Algaria

CEO:
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Harnessing
unique potential of
Microalgae

Creating value from residual effluents
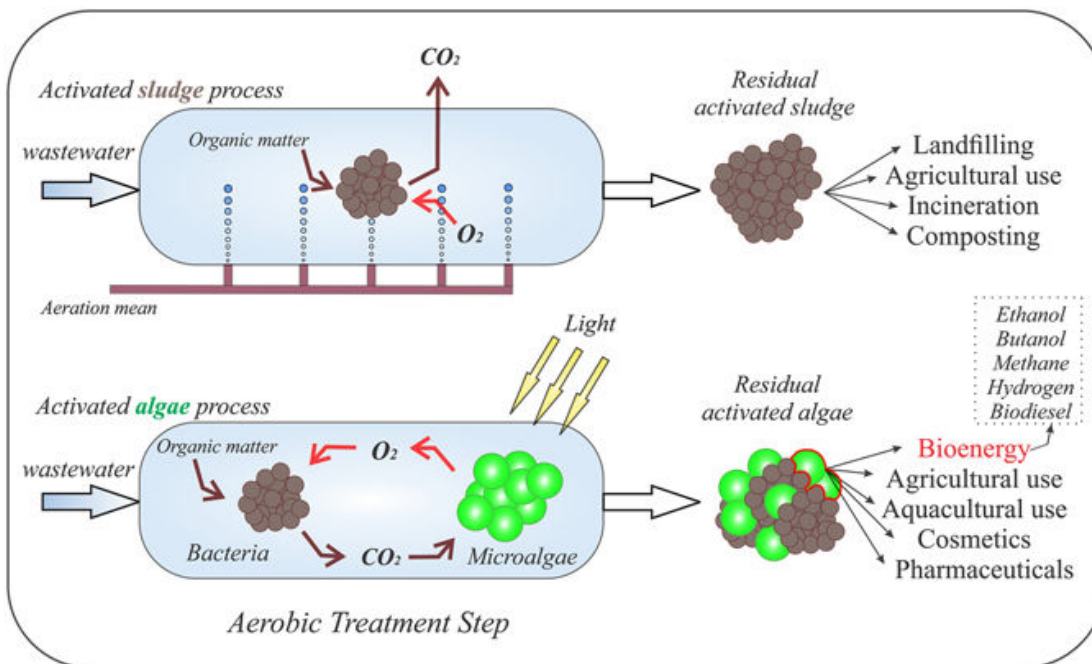
Agro-industrial effluents

Olive Mill
Cheese -Way
Animals Slurries

⇨

Cod 10-50 g/L
Suspended Solid 5 -40 g/L
Nutrients (N,P,K,mg……..)

Italian Case Study

3 Million of m³ per year (Eurostat 2014)

Energy demand to treat it 3-4 TWh

1-2 total Energy Demands

Activated sludge process

wastewater → Organic matter → CO₂ ↑ ← O₂ → Residual activated sludge → Landfilling / Agricultural use / Incineration / Composting

Aeration mean

Activated algae process

wastewater → Organic matter → O₂ ← Bacteria → CO₂ → Microalgae

Light

Residual activated algae → Bioenergy / Agricultural use / Aquacultural use / Cosmetics / Pharmaceuticals

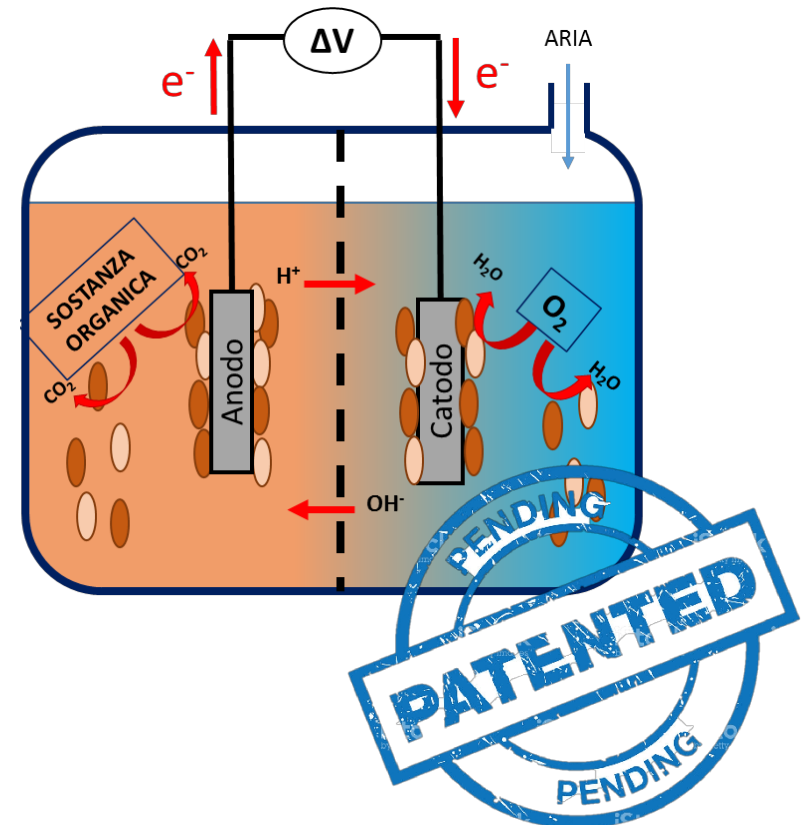Ethanol / Butanol / Methane / Hydrogen / Biodiesel

Aerobic Treatment Step

e-biopond

We go beyond

- Circular Economy concept
- Products market valorisation
- Nutrients Reuse
- Less Energy demands
- Existing technology integration

Bioelectrochemical Fuel Cell

e-biopond - products

Demonstration facility

Aquaculture Feed
plenty of protein

Organic minerals
fertiliser

GREEN POWER
BIO

Phycocyanin

Color dye

e-biopond - advantage & Needs

1. Efficient management system for effluent treatment

2. Easy integration with the existing technology

3. Reducing the overall energy consumption

4. High Nutrient removal and reuse

5. Market Products

Products industrial process supports

1. Aquaculture feed trials & regulation

2. Organic fertiliser trials & regulation

3. Large scale implementation

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