 2025)

How does a city smell? Can the sources of scents that shape an urban environment be distilled into fragrances? Participants explored Shibuya through scents, mapping its olfactory landscape and extracting fragrances from the materials they collected using the 'Maki's Method', Ueda's widely recognised extraction technique.



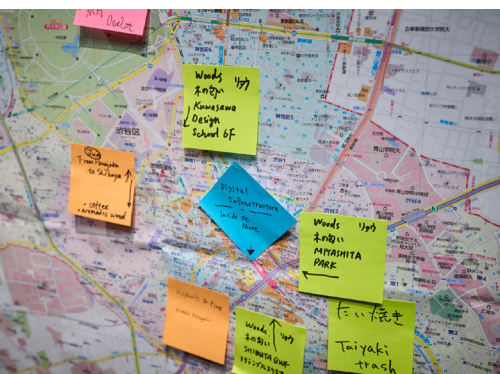
The third day of *SMELL LAB* focused on distillation through a hands-on workshop. Each participant brought a material that, for them, represented 'the smell of Shibuya'. By extracting scents from these objects, they explored how memory, place, and environment might be translated into an olfactory form. The workshop sought to give a tangible form to the city's invisible layers through liquid extracts.

The session opened with presenta-

tions of the collected materials. Ginkgo leaves exposed to Tokyo's air represented both the city's atmosphere and the official symbol of Tokyo. Asphalt from Shibuya Scramble Crossing, fragments of pedestrian crossings, and suitcase wheels spoke of movement and abrasion. Other materials included wood shavings from a design school, clams recalling the ancient shoreline and shell mounds beneath modern Shibuya, soil from Meiji Jingu, persimmons and camphor from street trees, coffee beans reflecting the city's café culture, crushed computer parts symbolising information overload, strawberry syrup and absinthe expressing emotional journeys, batteries and confectionery representing consumer culture, and even discarded taiyaki packaging collected from the streets. Each participant revealed a different Shibuya, shaped by memory, history, culture, and everyday experience.

Most participants extracted their materials using the tincture method. The material was placed inside a cotton tea bag, sealed in a heat-resistant plastic bag with ethanol, and gently heated at 60°C for about one hour. After approximately 30 minutes, the extracts were evaluated by smell and heated further as needed. Once complete, the liquid was run through a coffee filter. Like making homemade plum liqueur, the process was both domestic and methodical, relying on time rather than complex equipment.

One participant, however, experimented with computer parts using a modified steam distillation method. Steam released volatile compounds from the material, which were then absorbed into cooking oil. Since oil retains aroma more gently and for longer periods than water, it proved well suited to metallic and high-



ly industrial materials. Although there was some uncertainty about whether the scent could be captured at all, the extraction successfully preserved a distinct metallic character. The comparison between oil and water as different scent media became an important discovery.

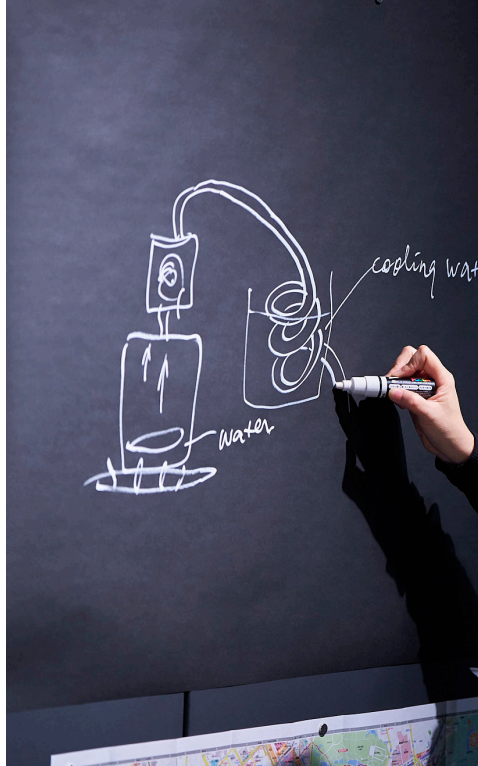
While the extractions were underway, participants worked collaboratively on a second task: creating an olfactory map of Shibuya. Using sticky notes placed on a map, they marked the locations and memories associated with each material. Fragments of smell gathered while walking through the city, gradually accumulating into a shared 'smellscape'.

The finished extracts were transferred into bottles, labelled with each participant's name and source material. Some were taken home, while the remaining ones were archived for use in future exhibitions by Ueda and in the next day's symposium. Participants were also advised to wrap the bottles in aluminium foil and store them in a refrigerator for long-term preservation.

Since the workshop took place in multilingual, multicultural Tokyo, English was adopted as the common language throughout. Reflecting afterwards, Ueda observed:

Some participants were not comfortable speaking English, but because the workshop was organised around small, randomly assigned groups, conversations developed naturally through the shared experience of working with smell, a fundamentally non-verbal medium. By the final presentations, participants spoke about their fragrances with remarkable confidence, and it was clear that their ability to express themselves in English had also grown.

With this final hands-on session, *SMELL LAB* came to a close. Over three days, the air of the city, personal memories, and the material qualities of everyday objects intertwined, allowing Shibuya to be rediscovered through the medium of smell. (N. Kusunoki)





When Smell Has Meaning

Symposium
(15 November 2025)



CCBT Symposium
Report (in Japanese,
with Youtube archive)

https://ccbt.rekibun.or.jp/what-we-do/when_smell_has_meaning



On 15 November 2025, CCBT hosted the symposium *When Smell Has Meaning: Perspectives from Aesthetics, Chemistry, and Digital Olfaction*. Bringing together three specialists from different disciplines, the event explored how smell acquires meaning from artistic, scientific, and technological perspectives.

The speakers were Yoko Iwasaki (Saga University of Arts), Kazushige Touhara (The University of Tokyo), and Katsuya Ujimoto (Ricoh Company, Ltd.). The symposium concluded with a panel discussion featuring all three speakers and Maki Ueda.

When Smell Has Meaning: On Aesthetics

Yoko Iwasaki

From an aesthetic perspective, Yoko Iwasaki situated smell within a broader phenomenology of olfactory experience.

She began by emphasising the intimate relationship between smell and breathing. Humans inhale more than 20,000 times a day, and with every breath, smell becomes part of everyday life, almost unconsciously. Although only a small fraction enters conscious awareness, odours accumulate over time, shaping the atmosphere of places and cities.

Among countless scents, we continuously select certain ones and connect them into meaningful relationships. Iwasaki describes this process as 'olfactory constellation-making'. Guided by memory and imagination, these constellations gradually become part of our identity.

Her artistic project *Olfactosphere* visualises smell as layered spheres: proximal smells rooted in personal experience, middle-distance smells shared socially, and distant smells associated with the natural environment. This framework has informed projects documenting island scents and seasonal change.

Iwasaki argued that giving meaning to smell means framing fragments of the olfactory world through personal experience while remaining shaped by broader social and historical contexts. Olfactory art does not communicate a sin-

gle universal meaning. Rather, it invites each person to recognise the unique constellation of smells they carry within themselves.

Scent as an Infochemical

Kazushige Touhara

Kazushige Touhara approached smell from the perspective of chemical communication. His lecture examined scent as an infochemical, a molecule that conveys biological information, and asked whether humans possess olfactory communication or pheromones in the scientific sense.

Across the animal kingdom, chemical signals trigger behaviours such as attraction, repulsion, alarm, and parental care. Well-known examples include the sex pheromone of the silkworm moth and alarm pheromones in fish, for which both signalling molecules and their functions have been identified.

However, humans present a more complex case. The perception of a pleasant smell depends heavily on memory, personal experience, and culture.

