

[High-energy communication](#)[Stable beams](#)[LHC Report: First stable beams at 6.5 TeV](#)[FameLab International Final: a triumph for Switzerland and CERN !\[\]\(19d44b37fb4fa155bf9d60c77a3d3cb2_img.jpg\)](#)[CERN openlab Open Day](#)[EuroCirCol: A key to New Physics](#)[Opening science to the world; opening the world to science](#)[Plastic fish !\[\]\(9f3852d68d41e1e95bc4ec10e81aba4b_img.jpg\)](#)[Computer Security: The dilemma of fractal defence](#)[Ombud's Corner: Bystanders, you can have a role too](#)[Matthieu Cattin \(1982 - 2015\) - Hervé Milcent \(1965 - 2015\)](#) [Subscribe by RSS](#) [Subscribe by RSS for this category only](#)

PLASTIC FISH

In terms of weight, the plastic pollution in the world's oceans is estimated to be around 300,000 tonnes. This plastic comes from both land-based and ocean-based sources. A lecture at CERN by chemist Wolfgang Trettnak addressed this issue and highlighted the role of art in raising people's awareness.



Artwork by Wolfgang Trettnak.

Packaging materials, consumer goods (shoes, kids' toys, etc.), leftovers from fishing and aquaculture activities... our oceans and beaches are full of plastic litter. Most of the debris from beaches is plastic bottles. "PET bottles have high durability and stability," explains Wolfgang Trettnak, a chemist by education and artist from Austria, who gave a lecture on this topic organised by the Staff Association at CERN on 26 May. "PET degrades very slowly and

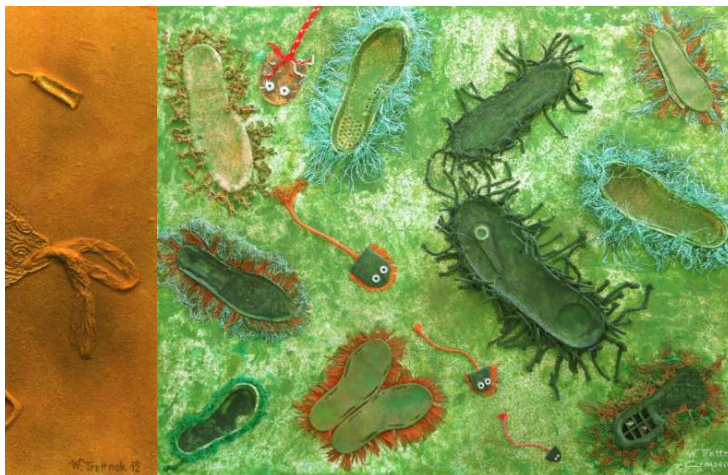
the estimated lifetime of a bottle is 450 years." In addition to the beach litter accumulated from human use, rivers bring several kilos of microplastics to the sea every day. Many toxic substances are accumulated or absorbed by plastic debris. They include polychlorinated biphenyls (PCBs), pesticides (e.g. DDT) and polycyclic aromatic hydrocarbons (PAHs); these substances can all be carcinogenic and mutagenic.

The scenario is frightening. Plastic, easily confused with jellyfish or plankton, is ingested by fish, turtles, other marine animals and even birds. "In March 2012, a sperm whale was found dead on a beach in Granada, Spain," explains Wolfgang Trettnak. "The whale had ingested 30 square metres of transparent plastic."

Unfortunately, plastic in the oceans also comes from containers lost deep in the sea. "This is something that can hardly be controlled," says Wolfgang Trettnak. "However, we can do a lot by changing people's habits. About 80% of the total amount of plastic waste that impacts the marine environment comes from land-based sources, with beach tourism being one of them."

Trettnak, who has dedicated the last ten years of his life to producing artwork inspired by science, believes that art is a very effective way of raising awareness about this problem worldwide. "I have exhibited my artwork in several venues around the world," he confirms. "With my paintings one can easily visualise what I mean by 'plastic fishes'."

The slideshow below gives you a taste of the artworks by Wolfgang Trettnak and Margarita Cimadevila:



by Antonella Del Rosso



CERN BULLETIN INFO

- [Past issues](#)
- [Contact us](#)
- [RSS feed](#)
- [Subscribe](#)

MORE

- [CERN Courier](#)
- [Staff Association](#)
- [Press Office](#)
- [Training](#)
- [CERN & HEP events](#)
- [Clubs](#)

© Copyright CERN 2015
CERN Publications, DG-CO