

## BIO-MATERIAL CONSULTANT



Not one day passes without a reminder that we must act to mitigate the effects of climate change .

Materials are the building block of our society and they are at the core of innovative circular economies forming.

That is why I support companies and industries with my expertise in biobased / biodegradable plastic, (bio)-composite, and (bio-)material.

Every waste stream is different, each context is unique. I do not like doing the same thing twice so I adapt my role and action plan to every new assignment.

My services range from setting up material databases to developing tailor-made bio-composites.





## IDENTIFY

We target bio-based resources that are relevant to your business and identify bio-material potentials.

Whether you are in the automotive, retail, hospitality, food, fashion or footwear, there is a relevant waste streams to tap into. We will find it.

## INSPIRE

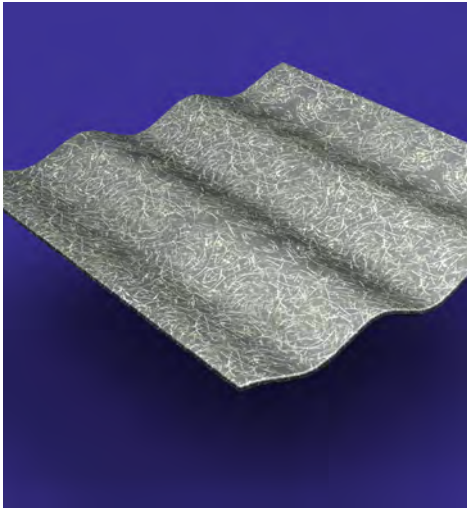
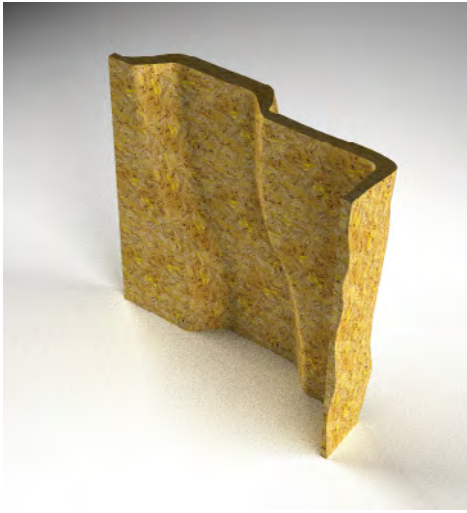
We design bio-material narratives to inform your consumers.

We inspire your team with color, material and finish (CMF) studies, and set up material libraries to support specific projects.

## IMPLEMENT

We love cross-disciplinary collaborations. Together with material producers, compounders and scientific partners, we can R&D bio-materials based on the latest scientific knowledge.

We develop materials with contemporary aesthetics that your production chain can actually process.