Recent studies suggest that olfactory communication also exists in humans. Infant body odour appears to strengthen maternal bonding, while the scent of women during ovulation may induce comfort and relaxation in men. Scientists are also identifying odour molecules that influence emotion and physiology. Even so, definitive evidence for human pheromones remains elusive.

Touhara concluded that smell should be understood not merely as something to eliminate but as an invisible chemical signalling system that shapes the behaviour and relationships of living organisms. He suggested that making these signals scientifically visible could support nature-positive agriculture while offering new possibilities for human well-being.

Experiencing Smell Through Machines

Katsuya Ujimoto

Katsuya Ujimoto explored digital olfaction through advances in gas sensing and chemical analysis. His lecture focused on how smell can be measured at the molecular level and recorded in real time across the physical space.





Conventional gas analysers provide high sensitivity and molecular selectivity but are large, expensive, and impractical outside laboratory settings. Gas sensors provide immediate measurements but generally cannot distinguish individual molecules.

To bridge this gap, Ricoh has developed a compact analyser based on FAIMS (Field Asymmetric Ion Mobility Spectrometry). By ionising airborne molecules and separating them according to their mobility in asymmetric electric fields, the system detects trace compounds in real time at concentrations as low as parts per billion. The current prototype (120 × 220 × 160 mm) is portable enough for fieldwork.

Its portability enables smell to be measured in factories, cities, and natural environments. Case studies from a metal recycling plant and Ishigaki Island showed that odours form environmental distributions rather than isolated events, suggesting new ways of visualising the smellscape of cities, tourist destinations, and ecosystems.

Ujimoto emphasised that digital olfaction extends beyond measurement. By combining chemical analysis with scent generation, FAIMS can record and recon-



struct smell together with its temporal and spatial context, opening new possibilities for science and art.

During the symposium, a live FAIMS demonstration addressed a question posed by Maki Ueda: Why do crowded commuter trains rarely smell as strongly as expected despite the number of passengers?

A temporary tent simulated the conditions of a crowded train carriage while FAIMS continuously monitored the air. As more people entered, signals believed to originate from ammonia associated with physical stress and fatigue increased noticeably. These changes became apparent only as the crowd grew, suggesting measurable olfactory characteristics unique to densely occupied environments.

The symposium concluded with an open discussion among the speakers and Maki Ueda. Audience questions expanded the conversation from science and art to body odour, ageing, self-perception, cultural differences, deodorisation, and comparisons between human and animal olfaction. The discussion highlighted olfaction as a field in which measurement, perception, memory, and artistic expression converge and continue to generate new interdisciplinary questions. (CCBT Activity Report | Naoko Kusunoki)



Appetizer: Research

Olfactory Sensing

Human olfaction is highly subjective and easily influenced by factors such as cognitive bias and olfactory adaptation. This project therefore translates air quality into objective visual data using a digital gas sensor.

Measurements were obtained using FAIMS, developed by Ricoh Company, Ltd. FAIMS is an analytical technology that ionises airborne molecules and separates them according to differences in their mobility under asymmetric electric fields. The portable device rapidly detects volatile compounds, including odour molecules, in real time, without preselecting specific compounds.

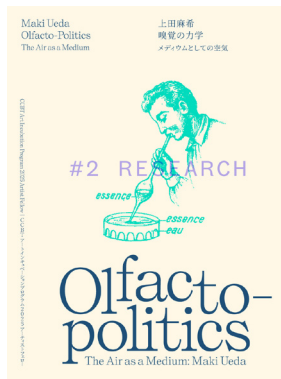
Resources:

About FAIMS (Ricoh)

https://jp.ricoh.com/technology/tech/122_GasOdorSensing

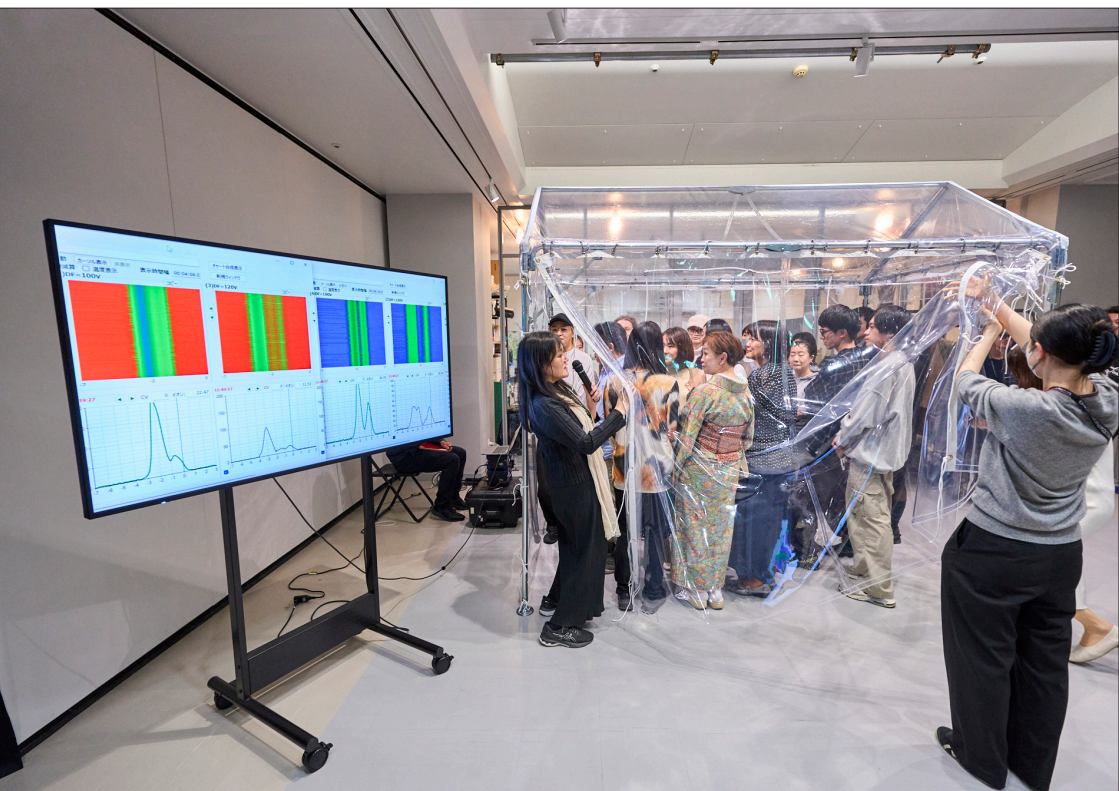
Project Archive (includes video documentation)

<https://ueda.nl/category/english-uk/olfacto-politics/dogs-nose/>



Packed Train Smellscape

Our bodies are chemical factories of smell. Human body odour, therefore, contributes significantly to the smell of shared environments. Inspired by Tokyo's famously crowded commuter trains, this small-scale experiment compares human olfactory perception with air-quality data measured by FAIMS.



15 November 2025 · Live Measurement during the Symposium

Measurement Report

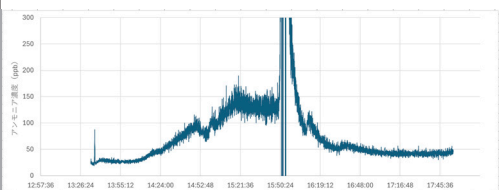
Katsuya Ujimoto (Ricoh Company, Ltd.)

