

AIRPOTITION[♣] 2012



AIRPOTITION IS A LIGHTWEIGHT CONSTRUCTION THAT EXPLOITS THE OUTER AIR CONDITION BOXES. IT PROPOSES AN ALTERNATIVE USE OF THE UNITS, IN ORDER TO GAIN THE AMOUNT OF WASTED ENERGY, WHICH COMES FROM THE **WATER**, AS WELL AS, THE **WIND** PRODUCED FROM THE FAN. INDEPENDENT **CONCAVE STRUCTURES MADE OF METAL AND CARBON FIBERS** ARE INSTALLED IN FRONT OF THE AIR CONDITION BOXES TAKING ADVANTAGE OF THE AIR AND THE OSCILLATIONS, TRANSMUTING THEM FROM KINETIC TO **ELECTRIC ENERGY** SUPPLEMENTING THE BUILDING'S POWER SUPPLY. ADDITIONALLY, THESE UNITS COLLECT THE DISPOSED WATER IN ORDER TO USE IT TO CULTIVATE **HYDROPONIC CLIMBING PLANTS** SO THAT IN THE FUTURE A "GREEN" SKIN CAN BE CREATED. THE PLANTS ARE GERMINATING ON METAL FRAMES THAT CAN BE EASILY SNAPPED TOGETHER AND INSTALLED PROVIDING ALSO THE OPPORTUNITY TO PRODUCE **UNIQUE FORMS** TO EACH BUILDING.

AIRPOTITION, 2012

WORK TEAM:

K.A. OUGKRINIS

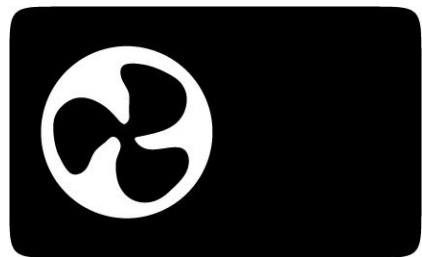
A.KLOTHAKIS

I.PATERAKIS

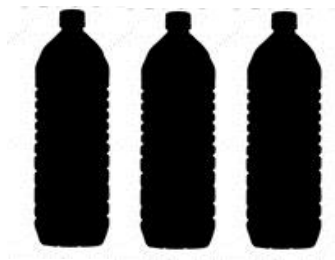
A.TRALO

G.VORADAKI

Green energy



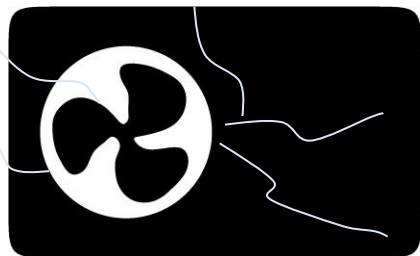
9K BTU



10 L



+

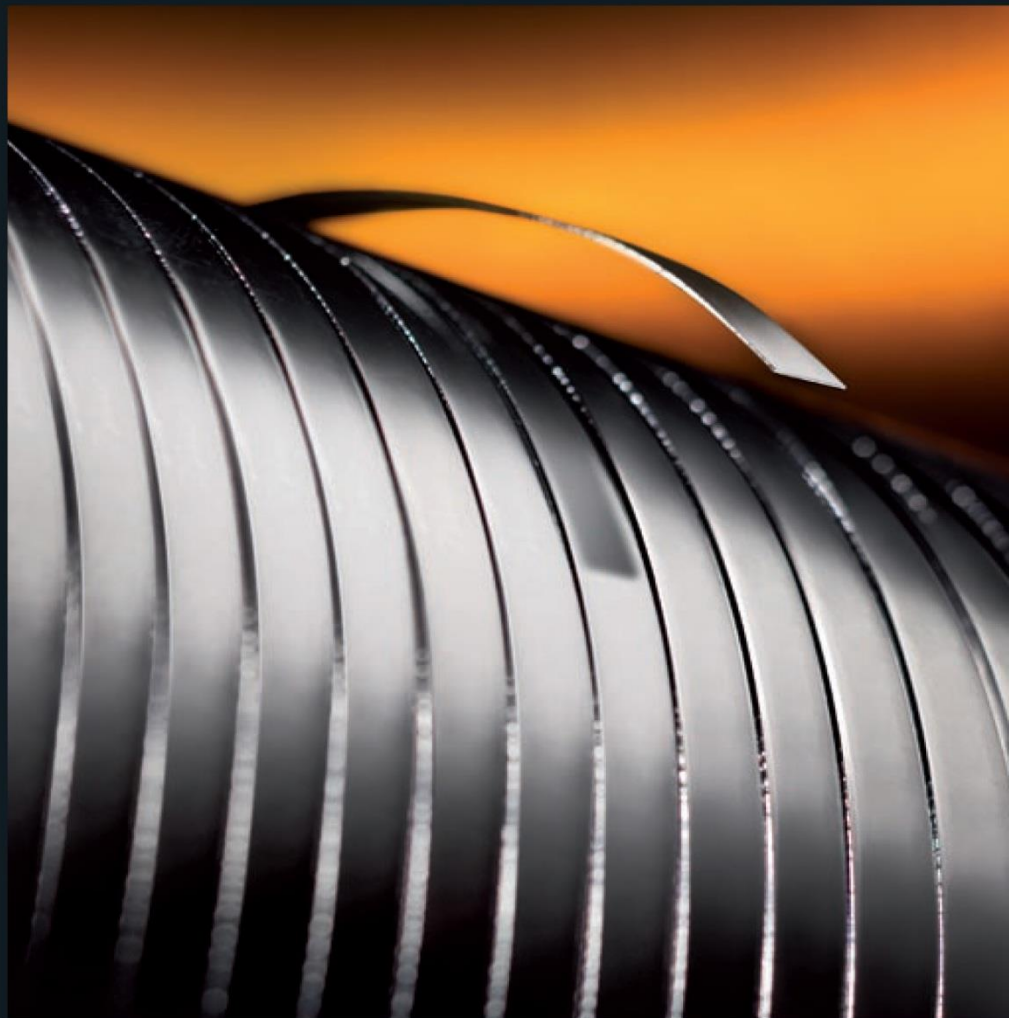


exterior

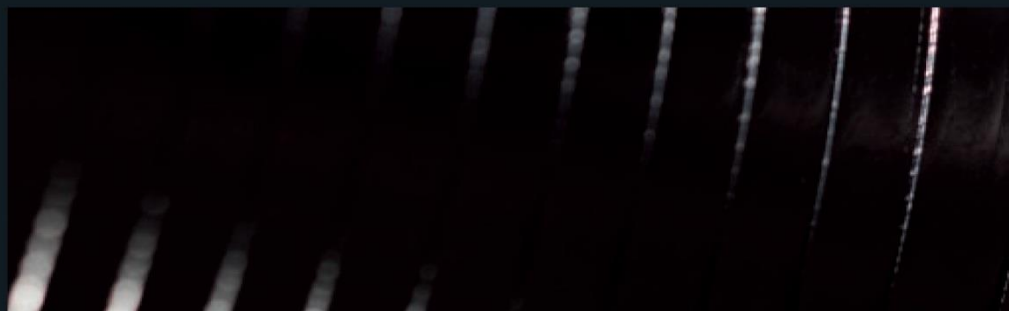


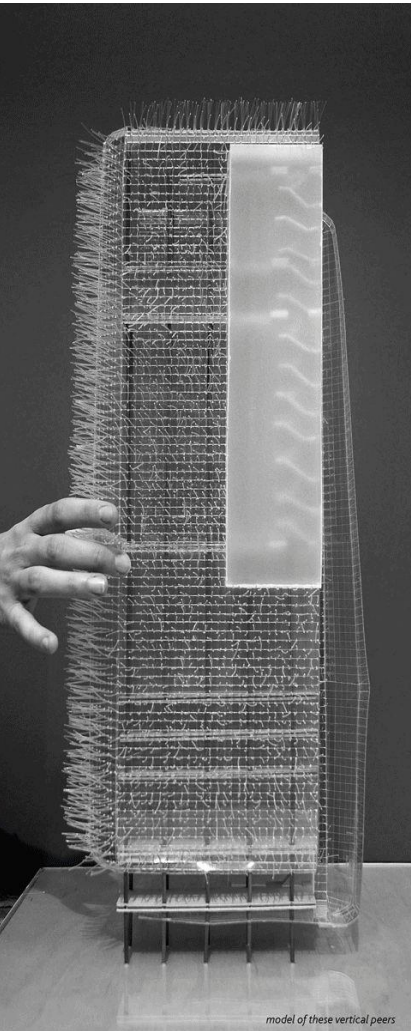
interior





Photovoltaic ribbons (PV)





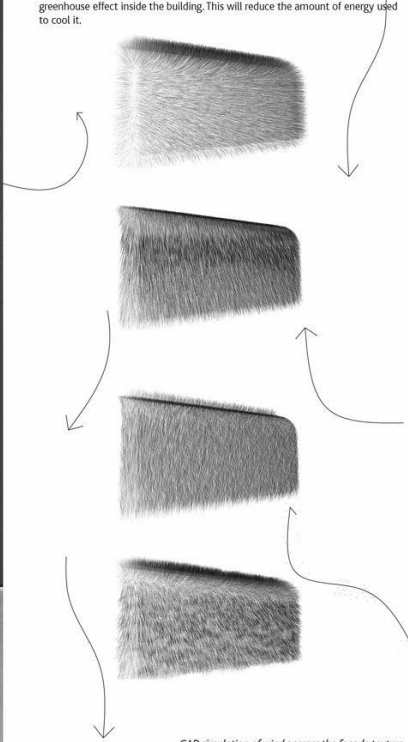
model of these vertical peers

Mobile skyline