## CLIENTS REFERENCES

FONDATION LUMA  
ELHO GROUP  
L'OREAL (LANCÔME)  
LVMH  
LE MERIDIEN - MARIOTT  
SEABOURN CRUISE LINE

**Marriott®**

**LUMA FOUNDATION**

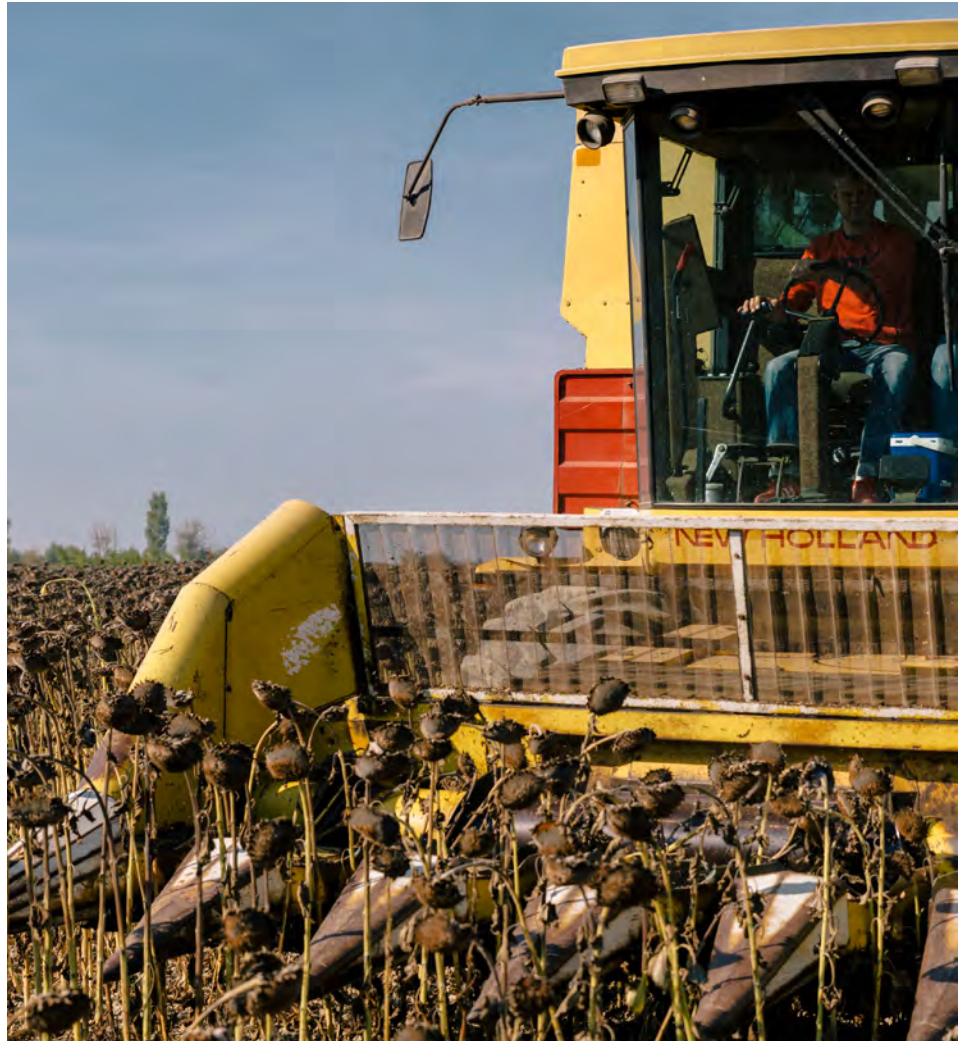
*Le*  
**MERIDIEN**

**SEABOURN®**

**elho®**

**LANCÔME**





## BIO-BASED RESSOURCES

Bio-based resources are becoming desirable and viable commercial choices for industries.

We target biomass by-products and waste streams relevant to your business.



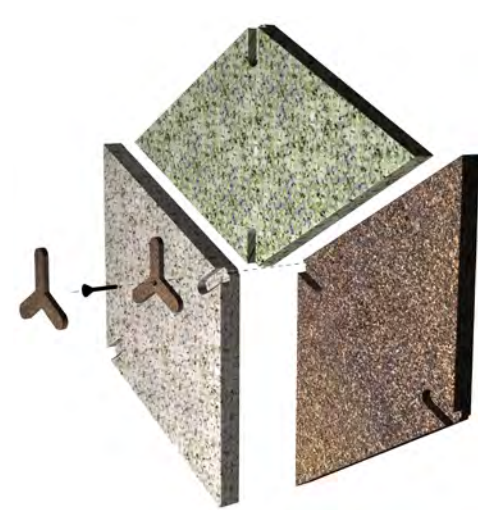
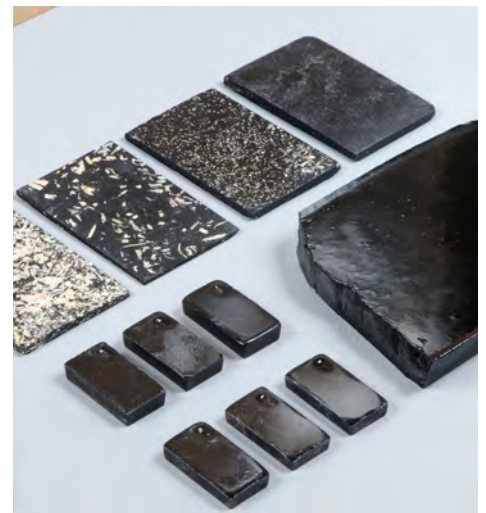


## INDUSTRIAL BY-PRODUCTS

Design is not only about products but also about (natural-) resources, (bio-) cycles and (eco-) systems.