During the experiment, the ammonia concentration inside the temporary tent was initially around 20 ppb. As more participants entered and the space reached conditions comparable to those of a crowded commuter train, the concentration increased to approximately 130 ppb (± 10 ppb) after 3:00 pm. This increase is thought to result from the accumulation of

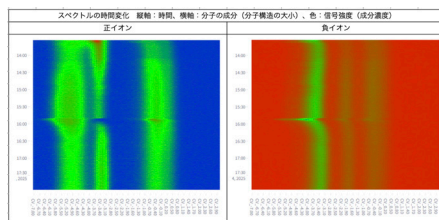
biogenic gases, including ammonia, released through human breath and skin. Previous studies have shown that indoor ammonia levels increase with the number and activity of occupants. The results suggest that air is not simply a passive background but a shared medium that is continuously altered by human presence.

The measured concentration of 130 ppb is close to the lower limit of the human odour threshold for ammonia and is generally too low to be perceived as a distinct smell. In other words, we inhabit an atmosphere that is constantly changing, even when we are unaware of it. The findings highlight that urban and public spaces are environments in which people continuously share air containing chemical compounds emitted by one another.

The changes observed in a crowded train are therefore real, even if they remain largely invisible and imperceptible. Air functions both as a commons, continuously reshaped by human activity, and as a medium connecting our bodies with society. These measurements invite us to recognise otherwise unnoticed environmental changes and to reconsider what it means to share the air around us.



As the crowd builds, ammonia levels rise to a peak before gradually declining as residual odours dissipate.



Dog's Nose

A Bio-Logging System for Smellscape Capture and Playback

What is that dog sniffing so happily? Inspired by this simple question, Dog's Nose combines environmental sensing and digital media to record and replay a dog's smellscape, allowing humans to vicariously experience a canine sense of smell.

Dog's Nose is a multispecies bio-logging system in which a dog carrying a chemical sensor records smellscape that can later be reconstructed through a digitally controlled olfactory playback system. Air is sampled near the dog's nose through a small tube and transported to a portable FAIMS device developed by Ricoh. As the dog moves freely through its surroundings, airborne molecular patterns are measured and translated into digital data. The dog's movement becomes a form of bio-logging in which the animal acts as a multispecies carrier of environmental sensing. While bio-logging technologies are widely used in ecological research to monitor animal behaviour and environmental conditions, *Dog's Nose* extends this approach to sensory documentation.

The collected chemical data are mapped to an olfactory and visual playback system that reconstructs recorded smellscape in another place and time, allowing environments encountered by the dog to be experienced later by human audiences.

The smellscape is also shared through a spatial interface. Simplified scent compositions are printed onto a floor map using micro-encapsulation technology. Through this tactile interface, visitors of all ages can explore a spatially reconstructed smellscape by



Chiyoko (Shiba-Inu, 10 years old)



touching and smelling different locations on the map.

The project also includes the participatory urban *Chiyoko Walk*, guided by Chiyoko the dog. Walking with a ‘wild nose’, far more sensitive than that of a human, participants could explore the city through smell, perceiving it as a dynamic field of chemical signals.

The project addresses a gap in contemporary media infrastructures: while visual and acoustic environments can be recorded and reproduced, smell, despite being a fundamental component of environmental perception, remains largely absent from media technologies. The project proposes a new way of recording, sharing, and experiencing olfactory environments as environmental knowledge.

Recording Sessions (2 hours each)

15 October 2025: Shibuya–Meiji-dori

15 December 2025: Harajuku

16 December 2025: Yoyogi Park

23 March 2026: Ogikubo

Exhibition

13 February – 1 March 2026

Civic Creative Base Tokyo (CCBT)

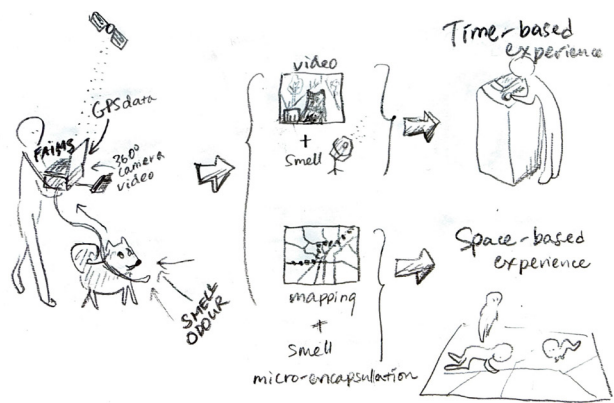


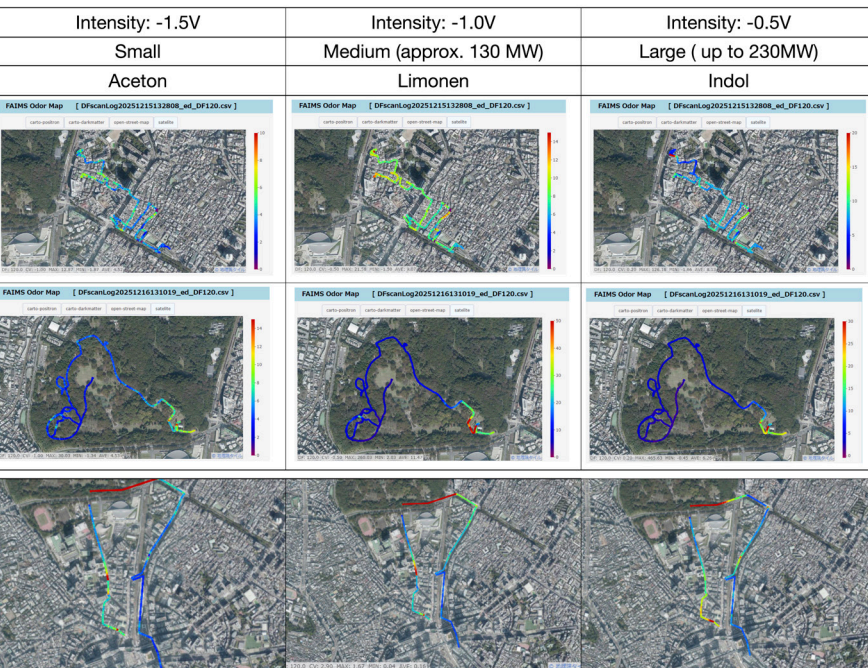
14 December 2025
Chiyoko Walk Vol. 2
Takeshita Street, Harajuku



Place	Date	Time when the signal changed	Signal Strength Trend	Intensity: -4V
Targeted Molecule Size				Extra Small (20-30 MW)
Example of Molecule				NH ₃ (Ammonia)
Harajuku	2025.12.15	13:40:20 13:41:23 13:45:42 13:59:09 14:09:15 14:16:55 14:23:54 ← Abnormal flow 14:24:52 14:26:20 ← Abnormal flow 14:27:32 14:28:58 14:31:15 14:32:55 ← Abnormal flow 14:37:04 ← Abnormal flow 14:42:59		
Yoyogi Park	2025.12.16	13:16:09 13:18:44 13:18:46 13:19:51 13:43:45 13:48:35 13:55:07 14:00:00 14:06:05 14:07:17 14:08:07 14:10:11 14:11:05 14:11:44 14:21:30		
Shibuya	2025.10.15	13:16:09 13:18:44 13:18:46 13:19:51 13:43:45 13:48:35 13:55:07 14:00:00 14:06:05 14:07:17 14:08:07 14:10:11 14:11:05 14:11:44 14:21:30		

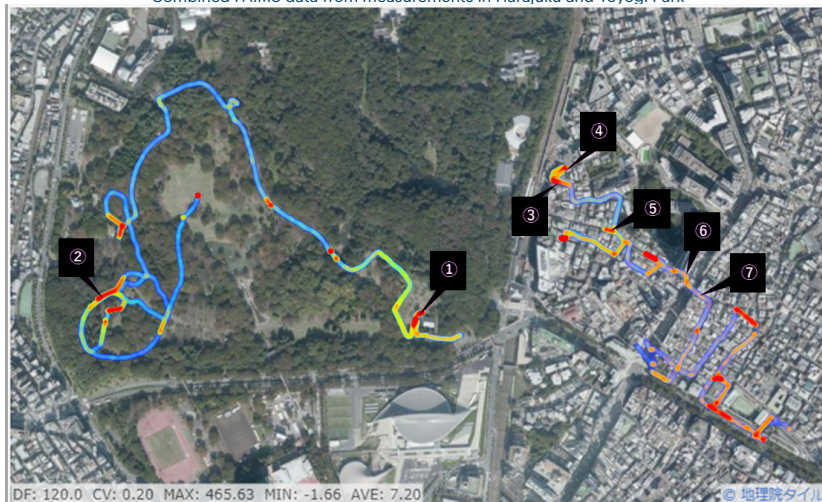
Visualisation of FAIMS data in Dog's Nose





AIMS Measurement Results

Combined FAIMS data from measurements in Harajuku and Yoyogi Park





Time-Based Interface

Turn the trackball to replay the dog's walk through time.