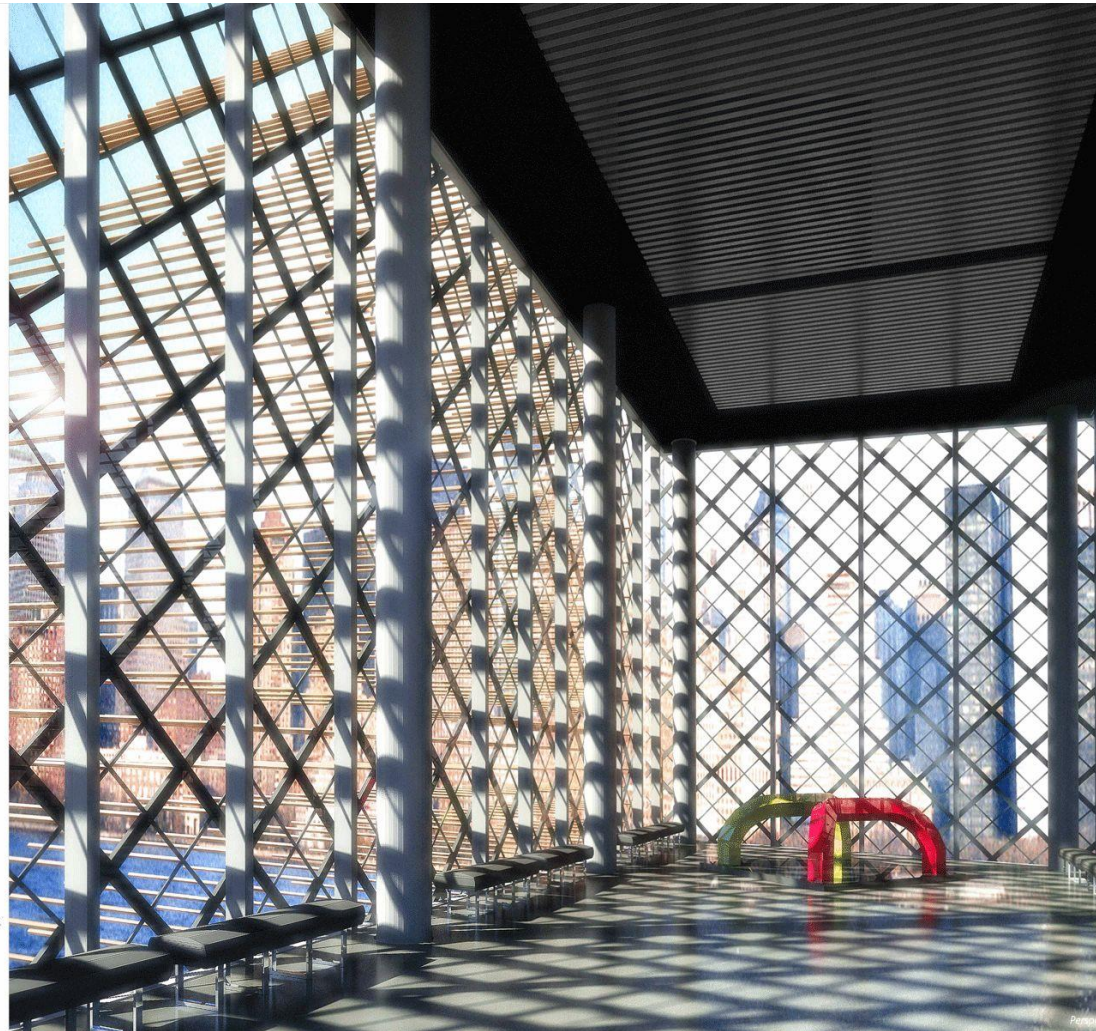
It is interesting to leave behind preconceived notions about towers for a moment and to rethink the tall building. Glass, steel and stone stiffen today's skylines. Side effects of these constructions are often undesirable, like the Venturi effect where wind is channeled and accelerated by ever sleeker facades. In addition to its technical advantages the façade of this tower stirs the imagination and emulates the movement and development of a culture.