We develop bio-material solutions embedded within production and consumption systems.





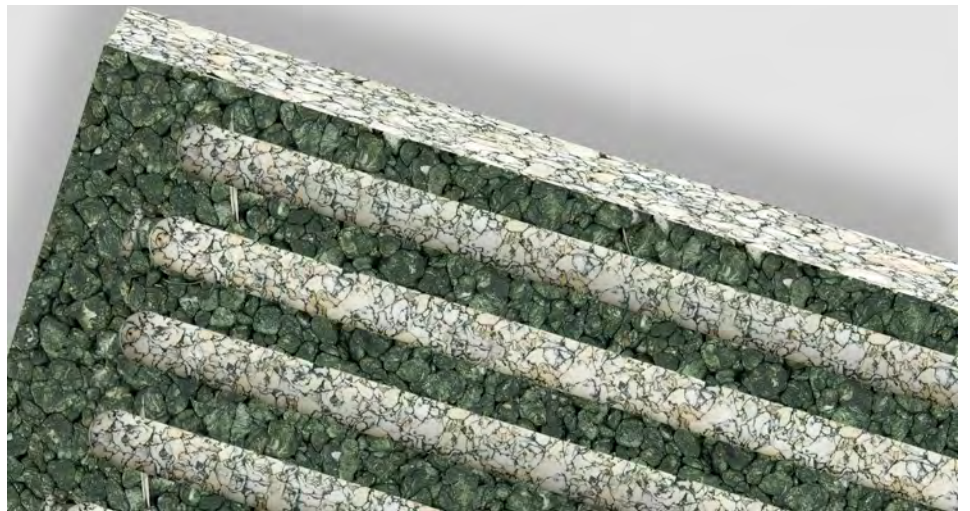
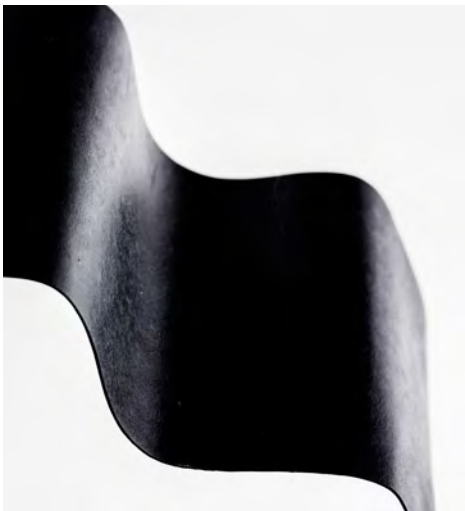
## BIO-MATERIAL DEVELOPEMENT

Bio-based materials are not just replacing plastic.

We create novel & unique bio-materials going beyond preconceived idea and expectations set by durable & disposable plastics.

and we develop their unique values, characteristics & mechanical proprieties.