From six hours of *Chiyoko Walk* recordings through Shibuya and Hara-juku, seven moments were selected in which significant changes in air quality closely corresponded with Chiyoko's behaviour. Airborne molecules were broadly classified into L/M/S according to molecular size, then reconstructed using fragrance molecules with similar characteristics.

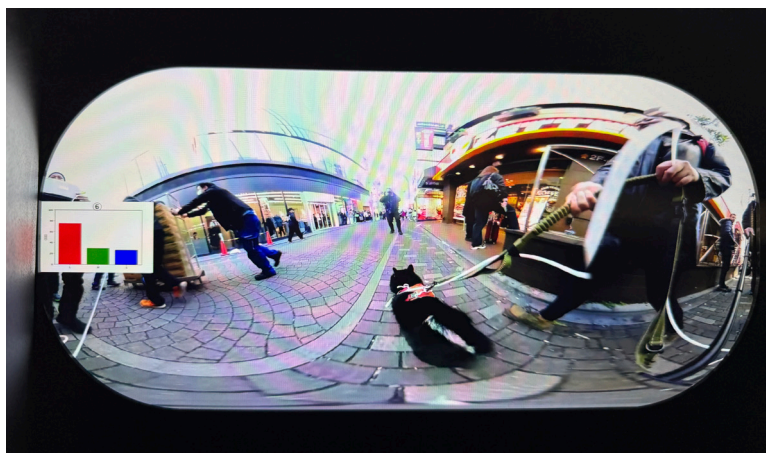
FAIMS functions as a scanner of the air, detecting both odours perceptible to humans and those beyond what human smell. Dogs, mean-

while, possess an olfactory sensitivity many times greater than our own. By combining FAIMS with the dog's extraordinary sense of smell, the system offers a simulated experience of the otherwise inaccessible olfactory layers of the city.

To recreate the recorded smells-capes interactively, scent playback is digitally controlled according to olfactory characteristics, incorporating principles such as the Weber-Fechner law and time-derivative processing.

Equipment:

Computer, trackball, monitor, Aromashooter 2 (Aromajoin)



360° video playback. The meter on the left indicates the amount of molecules being dispersed.



Space-Based Interface

Using microencapsulation technology commonly employed in scented printing and fabric softeners, odours were embedded into a miniature map. Visitors followed the scents like a dog, physically exploring the map.

To avoid affecting the office environment, the scents were detectable only within a range of 10 cm. Three transparent 'primary odours' were created and applied using an analogy with colour mixing; for example, purple areas combined the equivalents of Red and Blue.

Microencapsulation:

Japan Capsule Products Co., Ltd.





Top and bottom-right photographs: Photography by Masashi Otsuto. Courtesy of CCBT.

Odour Abstraction Algorithm

For reconstruction, the data were processed using a bespoke algorithm that accounts for human olfactory adaptation as well as the exhibition environment, duration, and scale. Unlike vision, which reproduces images using the primary colours Red/Green/Blue, olfaction has no established equivalent of primary sensory components. The project therefore proposes an analogous model based on the structure of colour, assuming that smell, too, may consist of three hypothetical primary odours. Data representing larger molecules, such as indole, are translated into fragrance materials with comparable molecular size and olfactory character, such as Indolene.



The next formulations are used to reconstruct the smellscape in both the Time-Based and the Space-Based Interface.

Red : for L-size molecules

Ambrocenide	10%TEC	89
Evernyl	100%	3
Indolene	100%	27
DPG	100%	17
MCT	100%	865
TOTAL		1000

Green : for M-size molecules

Triplal Digustral	100%	200
Blackpepper EO	100%	140
Peppermint EO	100%	140
Petit Grain EO	100%	430
Aurantiol	100%	90
TOTAL		1000

Blue : for S-size molecules

Hedione	100%	333
Calone	100%	74
Calone	10%DPG	185
Floralozone	100%	37
MCT	100%	370
TOTAL		1000

Report: Chiyoko Walk (Excerpt)

Katsuya Ujimoto (Ricoh)

Results

Measurements showed that NH_3 (ammonia) and the S, M, and L molecular ranges were not uniformly distributed throughout the urban environment but exhibited characteristic spatial distributions and temporal variations depending on location.

In Yoyogi Park, relatively high NH_3 signals were observed over a wide area, together with localised hotspots in the M and L molecular ranges. Areas where fallen leaves had accumulated showed increased FAIMS signals, and Chiyoko displayed intensive exploratory behaviour such as running and digging. In open areas of the park, increases in FAIMS signals coincided with Chiyoko's exploratory behaviour, suggesting that both responded to molecules carried by the wind.

In Harajuku, S and M signals remained relatively stable, whereas L-range signals appeared as brief, intermittent events. Chiyoko occasionally paused near luxury boutiques, variety shops, a copybara café, and narrow intersections surrounded by buildings, but more often she briefly investigated before resuming her walk. These localised events may reflect either moving odour sources or intermittent volatile compounds generated by pedestrian traffic and commercial premises.

In many observations, increases in NH_3 preceded increases in the S, M, and L signals, indicating a consistent temporal sequence.

Discussion

Comparison between Yoyogi Park and Harajuku suggests that differences in the spatial structure of odours strongly influenced Chiyoko's behaviour. In Yoyogi Park, naturally occurring elements may have retained odour molecules and formed stable concentration gradients, encouraging sustained exploratory behaviour and locally elevated FAIMS signals. In Harajuku, odours originating from pedestrian activity and the built environment were more diverse and intermittent, producing unstable odour gradients. Chiyoko therefore often detected odours but ended her investigation at an early stage.

These observations suggest that, for Chiyoko, olfactory meaning depends less on odour intensity than on the structure of the olfactory field. At enclosed intersections, transient increases in FAIMS signals coincided with indecisive exploratory behaviour, suggesting the existence of an olfactory chaotic space created by changing wind direction and turbulence. By contrast, open areas and locations with accumulated leaves produced simultaneous responses from both FAIMS and Chiyoko.

The observations also suggest a two-stage olfactory model. Variations in NH_3 concentration may first function as a trigger for detecting unusual environmental conditions. As the source is approached and molecular concentrations increase, patterns within the S, M, and L molecular ranges may then provide qualitative information about the odour. This model is consistent with Chiyoko's behavioural sequence of detection, running, stopping, digging, or ignoring.

The average NH_3 concentration remained below approximately 17 ppb, although local peaks of 100–400 ppb were observed. These results suggest that Chiyoko perceives subtle environmental changes that often remain below the threshold of human perception. Parallel FAIMS measurements made part of this otherwise imperceptible olfactory environment measurable.

(For the full report, see the project archive website.)

Main Dish



Main Dish: Exhibition

Olfactory Intelligence

Plants, insects, animals, and countless other living beings relate to their surroundings through chemical signals carried by scent. Olfaction connects us to this distributed network of intelligence that extends across species. This idea takes the form of a large-scale environmental installation at the Yumenoshima Tropical Greenhouse Dome.

