

# MICROALGAE

## Nature reload

*"IF THE ORGANISM ENDS UP DESTROYING ITS ENVIRONMENT, IT HAS IN FACT DESTROYED ITSELF."*  
G. BATESON, STEP TO AN ECOLOGY OF MIND (1972)

Recent design discourse incites new questions for an architecture that can be resilient or reproductive within a changing environmental context. As cities get denser and ecological awareness gets stronger, the skin of the city can become a living landscape itself. Microalgae are biological organisms that can play a fundamental role in this situation as sustainable solution for energy saving, energy production, air pollution reduction, improvement of environment quality and biodiversity, biodegradable material production, water purification and, last but not least, food supply. Microalgae are unicellular photoautotrophic microorganisms. Typically, they grow suspended in a water solution, and do photosynthesis from CO<sub>2</sub> and radiant energy of the sun, producing sugars for their metabolism, and oxygen, which in part they can use for breathing and partially release in the medium in which they are immersed. Moreover, microalgae are able to produce more O<sub>2</sub> than terrestrial plants can produce and are besides, directly responsible of almost the 50% of the photosynthesis on Earth.



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