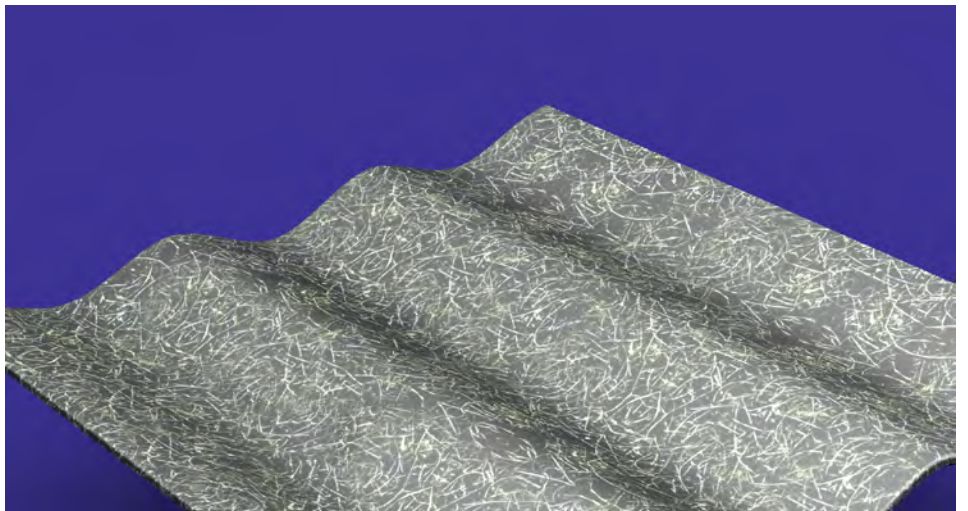
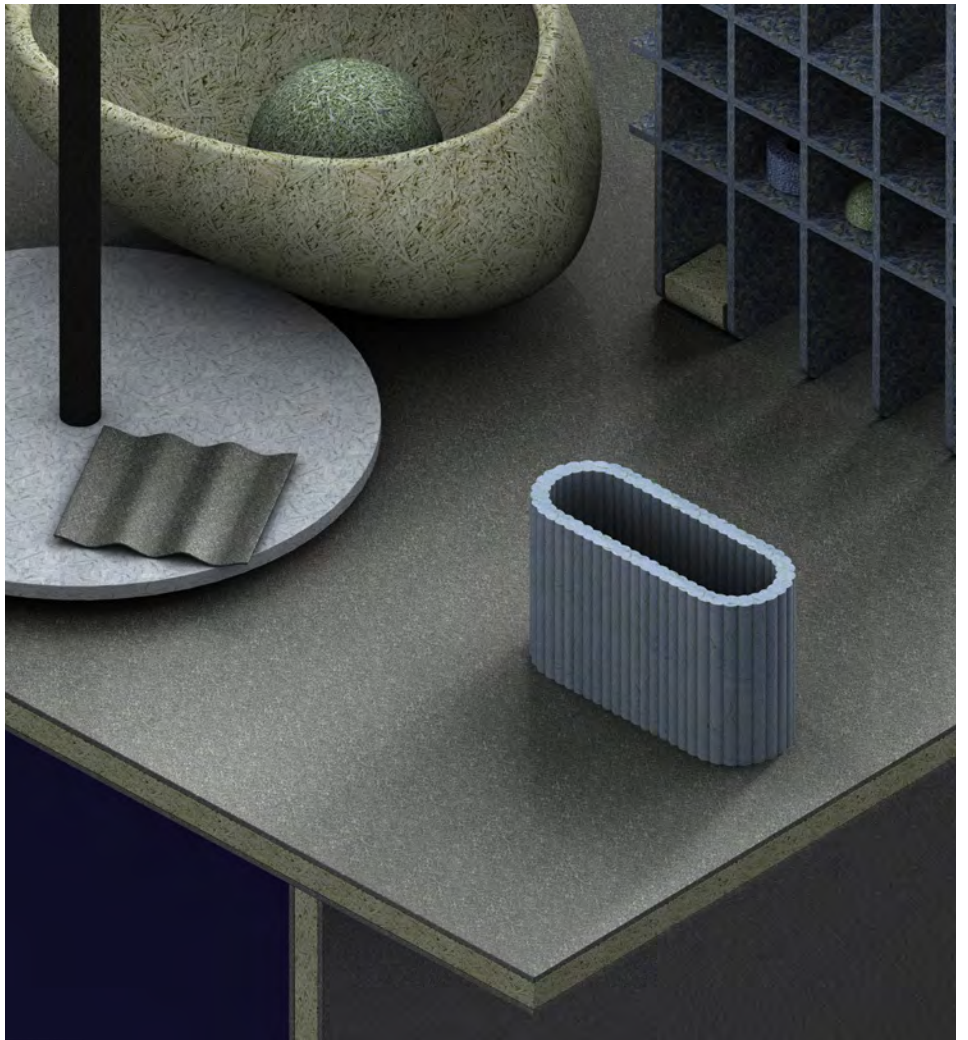




## A SYSTEM OF BIOMATERIALS MADE FROM SUNFLOWER BY-PRODUCT

Focusing on the transformation of bio-matter, this project explores the potential of sunflower leftovers to create new applications and prototypes embedded in sustainable, innovative production systems.