Resources:



Archive (includes video documentation)

<https://ueda.nl/category/english-uk/olfacto-politics/olfactory-biome/>



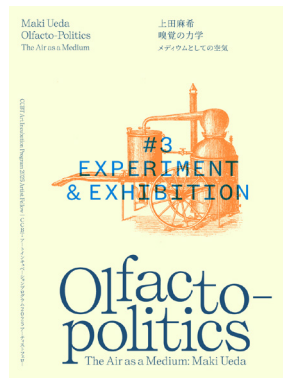
CCBT Event Page: *Aerosculpture ver.2 – Olfactory Biome*

https://ccbt.rekibun.or.jp/en/events/biome_of_scent



CCBT Event Page: *Olfacto-Politics – The Air as a Medium*

<https://ccbt.rekibun.or.jp/en/events/olfacto-politics-ccbt>





30 January–1 February 2026
Aerosculpture ver.2: Olfactory Biome
Yumenoshima Tropical Greenhouse Dome

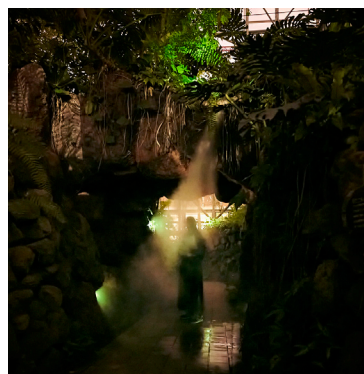


Olfactory Biome

A Participatory Multispecies Environment of Chemical Signals (Aerosculpture ver.2)

"Smell is a long-distance sense, a way of stretching time and finding out in advance what lies ahead."

— Lyall Watson



Olfactory Biome is a site-responsive environmental installation that explores an ecosystem organised through smell rather than vision. Set within a tropical greenhouse, it invites visitors to experience an invisible biome shaped by chemical signals: scents that attract, repel, or confuse other organisms.

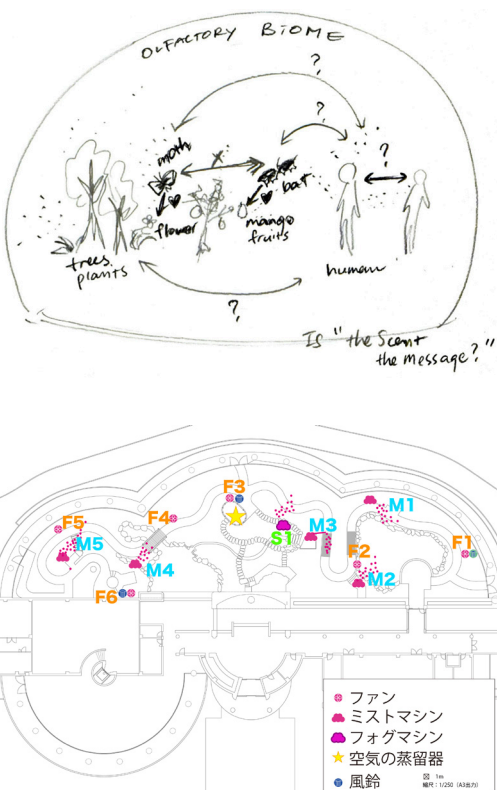
The experience evokes walking through a forest at night. The space is kept in near-total darkness, illuminated only by moonlight filtering through the greenhouse roof. As vision becomes unreliable, percep-

tion is reorganised. Awareness expands in every direction, and the sense of smell becomes increasingly acute. The soles of the feet and ears begin to function almost like eyes. Small blinking lights reminiscent of fireflies provide minimal orientation.

Before entering the space, participants choose the role of a moth, bat, or human, composing fragrances that attract or repel. They carry them on their bodies, becoming mobile sources of chemical signals. Scents dispersed throughout the space by particles such as mist and fog, sometimes visible and sometimes imperceptible, lure and confuse participants.

In natural ecosystems, organisms constantly exchange chemical signals. Flowers emit volatile compounds to attract pollinators; animals such as moths and bats respond to pheromones and food odours, and plants release warning signals when damaged. These invisible exchanges form an atmospheric layer of ecological communication. This installation invites audiences of all ages to participate actively in such an atmospheric field of chemical signals.

The installation also incorporates a sonic environment designed to enable participants to detect each other's movements through changes in echoes, recalling the way moths emit ultrasonic clicks to disrupt bat echolocation and avoid predation. Rather than overwhelming visitors with audiovisual spectacle, *Olfactory Biome* encourages immersion in internal sensory awareness. The work explores olfaction as a means of environmental knowledge, proposing olfactory intelligence as a form of resilience that enables us to perceive and adapt to changing environments.





香りの名前 一覧表

ゴ = コウモリ = 人間 =

誘引 = 忌避 =

ボールの番号	香りの名前	ターゲット	作用	メモ
1	リナロール			ほとんどの香りでいる香気成分。植物に含まれる成分。花や果物などにも含まれるので人間もこの匂いが好き。匂いを好むという点に、そして人間に好まれるという点にどうぞ。
2	ジャスミン			夜に咲く花。神話の「さくらんぼ」に使われる。特にオスの香を誘いたいあなたにどうぞ。
3	安息香酸ベンジル			オスの香の成分（さくらんぼ）。の代替として。特にオスの香を誘いたいあなたにどうぞ。
4	γデカラクトン			果実や香料成分。数年の間に存在する成分。人間の匂い（女性）の体臭に似ている成分でもある。匂いを誘いたいあなたにどうぞ。
5	cis-3-ヘキセノール			草の匂い。植物は根をかられたとき、この匂いを発して周囲に警戒を促している。香はこの匂いを嫌う。香を避りたいあなたにどうぞ。
6	月下美人			オオバコの花。満月や新月の夜にたくさん花をつける。コウモリを誘いたいあなたにどうぞ。
7	アンモニア			ネオンの匂い。動物界がすぐで消える。夜に咲きたるなどという点に、そして人間に好まれるという点にどうぞ。
8	アンモニア酒臭			アンモニアの成分。動物界がすぐで消える。夜に咲きたるなどという点に、そして人間に好まれるという点にどうぞ。
9	酢酸ヘンタール			バナナ、リンゴ、日本の香気成分。コウモリは好む。人間も好む。動物界・植物界を好む。
10	マンゴー			コウモリは好む。人間も好む。動物界・植物界を好む。
11	パーチアール油			白樺の樹皮から抽出された成分。コウモリは好む。人間も好む。動物界・植物界を好む。
12	サガリバナ			石川などの河川沿いで咲くコウモリも好む。コウモリにも好まれるという点にどうぞ。

Distiller of the Air

A monumental sculpture that distills the atmosphere of the biome itself.

Air is cooled until it condenses into droplets, which fall into a glass bowl below. Visitors are invited to lean over the rim of the bowl and smell the accumulated condensate.

Since prolonged exposure to the same atmosphere leads to olfactory adaptation, visitors are effectively unable to smell the air they have been inhabiting. The work, therefore, serves as a symbolic vessel containing the atmosphere collectively produced by everyone present.

Medium: copper vessel, ice, infrared heat lamp, glass bowl

Workshop The Scent is the Message!

This participatory workshop approaches smell as a medium of communication. Participants choose to become a moth, a bat, or a human, and compose a fragrance by selecting olfactory messages based on ecological functions such as attraction and repulsion.

Using a palette of approximately twenty materials, they combine three scents to create a layered chemical message with multiple meanings.