Creating Energy

This is a new generation of towers where the wind plays with a facade of carbon shafts and creates energy supplementing the buildings power supply. Perpendicular to the metal façade, 50 percent hollowed and 1.8 meters long, the shafts are placed 30 cm apart. They are flexible and oscillate in the wind, creating a living building. The shadows created by the shafts will be cast onto the second façade which protects the building from direct sunlight and will diminish the greenhouse effect inside the building. This will reduce the amount of energy used to cool it.



CAD simulation of wind across the facade texture



Green facades



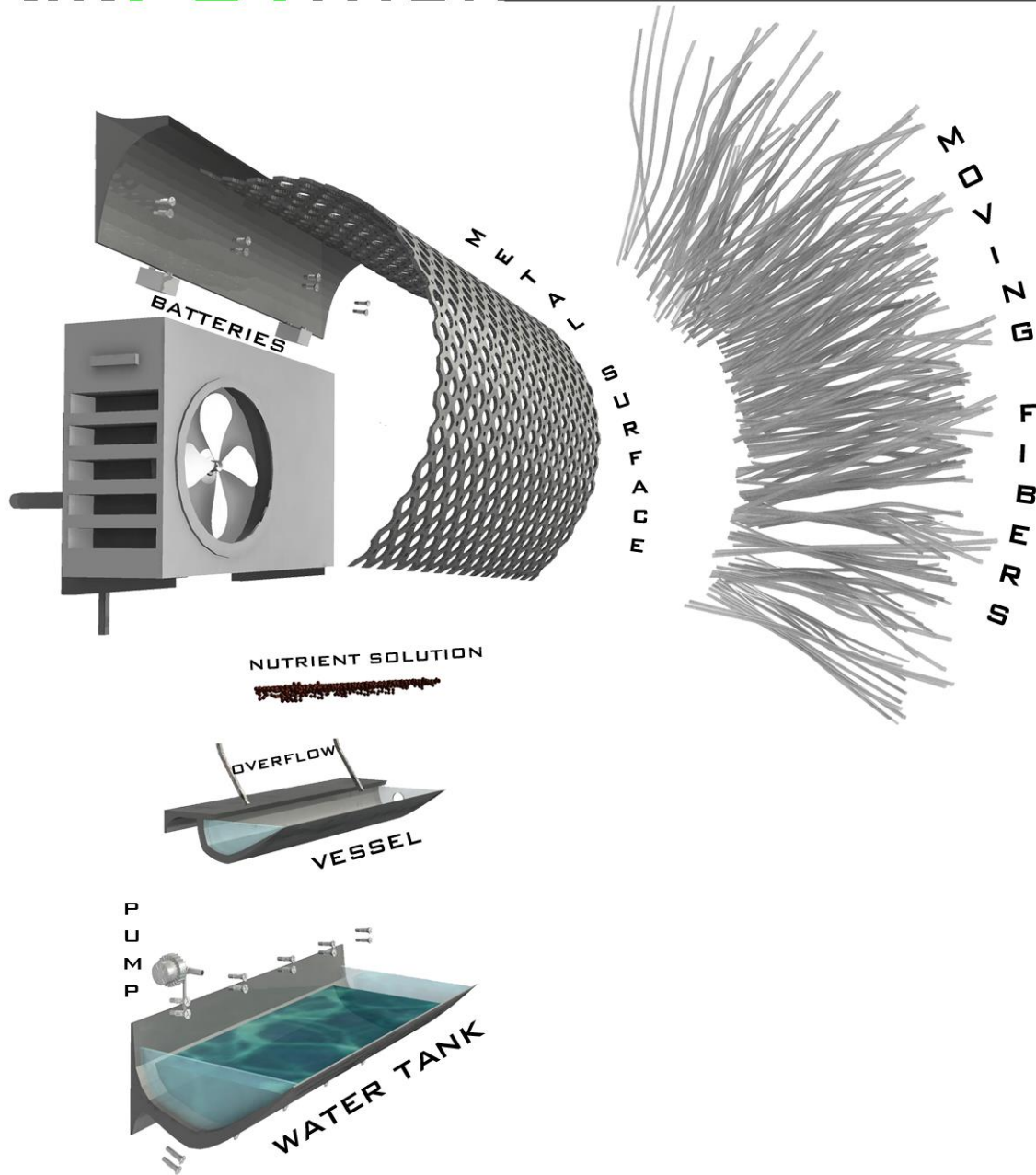
ZOOM OUT



Hydroponic system

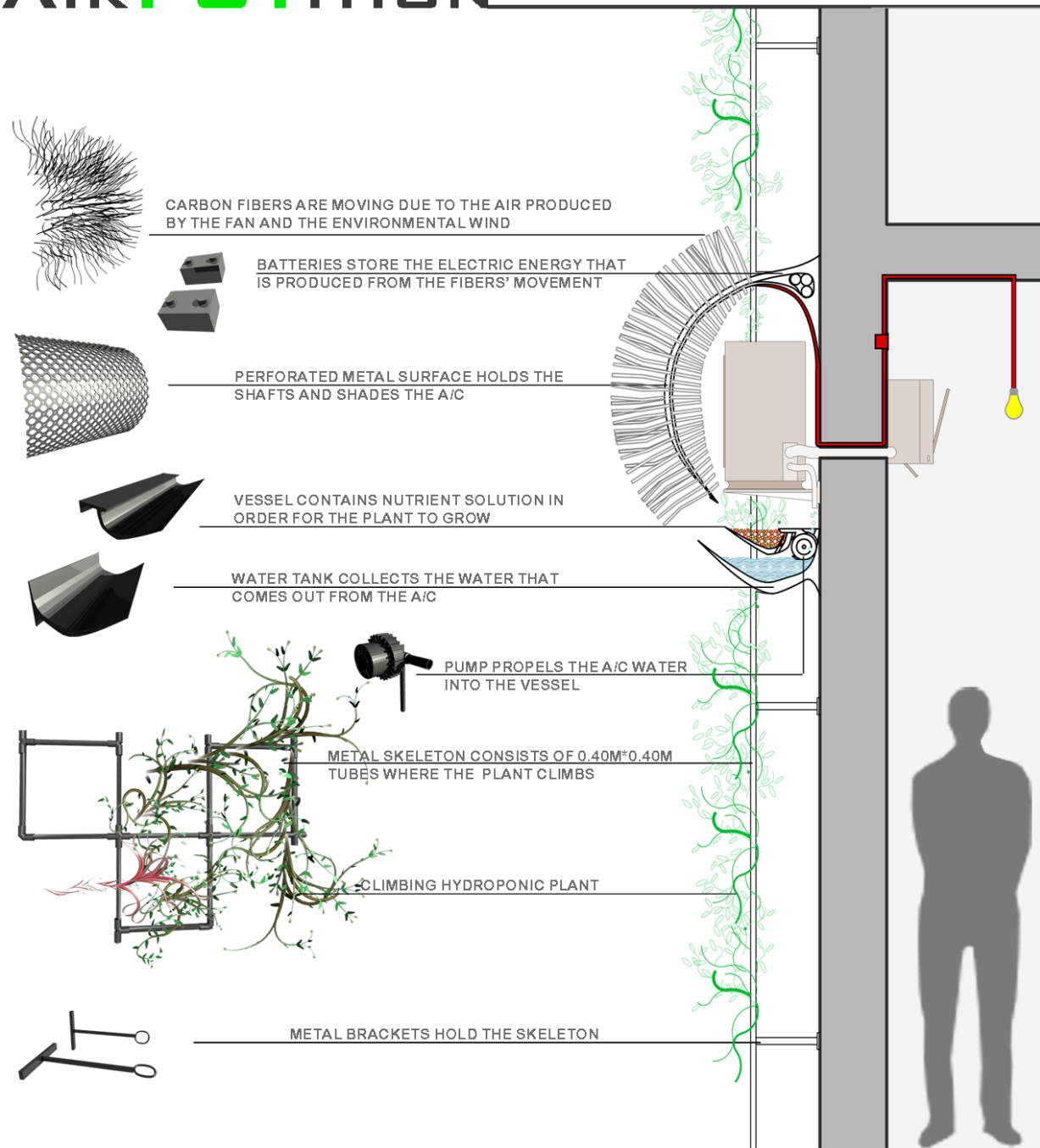


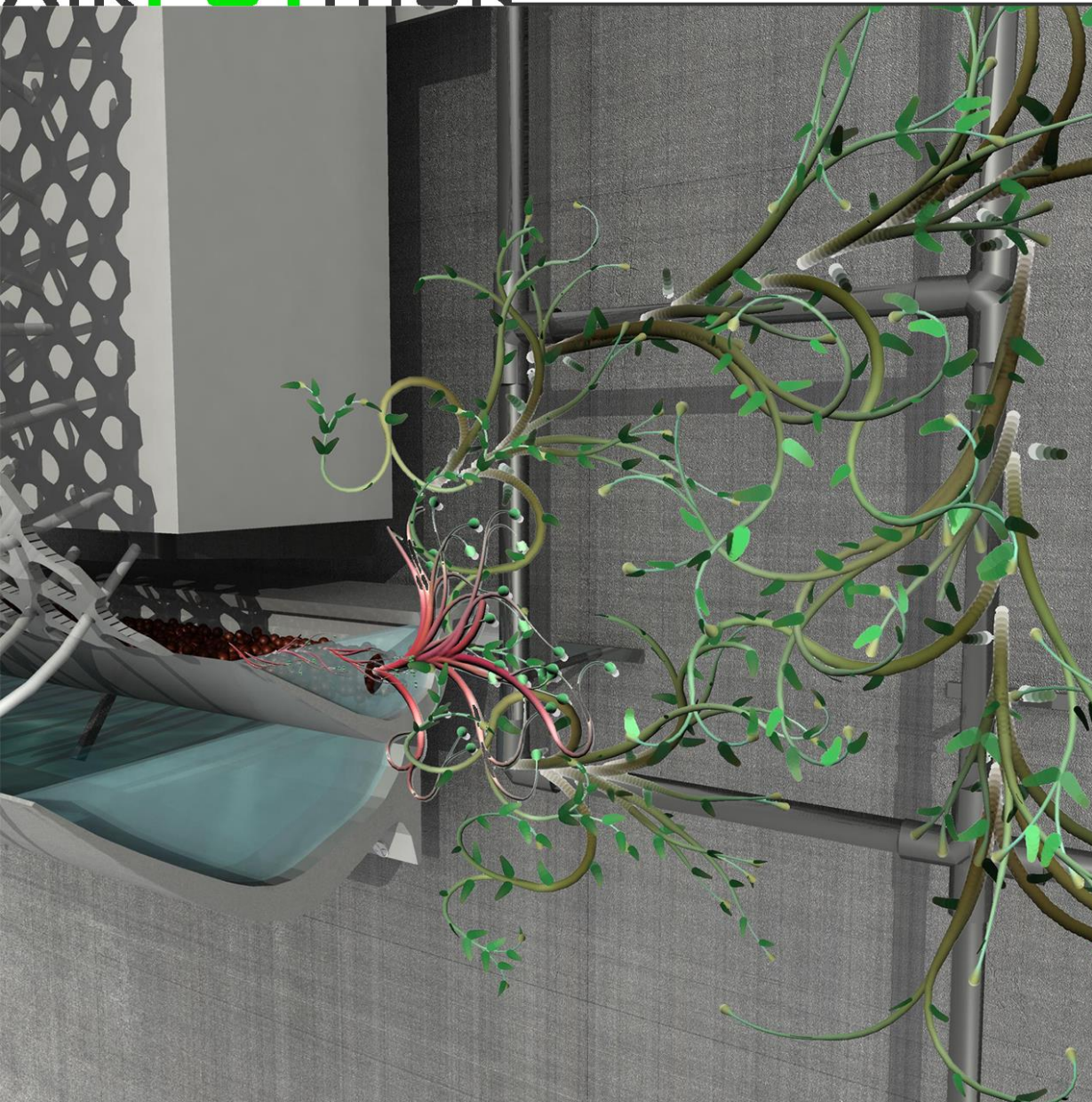
Project



AIRPOTITION³

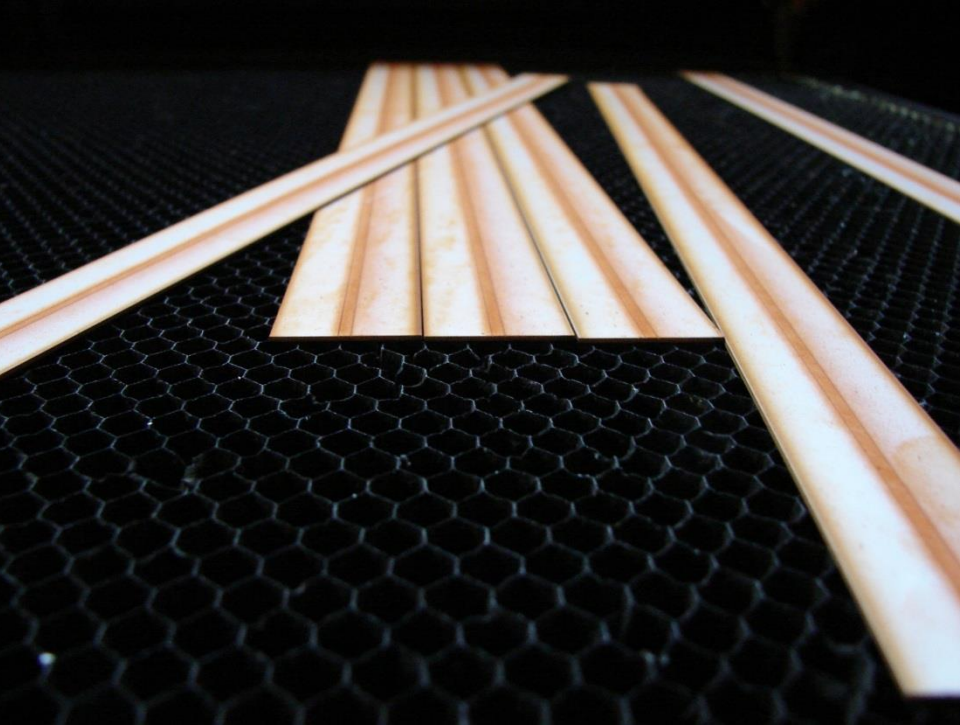
INTERSECTION



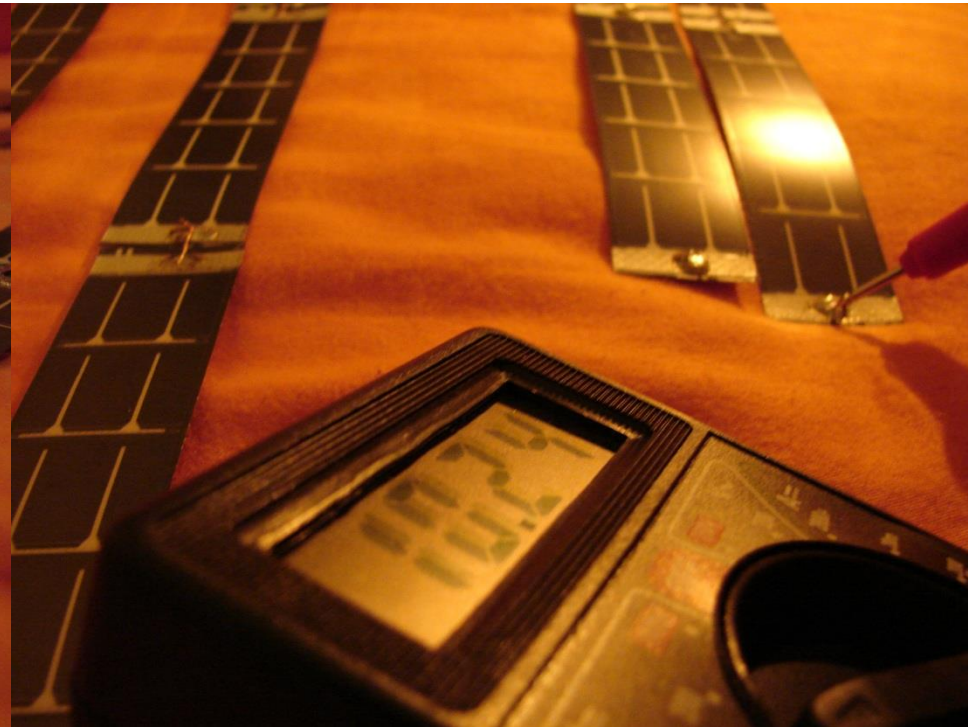
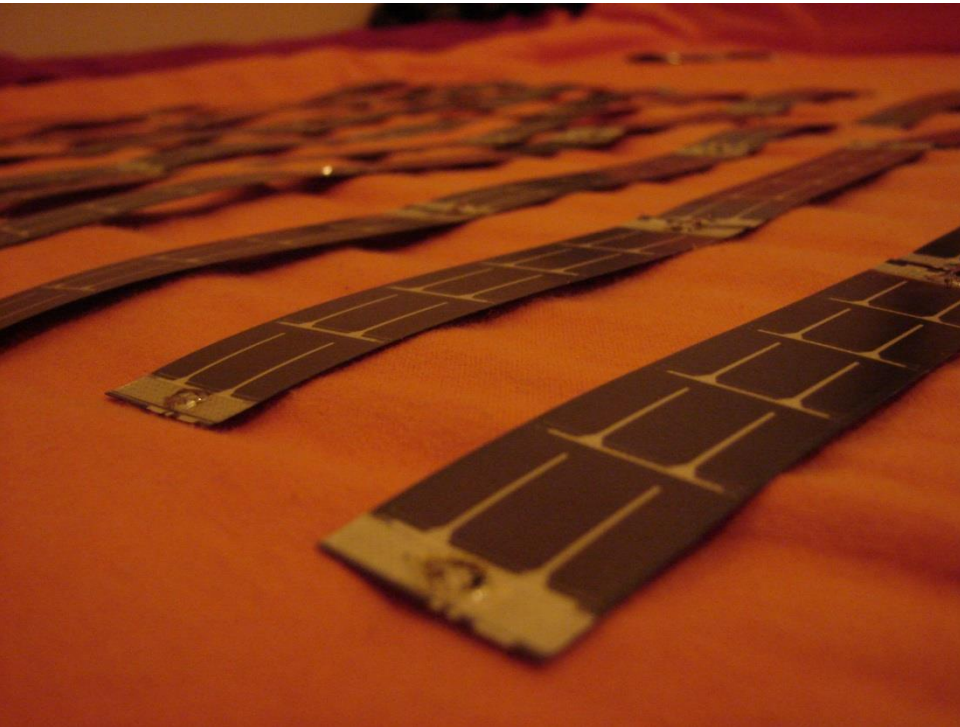