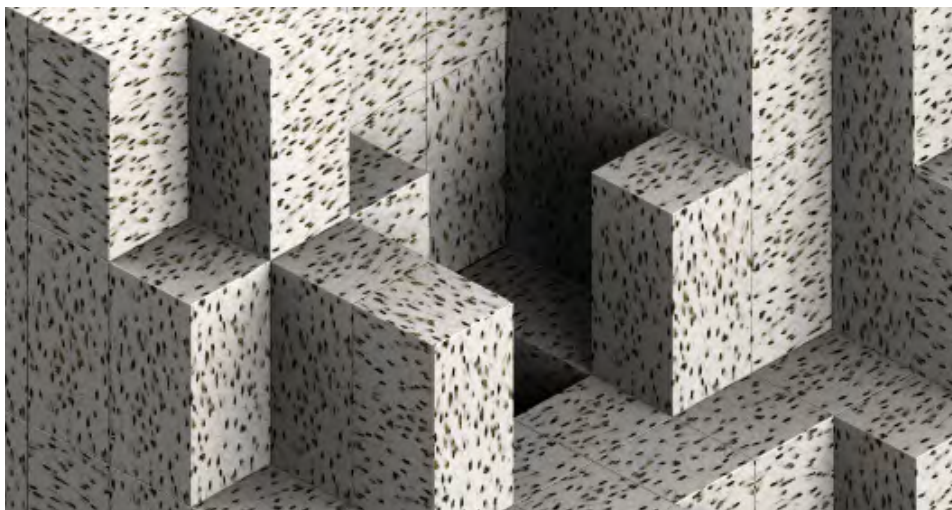
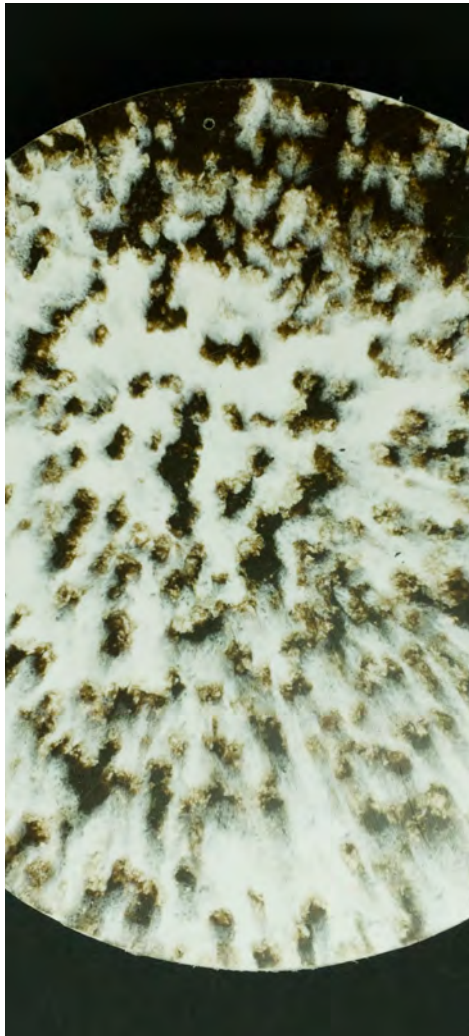




## FROM INVASIVE SPECIES... ...TO BIOMATERIALS

We have been developing biocomposites based on invasive species such as Thistles.





## FROM MUNICIPAL WASTE WATER ... ... TO BIOPLASTIC

PHA polymer and cellulose fiber can be extracted from municipal wastewater and turned into a bio-composite. This composite can be biodegraded in the same water it originated from making it a truly circular material.