The completed fragrance is worn on the body and travels through space with each participant, generating an ever-changing network of chemical signals. Visitors are encouraged to speak



to anyone whose attractive signal they believe they have perceived. However, interpreting such olfactory signals is extraordinarily difficult for humans. This paradox is itself an integral part of the experiment.

Workshops were held every thirty minutes for groups of up to twenty participants. Every session was fully booked, with approximately 300 people taking part over the course of the exhibition.



Dreams of Signalling and Interaction

Review of Olfactory Biome

Yuki Kimbara
(Poet)



‘Something smells suspicious’. ‘There’s a whiff of trouble’. We occasionally hear expressions such as these in novels, films, or on stage. They rarely refer to an actual odour. Instead, they suggest that something is amiss: a character’s behaviour is questionable, a situation feels unsettling, or something hidden has yet to reveal itself.

Whereas vision excels at perceiving what has already manifested, olfaction seems to reach further, towards things that have not yet appeared. Why might this be?

Entering the dimly lit greenhouse after hours, normally closed to the public, was enough to evoke the mystery of a tropical jungle. Hidden among the lush vegetation were subtle interventions designed to awaken what might be called our wild perception.

Before entering the installation, visitors participated in a perfume workshop titled *The Scent is the Message!*, where each composed a fragrance to wear throughout the experience.

Although that description may conjure the image of an ordinary perfume workshop, it was not.

Rather than creating a pleasant perfume, visitors assumed the role of a moth, a bat, or a human, composing a scent capable of attracting or repelling one or more of those beings. Nineteen fragrance materials were available, including moth pheromone compounds, molecules associated with night-blooming flowers, plant defence chemicals, and a compound first identified in the urine of pregnant women. Three ingredients were blended into a fragrance that carried a silent chemical message.

By carefully smelling the materials and blending them into a small bottle, each visitor created a personal talisman. Yet many of these compounds are not extraordinary inventions; they are substances already drifting through the atmosphere somewhere

on Earth at this very moment. With this thought quietly in mind, each participant assumed the role of a moth, bat, or human.

After spraying the fragrance onto themselves, visitors entered the exhibition.

Moonlight filtered softly through the transparent glass dome. Faint lights, like fireflies, flickered here and there, gently illuminating the path ahead. It was not complete darkness, yet colour had all but disappeared. Trees of every shape dissolved into shades of grey, their leaves extending quietly into the dimness.

Then came the ambient music, drifting in from no discernible source. The movement of air; the vapour; and, as one began to walk, scents that emerged unexpectedly throughout the forest became stronger. They possessed such substance, such presence, such palpable force that appeared—hardly seemed the right word. Rather, they announced themselves.

As visual information gradually receded, it was as though the senses exchanged places. Smell and hearing became strikingly vivid, while even the skin grew more alert. After all, this was a tropical forest at night, where one never knew where allies—or predators—might be lurking.

Before long, I realised that I had entered a realm dense with the scents of life and death. I, too, had become part of the work, creating faint currents of air with every step, leaving subtle traces of scent behind me and gently stirring the atmosphere. It almost seemed as though scent itself possessed a delicate magnetic force.

As the visible world receded and the unseen grew stronger, my body responded instinctively. Passing through a zone of slightly unpleasant odours, I tensed as though brushed by tiny thorns. Wrapped in a pleasant scent, I relaxed without thinking. Yet I also remembered that some beings, such as carnivorous plants, lure their prey into darkness with sweetness alone. Enchantment and unease coexisted, and my body's responses shifted almost imperceptibly from one moment to the next.

Gradually another realisation emerged. If a scent lingered here, then something—or someone—must exist beyond it. I began to sense the presence of beings attempting to communicate with me through silent messages addressed not to my ears but to my sense of smell. Perhaps they were waiting somewhere beyond the scent. Perhaps they had already gone, leaving only their traces behind. Standing in the present, I found myself breathing in a world composed equally of premonition and afterglow.

At the entrance, the exhibition's introductory panel opened with a quotation from Lyall Watson: 'Smell is a long-distance sense, a way of stretching time and finding out in advance what lies ahead'. Before entering the exhibition, these words had been unfamiliar to me. By the time I left, they felt profoundly true.

Leaving the greenhouse and stepping back into the night, I realised that, whether we are aware of it or not, we are constantly sending messages through scent. We can never truly discard our smells. Only then did it occur to me that this exhibition had taken place on Yumenoshima, an island created from reclaimed landfill. The traces of things that can never be thrown away continue to communicate, intertwine, and resonate with one another like a shared dream. That dream is, unmistakably, reality.





The Artistic Investigation of Olfacto-Politics

Kazunao Abe (Curator / Producer)

Maki Ueda's ongoing project, *Olfacto-Politics* invites us to reconsider the significance of olfactory art. Until recently, art centred on smell, or more broadly, olfaction, has remained a remarkably underdeveloped field. While fragrances have long been formulated for cosmetics and other applications designed to produce pleasant sensory experiences¹, artistic practices that engage with smell itself, in all of its complexities, have scarcely taken shape as independent disciplines. Why has this been the case?

One possible explanation lies in the nature of the senses. Among the five human senses, optical vision and hearing have been readily translated into digital data; however, smell has resisted this conversion. Unlike colour, which can be described using RGB values, or sound, which can be analysed in terms of frequencies and wavelengths, smell cannot be easily reduced to a small set of fundamental principles. Odours arise from highly complex molecular structures, and their perception depends on spatial conditions that are difficult to isolate and reproduce precisely. However, recent advances in artificial intelligence have altered this situation. The digitisation of smell and the possibility of faithfully reproducing olfactory experiences are gradually becoming a reality.

The ability to translate perception into numerical data has long been a defining feature of civilisation. Once a sensory modality becomes data, the space and time associated with that perception are subject to human control. Contemporary warfare provides a striking example. The ongoing conflicts between the United States and Iran, and between Ukraine and Russia, have increasingly become contests over the development of remotely operated, unmanned drone technologies and the information they produce. These systems rely primarily on visual data collected by drones, supplemented by auditory information. Increasingly, advanced AI integrates the streams of information gathered independently by multiple drones, acting as a proxy for human analysis. It rapidly synthesises dispersed data, generating new commands directed either at the system as a

whole or at individual units. This visual-centred mode of information processing makes it possible to control, edit, modify, replay, or erase space and time.

If we shift our perspective from warfare to art, a similar hierarchy of perception can be found within the modern art museum, despite its apparent distance from the battlefield. Museums privilege vision, occasionally supplemented by hearing, while organising space almost exclusively for visual experience. Other senses are largely excluded from the exhibition system. Even digital art, or media art, initially emerged by introducing media technologies and communication as alternatives to the ideology of visibility. In this sense, artistic practices and military technological developments have long shared technological foundations and ideological affinities.

This privileging of vision may ultimately be rooted in human brain structure. Neuroscience states that sensory information from optical vision, hearing, and touch passes through the thalamus before reaching the cerebral cortex. Olfaction alone is an exception. Signals from the olfactory bulb bypass the thalamus entirely and project directly to the olfactory cortex. The olfactory bulb is directly connected to regions of the limbic system, including the hypothalamus, amygdala, entorhinal cortex, and ventral striatum. Unlike visual or auditory information, olfactory signals reach the limbic system, a region associated with instinct, emotion, and intuition without first passing through the neocortex. When we encounter a scent, an emotional response often arises before we can consciously identify or describe the smell. It is as though a cloud of feelings suddenly forms around us, enveloping us, before reason has time to intervene. In this sense, Marcel Proust's famous account of involuntary memory in *In Search of Lost Time* finds support in contemporary neuroscience. Smells can be understood as a medium that directly transports us to another memory. Given these fundamentally non-rational qualities of olfaction, it is striking that the history of art, despite its critical ambitions, has remained overwhelmingly centred on optical vision. Art profoundly depends on sensory domains, whose space and time can be measured, organised, and controlled. This tendency can already be found in Immanuel Kant's *Critique of the Power of Judgment*, where smell is almost entirely absent from the sensory examples through which aesthetic judgement is theorised.

