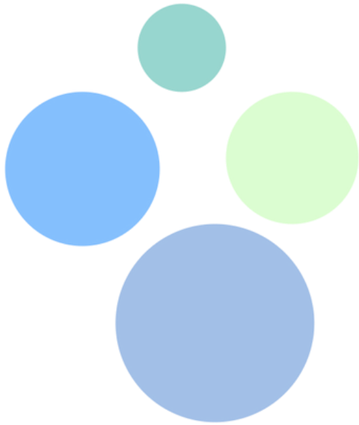
# Filter2Less



Glass2mass team 1
Laura del Río, Marc Clascà, Luca Rosati, Arslan Nafikov, Gorka Pradas

Filter2Less

# Context →

" Every time we clean a piece of cloth, up to **700,000** microscopic **fibers reach the oceans**, are swallowed by marine life and enter the food chain "

" Almost **half of the microplastics** in the oceans come from the washing of **synthetic textiles** "

https://www.ccma.cat/324/cada-quant-hem-de-rentar-els-texans-i-els-llencols-entre-la-higiene-i-el-medi-ambient/noticia/3229334/
https://www.statista.com/chart/17957/where-the-oceans-microplastics-come-from/

# Conciousness comes when we see or touch the reality

S. Pahl and K. J. Wyles, “The human dimension: How social and behavioural research methods can help address microplastics in the environment,” Analytical Methods, https://pubs.rsc.org/en/content/articlehtml/2017/ay/c6ay02647h (accessed May 26, 2023).

Filter2Less

# Filters are the solution, but...

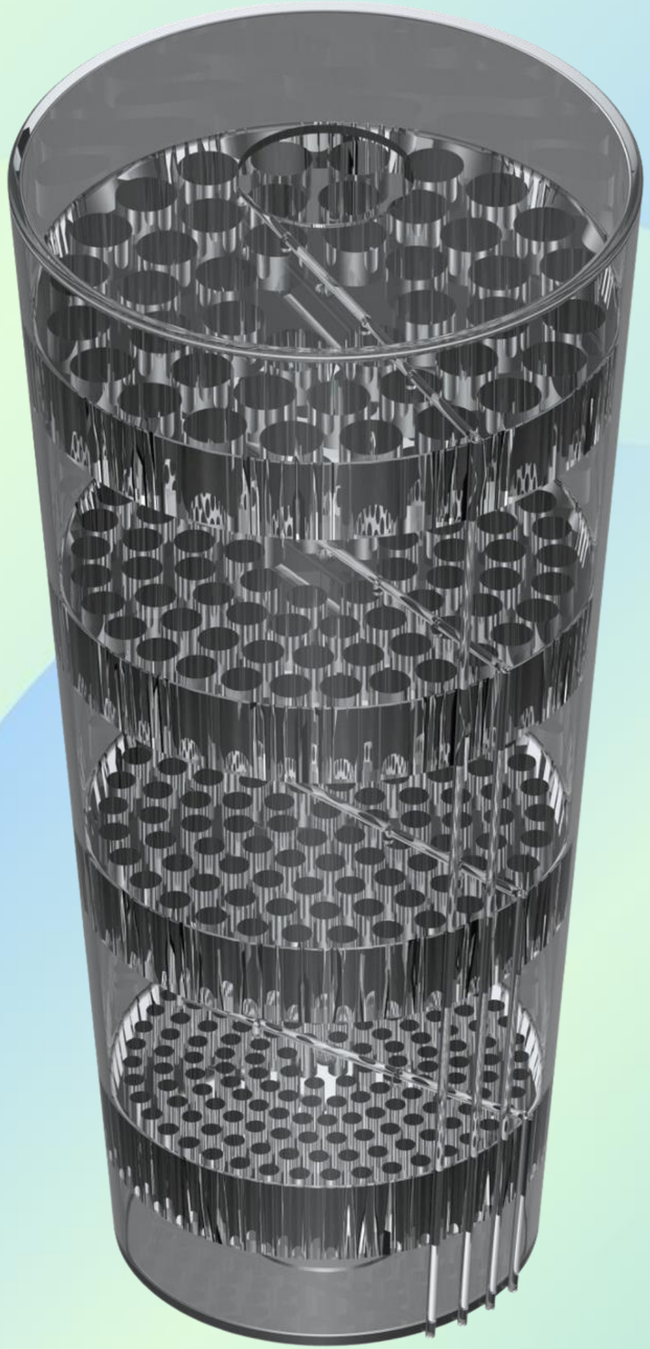
Current filters are made of plastic or paper

- Non - recyclable
- Prone to degradation
- Low temperature resistance
- Low chemical resistance

Filter2Less

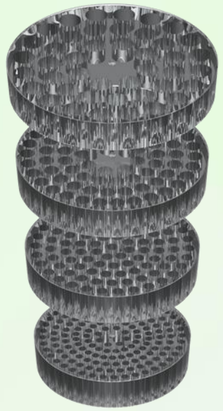
# Glass filter + in-device microplastics diagnoser

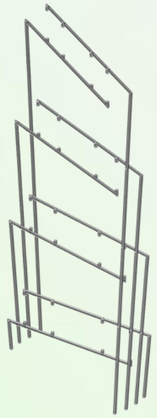
- Increased filter durability
- Recyclable
- Filtration efficiency

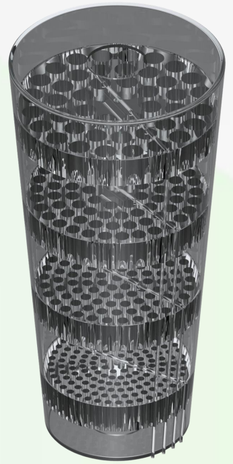


# Enabling characteristics

Filter2Less







## Precision glass filter

We can achieve down to 10nm pores with our fabrication process

## Full optical properties

Our glass has full oprical properties and transmits UV light. The device includes optical lanes to guide the light through the inner filters

## One-piece fabrication

Because we can 3D print it, the filters and the enclosure can be printed as the same structure, making easier

## Convenient and visible

It is small, easy to install and allows any small business and household to see their impact on microplastics

# Where our solution applies ←

- Households
- Laundromats
- Small factories

but we can imagine lot more...

# Thanks for your attention!