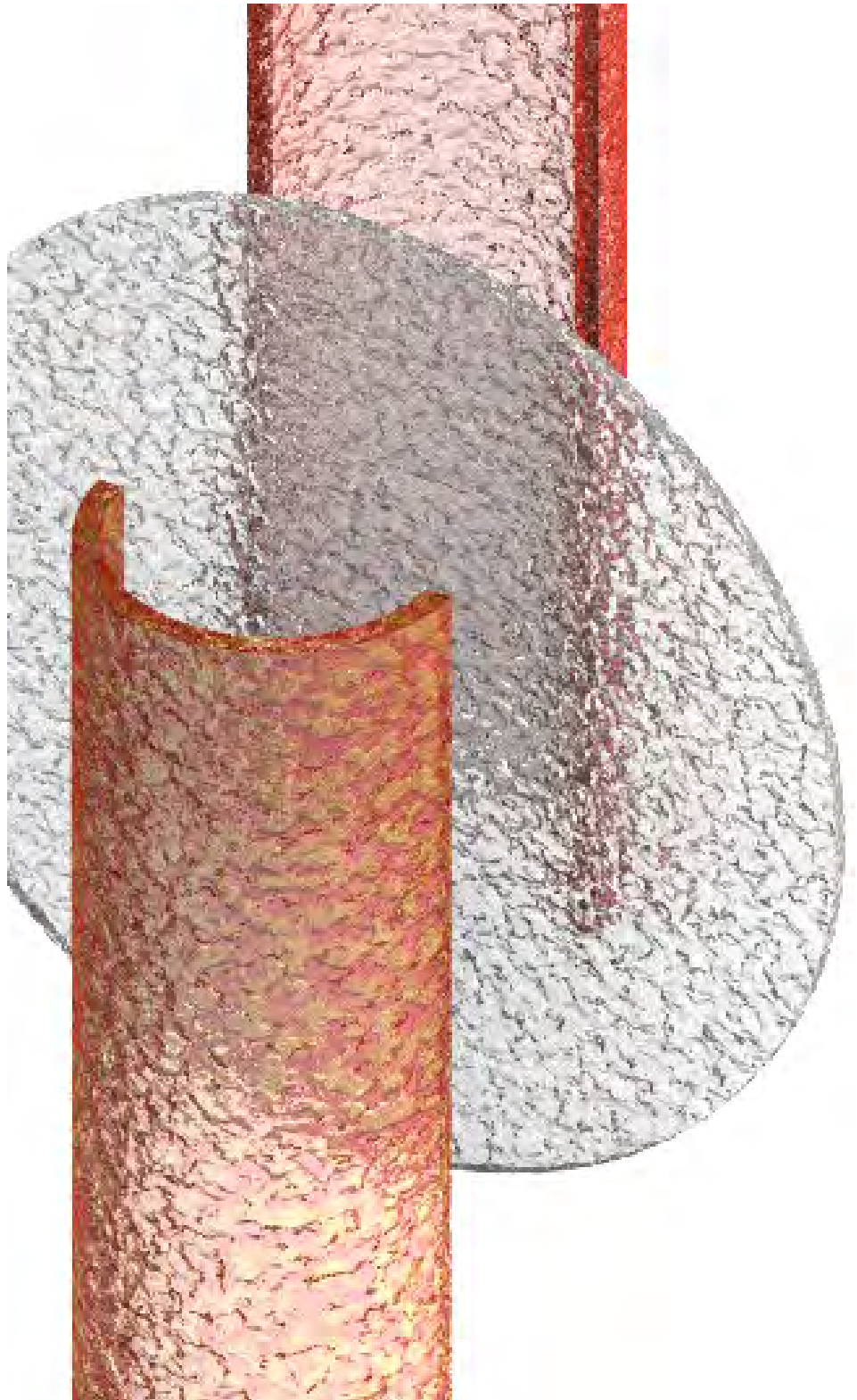




## PINE TREE FULL-USE

This project proposes to use natural building blocks extracted from the Pinus Pinaster tree to develop sustainable materials. The result is an abstraction of a tree, a black matter joining, coating, blending in and contrasting with pine wood.