Within the history of modern philosophy, one of the few sustained reflections on olfaction appears in Max Horkheimer's and Theodor W. Adorno's *Dialectic of Enlightenment*. Published in 1944, during the Second World

War, the book is deeply marked by its historical moment. Its discussion of smell emerges in relation to the Nazi regime's deployment of olfactory prejudice as part of its anti-Semitic propaganda. Even within this historical context, Horkheimer and Adorno's account of olfaction remains incisive. They distinguish smell from the institutionalised mimesis associated with optical vision, a form of representation grounded in rational judgement that regulates the distance between subject and object. In contrast, olfaction is the surviving trace of a more primordial form of mimesis.

As they write:

Of all the senses the act of smelling, which is attracted without objectifying, reveals most sensuously the urge to lose oneself in identification with the Other. That is why smell, as both the perception and the perceived, which are one in the act of olfaction, is more expressive than other senses. When we see we remain who we are, when we smell we are absorbed entirely. In civilization, therefore, smell is regarded as a disgrace, a sign of the lower social orders, lesser races, and baser animals.²

Apart from the book's broader critique of the Enlightenment, this passage also offers compelling anthropological insights. Smell is a fundamentally embodied sense that brings us into immediate contact with what we perceive. In doing so, it dissolves the boundary between subject and object in ways that are unavailable to the other senses.

Horkheimer and Adorno's discussion partly draws on Freud's *Civilization and Its Discontents* (1930).³ Freud approaches olfaction from an anthropological perspective, arguing that as our apelike ancestors descended from the trees and adopted upright bipedalism, the face, and with it the nose, was lifted away from the ground. In quadrupeds, smell is the principal means of locating food, detecting predators, and finding mates. Once humans became upright, however, olfaction gradually lost its evolutionary primacy, and optical vision emerged as the dominant mode of perception. Freud further suggested that sexual arousal in quadrupedal animals is primarily olfactory and cyclical, and is triggered by odours emitted during oestrus. As the genitals became physically separated from the ground through an upright posture, the importance of these olfactory stimuli diminished. Vision became the principal route through which sexual attraction was mediated while simultaneously functioning as a continuous perceptual system for vigilance, defence, and control. This evolutionary shift was accompanied by an expansion of brain capacity and the strengthen-

ing of the human skull. At the same time, the sexual and excretory organs increasingly came to be concealed as 'shameful' parts of the body, a tendency famously exemplified by making additions to Michelangelo's *The Last Judgment* in the Vatican. Similarly, odours associated with bodily functions, such as faeces and urine, came to be regarded as offensive and culturally unacceptable. It is particularly striking that the institutional logic of modern art museums mirrors this structure. The museum privileges the visual system while suppressing the olfactory system, reproducing the same sensory hierarchy described by Freud. Works such as John Waters' film *Pink Flamingos* and Piero Manzoni's art object *Artist's Shit* can, therefore, be understood as deliberate inversions of this hierarchy.

More recently, Benjamin D. Young of the University of Nevada, whose research explores the philosophy of olfaction, argued that despite its profound significance for perception, consciousness, and mental life, smell has remained remarkably underexamined. In response, he proposes a new framework for understanding olfaction: the concept of the 'smellscape'.⁴ Rather than following the philosophical tradition established after Kant, which assumes discrete, autonomous objects apprehended through rational cognition, and treats smell as a sense incapable of maintaining critical distance, Young understands perception as engagement with a complex and heterogeneous environment. According to Young, natural smells are composed of countless odourants that form complex, dynamic, and continually evolving odorous objects within an environment. Through experience, we have gradually learned to group these olfactory cues into meaningful patterns. Therefore, a smellscape exceeds both a simple mixture of odours and their individual qualitative properties. It possesses its own distinctive structure, one that resembles a puzzle in which we perceive odours as distal objects situated within the surrounding environment, rather than merely as sensations occurring within ourselves. Young's theory offers a fundamentally new account of these perceptions. Seen in this light, Maki Ueda's *Aerosculpture ver.2: Olfactory Biome*, presented beneath the vast dome of the Yumenoshima Tropical Greenhouse as one of the two principal projects of *Olfacto-Politics*, was an exceptionally apt and intuitively compelling choice of environment that can genuinely be understood as a smellscape.

Ueda's *Olfacto-Politics* is a compelling project that, while grounded in the latest technological developments and artistic practices, also opens broader questions in cultural anthropology and environmental thought. Two major projects have explored the complementary dimensions of

this enquiry: *Aerosculpture ver.2: Olfactory Biome*, presented at the Yumenoshima Tropical Greenhouse, addresses the realm of flora, whereas *Olfacto-Politics: The Air as a Medium*, presented at CCBT, turns its attention to fauna. The choice of the tropical greenhouse was particularly significant. As visitors moved through the space, its cyclical circulation and layered rhythms became perceptible, both physically and sensorially. At the same time, the vast glass dome recalled what Claude Lévi-Strauss described in *Tristes Tropiques*: the overwhelming experience of the immense natural canopy perceived from within the Amazon rainforest. More importantly, the installation presented plants, soil, and water as an interconnected ecology rather than as separate elements. Pleasant and unpleasant odours were distributed throughout the environment. In particular, soil possesses a density and tactile smell that is quite distinct from the airborne smellscape, striking the brain with a different type of immediacy. Recent research has shown that plants release large quantities of volatile molecules into the atmosphere, enabling trees, which themselves cannot move, to communicate with one another by signalling the presence of insect infestations. Beneath the ground, another network operates. Through roots, rhizomes, and the mediation of fungi and bacteria, neighbouring plants, and even those of different species, exchange nutrients and water in relationships of mutual support. Plants possess their own form of perception towards the underground world. They have no eyes in the conventional sense, yet they are capable of sensing their surroundings and communicating with each other. If so, can we still claim that animals or humans occupy a position of superior intelligence?

Fundamentally, a worldview centred on the higher senses of optical vision and hearing continually reproduces the vertical structures of domination and hierarchies of upper and lower, surface, and depth. Freud's hypothesis that civilisation originates from the repression of bodily drives rooted in our organic condition is predicated on such a structure. However, plant philosophy suggests an altogether different model. Above and below ground do not exist as a hierarchy but as two parallel worlds connected through the trunk as an interface. Their relationship is one of coexistence rather than repression. Accordingly, the presence and functions of olfaction above and below ground are fundamentally different.

In this sense, Ueda's *Olfacto-Politics* is a genuinely alternative artistic project, one that places olfaction, so long neglected, at the centre of its enquiry. Through projects such as *SMELL LAB*, it has transformed a radical conceptual proposition into a tangible artistic and research practice.

That such a project should emerge at a moment when the world finds itself in profound uncertainty is remarkable. It feels less like the arrival of a single artwork than the beginning of a historical turning point, not only for our time, but also for art itself. However, my own experience with the work unfolded in a far more contemplative manner. I found myself wandering slowly beneath the skeletal glass dome of the tropical greenhouse beneath a moon, visible through its transparent roof, circling the space several times and sometimes even retracing my steps. The scent of soil and water repeatedly drew me into an immersive world that was both unfamiliar and deeply familiar to me. Drifting through this atmosphere, I found myself reflecting on the immense age and unfathomable depth of plant life on Earth. Perhaps this is what olfaction ultimately offers: immersion into an altogether different mode of being in the world. Perhaps this experience, a world disclosed through smell alone, is something that language and images can never reproduce.