Work In Progress

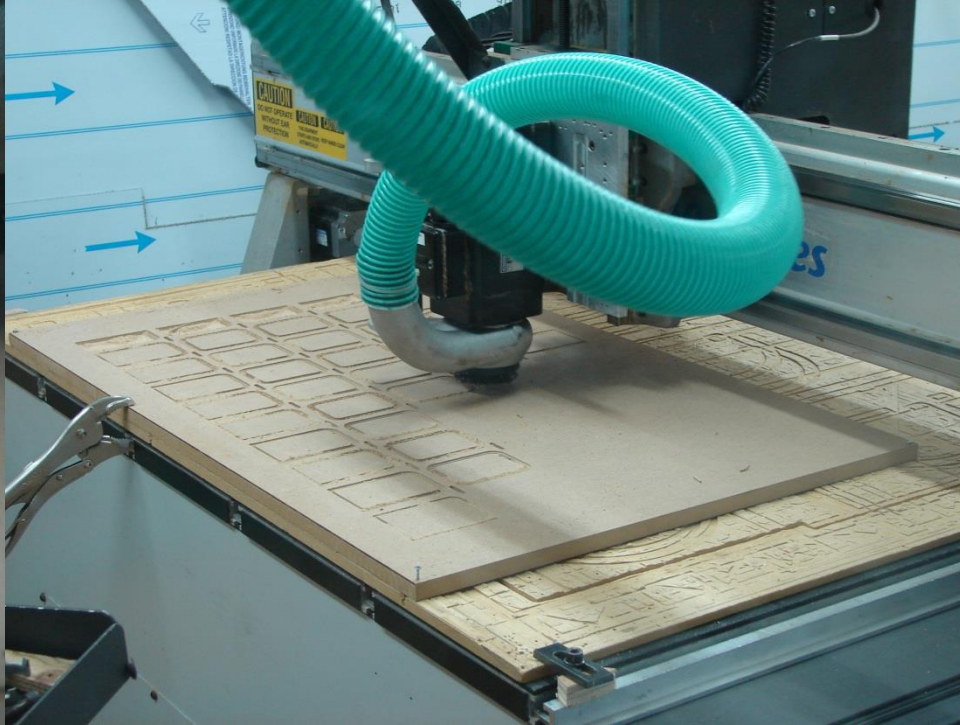
Laser cutting



Photovoltaic ribbons
10,24V , 40mA x 32



CnC routing layer1

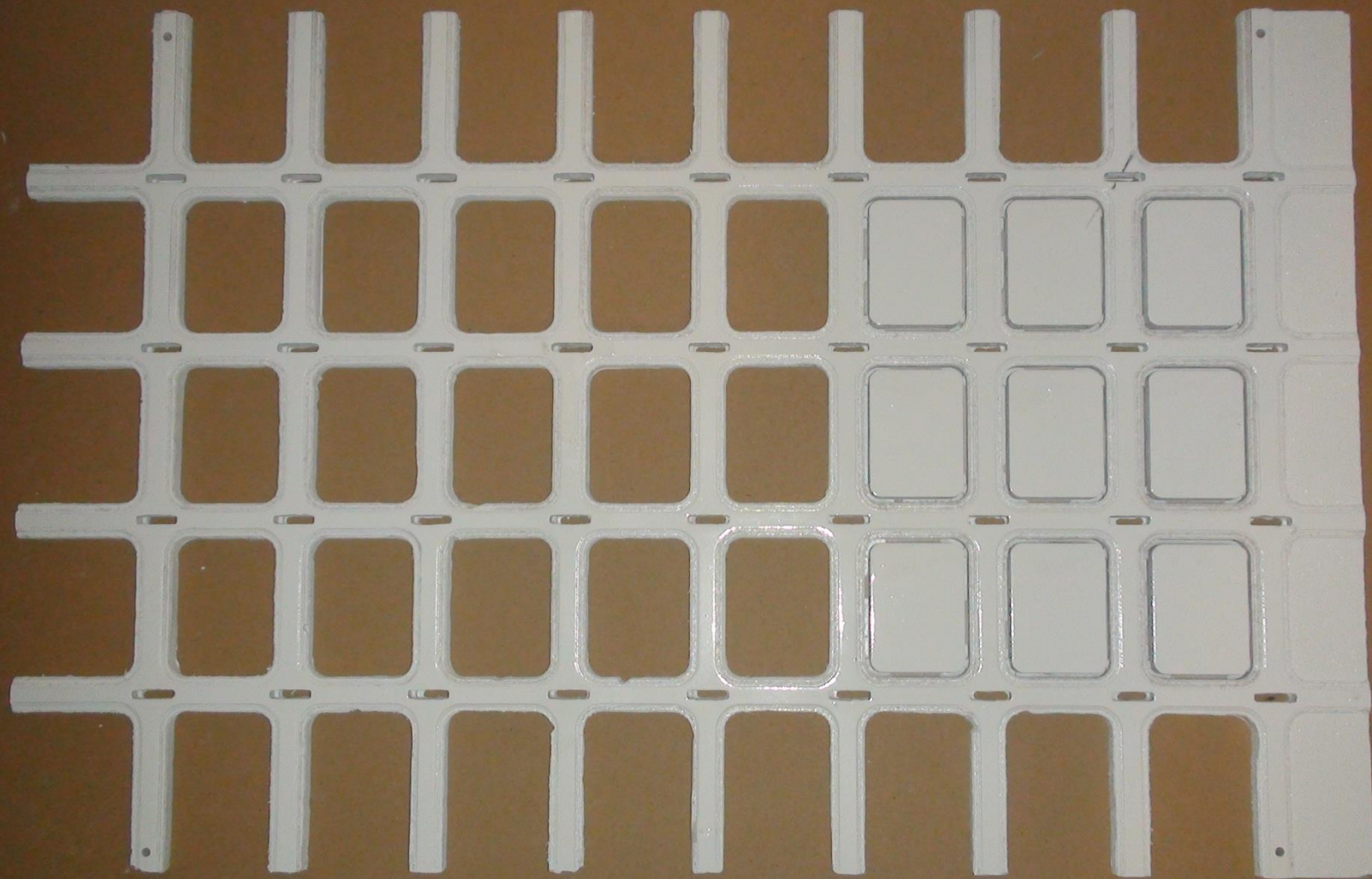


CnC routing layer1





painting layer1



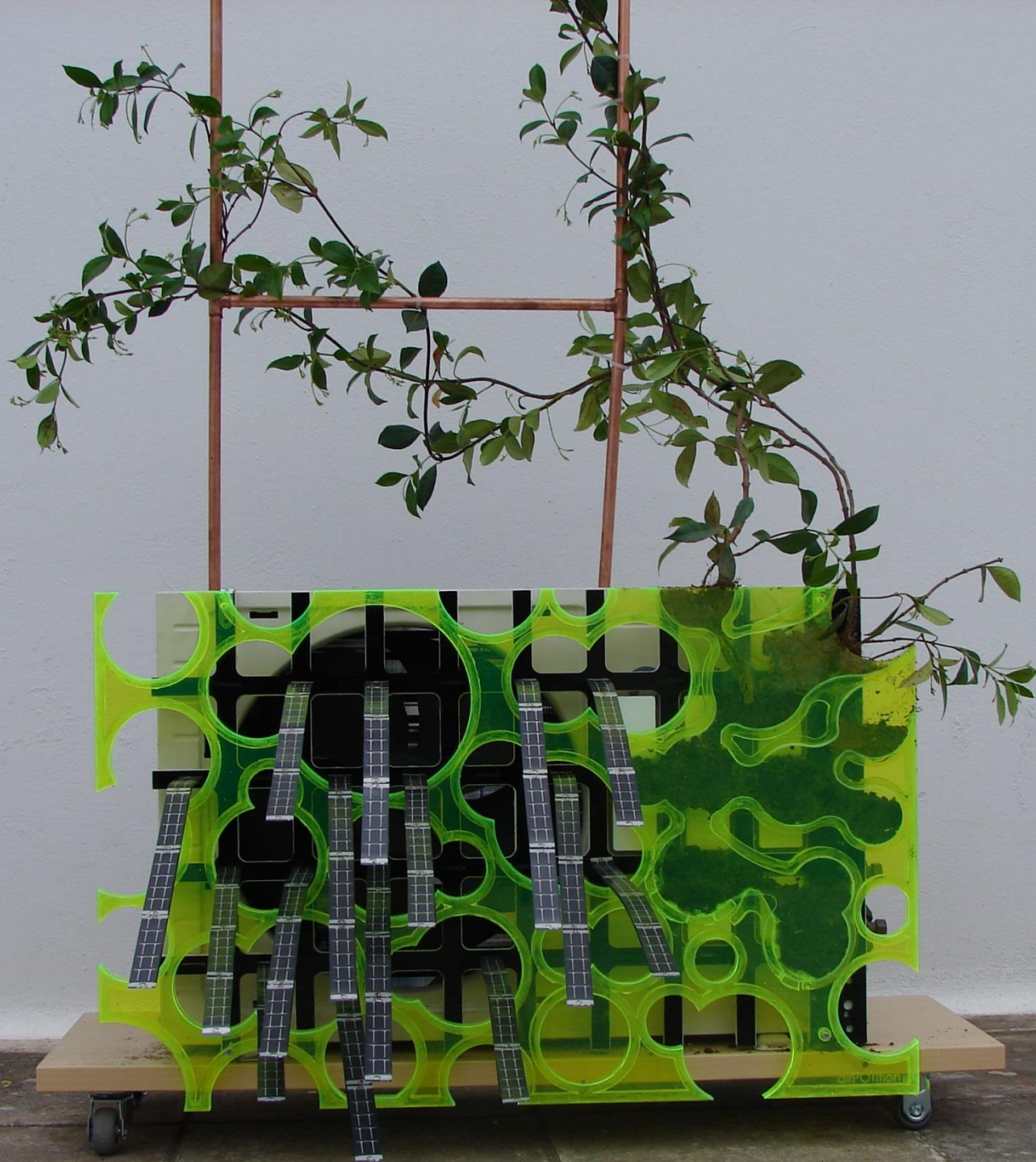
Back to the future

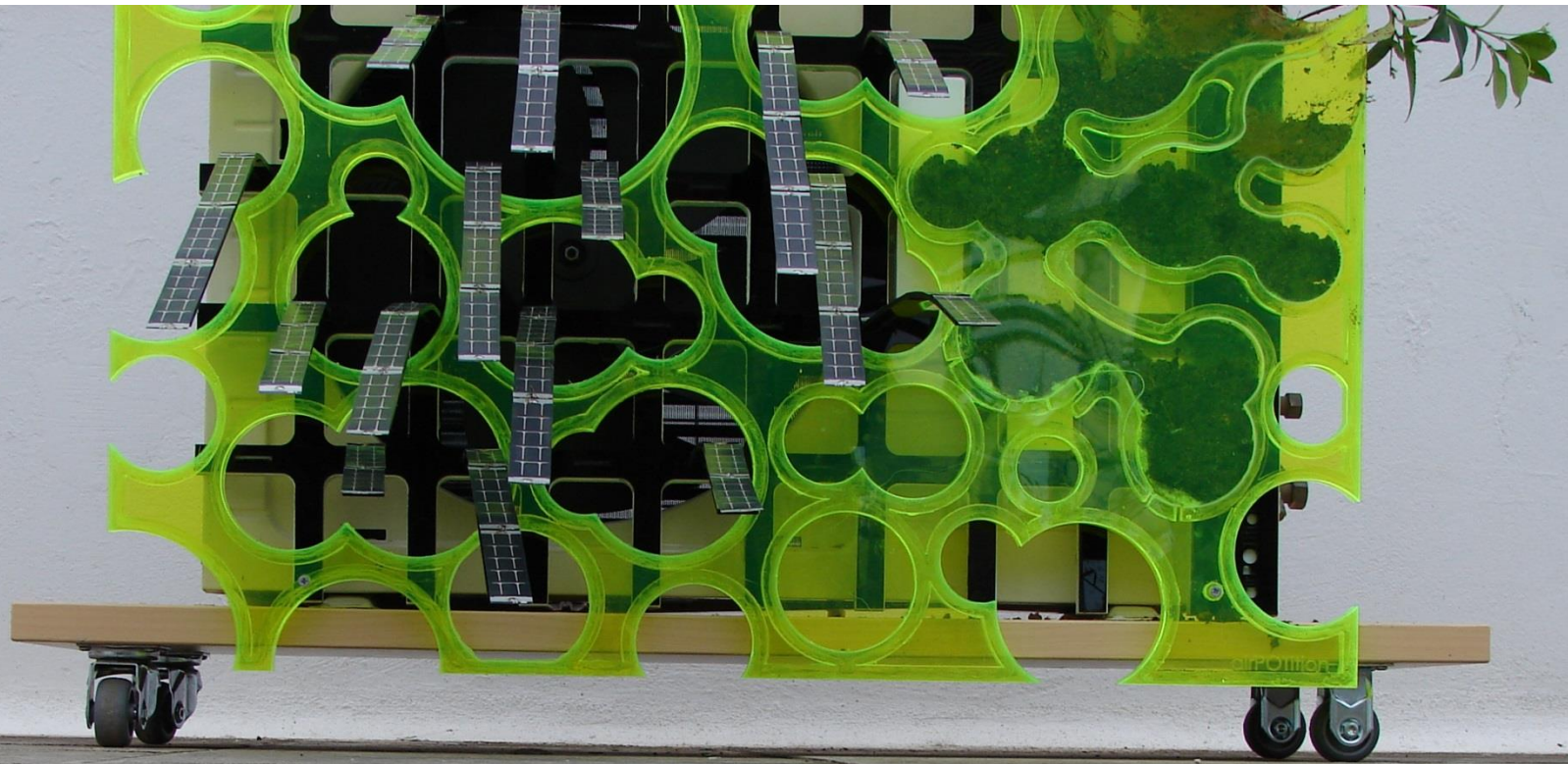


**IN THE FUTURE, EVERY CONTEMPORARY
METROPOLIS COULD BE TRANSMUTED
GRADUALLY INTO A FRIENDLY NATURAL
PLACE FOR ITS HABITANTS.**











Ευχαριστούμε τους Σαμαρτζής Α.Ε.



Ευρωπαϊκή Ένωση
Ευρωπαϊκό Κοινωνικό Ταμείο



ΥΠΟΥΡΓΕΙΟ ΠΑΙΔΕΙΑΣ & ΘΡΗΣΚΕΥΜΑΤΩΝ, ΠΟΛΙΤΙΣΜΟΥ & ΑΘΛΗΤΙΣΜΟΥ
ΕΙΔΙΚΗ ΥΠΗΡΕΣΙΑ ΔΙΑΧΕΙΡΙΣΗΣ

Με τη συγχρηματοδότηση της Ελλάδας και της Ευρωπαϊκής Ένωσης