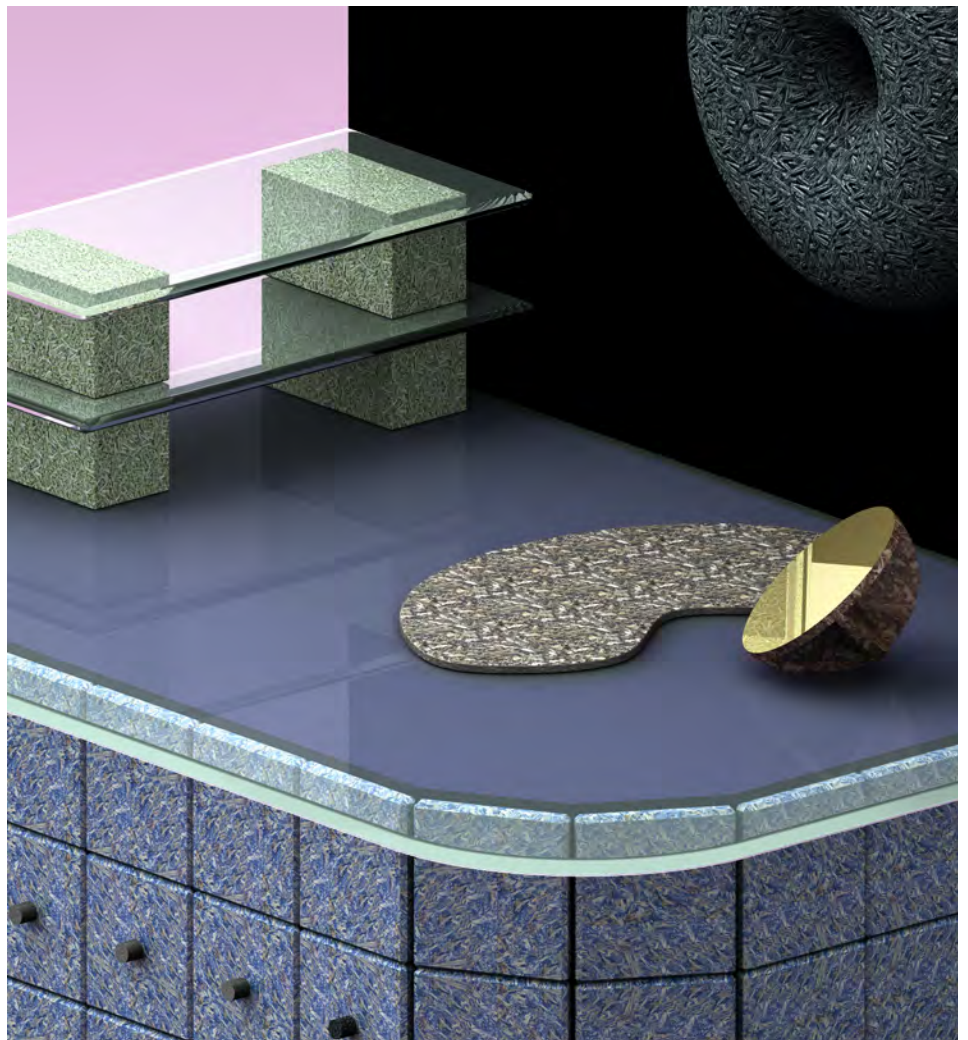


**From car light...**

**...to diffuser**

Car lights are mostly made of PMMA. We developed a straight forward process to recycle PMMA.





## FROM DISTILLATIONS BY-PRODUCT... ...TO BIOMATERIALS

Fragrances are distilled from roots, leaves, bark, and flower,... of various plants. A large quantity of biomass is required to obtain a small quantity of Absolute - the most concentrated form of fragrance. The by-products of these extraction processes can be turned into decorative and functional bio-materials.





## STUDIO THOMAS VAILLY

Douglashout 125  
5621 DE Eindhoven  
The Netherlands

E: [Thomas@studiothomasvailly.com](mailto:Thomas@studiothomasvailly.com)  
M: +31 6 37 43 18 77