¹ Conversely, at the opposite end of the spectrum from a refined and pleasurable fragrance, John Waters' film *Pink Flamingos* (1972), starring Divine and notorious for its deliberate pursuit of bad taste, reportedly featured a special New York screening during which bags containing the smell of dog excrement burst inside cinema to coincide with a particular scene, filling the auditorium with an overwhelming stench. Ironically, this anticipates recent research suggesting that unpleasant odours are processed slightly faster than pleasant ones by the human brain. It also demonstrates a distinctive characteristic of smell as a medium; unlike visual or auditory information, offensive odours cannot simply be 'cancelled'.

² Max Horkheimer and Theodor W. Adorno, *Dialectic of Enlightenment: Philosophical Fragments*, translated by Edmund Jephcott (Stanford, CA: Stanford University Press, 2002), "Elements of Anti-Semitism: Limits of Enlightenment."

Of all the senses, the act of smelling, which is attracted without objectifying, reveals most sensuously the urge to lose oneself in the other and become like it. When we see we remain who we are; when we smell we are absorbed entirely. Thus, in civilization, smell is regarded as a disgrace...

(All quotations in the text are taken from this English edition).

https://sisu.ut.ee/wp-content/uploads/sites/204/max_horkheimer_theodor_adorno_gunzelin-no-eri_eb-ok_org_.pdf?utm_source=chatgpt.com

³ Sigmund Freud, *Civilization and Its Discontents*, Chapter 4. The Standard Edition of the Complete Psychological Works of Sigmund Freud, Vol. XXI, translated by James Strachey (London: Hogarth Press, 1961).

⁴ Benjamin D. Young develops the concept of the smellscape based on what he calls Molecular Structure Theory, which distinguishes three interconnected levels of olfactory perception: olfactory qualities, odorous objects, and distal entities. See Benjamin D. Young, *Stinking Philosophy!* (Cambridge, MA: MIT Press, 2024).

Dessert

Afterword

In the 1960s, the Canadian media theorist Marshall McLuhan coined one of the best-known observations in media studies:

‘The medium is the message’.

His proposition was that the medium itself shapes human perception and society even more profoundly than the message it carries.

The culmination of my CCBT fellowship became my own interpretation of this idea:

‘The scent is the message’.

The exhibition *Olfactory Biome* and its workshop were conceived as a single olfactory experience following this idea.

The number of parameters to consider was almost endless: season, humidity, temperature, time of day, audience, the scale of the space, electrical capacity, budget, staffing, motifs and context, fragrance selection, concentration, molecular weight, diffusion, solvents, persistence, spray timing, spatial olfactory composition, safety, the Weber–Fechner law, olfactory fatigue, airborne particles, lighting, visitor flow, expected attendance, clothing and fabric absorption, airflow, scents from plants, the greenhouse’s ambient odours, ventilation, northerly winds, and the relationship between smell and the other senses, particularly hearing.

The work itself was ephemeral. In the end, little remains but the recipe that brought these elements together: an Excel spreadsheet.

Even so, I left with a strong sense that this was only the beginning. What continues to fascinate me is that, in olfaction, the pursuit of intelligence seems inevitably to lead back to instinct.

My heartfelt thanks go to everyone who visited the exhibition and participated in this experiment, and to all those who helped make *Olfacto-Politics* possible.

Maki Ueda

Credits

Concept / Direction / Composition: Maki Ueda

Assistant: Naoko Kusunoki

Technical Direction: Katsuhiko Tabei (arsaffix Inc.)

Technical Staff: Miki Hirase (arsaffix Inc.), Shumpei Inada (CCBT)

Graphic / Asset Design: Sumire Kobayashi

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Documentation Video / Video Editing: Ryuichi Maruo

Production Coordination: Haruka Ito (CCBT), Naho Kato (TASKO), Tamae Kobori(CCBT), Hiro Mukai (TASKO), Nonoka Uehara (TASKO)

The Olfactory Seminar SMELL LAB: All the Members

Symposium Speakers: Yoko Iwasaki (Professor, Kyoto Saga University of Arts), Kazushige Touhara (Professor, Graduate School of Agricultural and Life Sciences; Dean, Faculty of Agriculture, University of Tokyo), Katsuya Ujimoto (Ricoh Company, Ltd.)

Exhibition Aerosculpture ver.2 - Olfactory Biome -

Acoustic and Sound Design: Yota Morimoto

Lighting Device Design & Production: Kenichi Takahana

Exhibition Operations: Yusuke Ide (TASKO), Mika Masaka (TASKO), Hiro Mukai (TASKO), Kayano Nakamura (TASKO), Naoki Taichi (TASKO)

With the Cooperation of: Seiko Giken Inc., Morimoto Yota Laboratory (Waseda University)

Co-organizer: Yumenoshima Tropical Greenhouse Dome

Organizer: Civic Creative Base Tokyo [CCBT]

Exhibition Olfacto-Politics: The Air as a Medium

Measurements / Surveying / Replay: Katsuya Ujimoto (Ricoh Company, Ltd.)

Fixture Fabrication: Masashi Atsumi

Sensor-reactive Fan Design: Kenichi Takahana

Dog: Chiyoko Ueda

With the cooperation of: SMELL LAB Members, and Friends



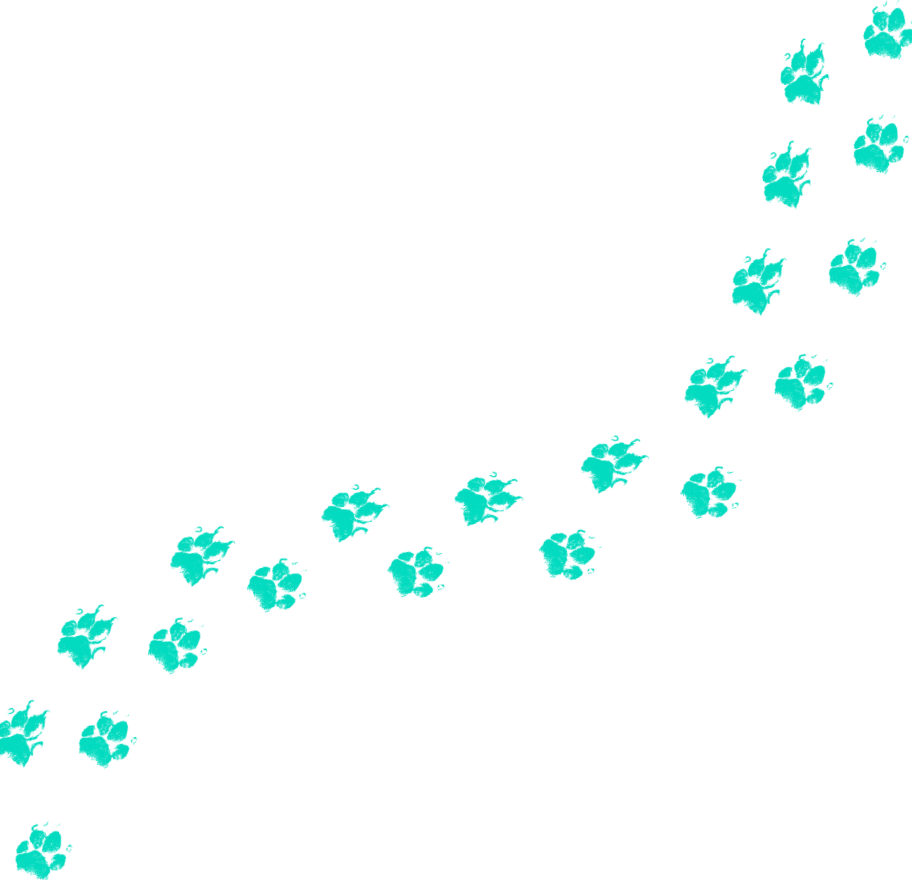
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