

System Synthetics – Maurizio Montalti – Kluver Centre for genomics of Industrial Fermentation

System Synthetics aims to realize a bioreactor in which a human made synthesis of fungi will thrive to biodegrade plastics into bio-ethanol. In doing so this collaboration between designer Maurizio Montalti and the Kluver Centre aims to inspire the public, and promote discussion about the benefits of a man-made evolution of life.

Scientifically it is relatively novel to realize a man-made transgenic synthesis of two fungi that in one entangled process biodegrade certain forms of plastic and turn those into a bio-fuel. Simultaneously this process can have an exemplary meaning for the audience if it comes to the public perception of Life Sciences, Sustainability, collaboration between the Arts, Design and Science and possibly change of behavior of the audience itself.

The public transparent bioreactor will show not only symbioses of fungi, but also makes visible that it operates autonomously, as part of the produced bio-ethanol is fed back into the system to sustain the fermenting process. The two fungi are made visible by adding a bio-luminescence vector to their genome.

Convinced of the idea of symbiosis and sustainability of *System Synthetics*, it is still a challenge to inspire the public and promote discussion. The jury is unanimously convinced of the significance and meaning of *System Synthetics*, but would like to see the public dissemination addressed quite prominently in the realization. Previous work by Montalti suggests that this will be possible.