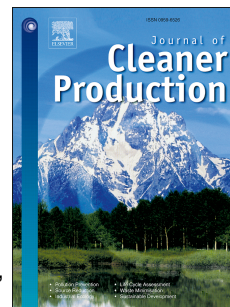


# Accepted Manuscript

Performance of an outdoor membrane photobioreactor for resource recovery from anaerobically treated sewage

Alexandre Viruela, Ángel Robles, Freddy Durán, María Victoria Ruano, Ramón Barat, José Ferrer, Aurora Seco



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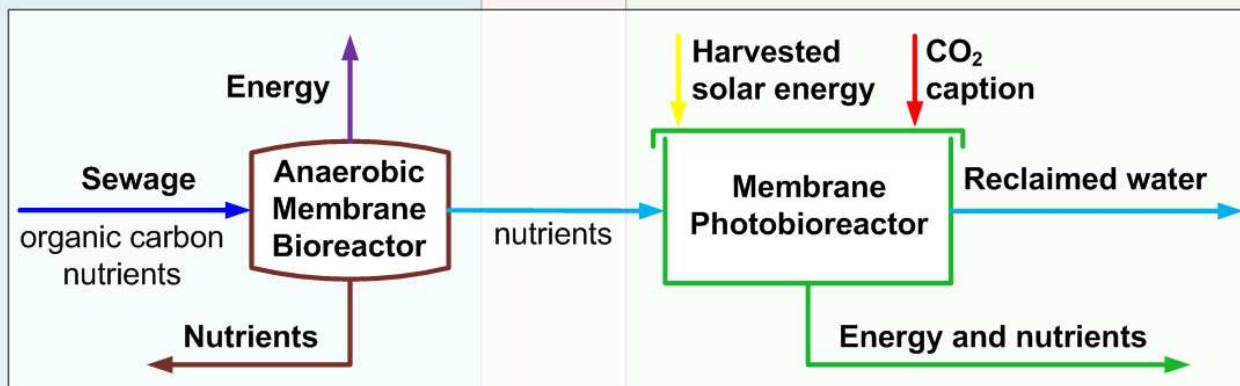
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**Objective:**

Evaluate the performance of a membrane photobioreactor treating anaerobically treated sewage

**Evaluated factors affecting membrane photobioreactor performance**

Temperature, solar irradiance, biomass retention time, nutrient loading rate, recirculation mode, non-photoc volume

**Maximum yields**

- Volumetric biomass productivity: 66 mg VSS·L<sup>-1</sup>·d<sup>-1</sup>
- Nutrient removal rate: 7.7 mg N·L<sup>-1</sup>·d<sup>-1</sup> and 1.2 mg P·L<sup>-1</sup>·d<sup>-1</sup>
- Theoretical energy recovery: 0.43 kWh per m<sup>3</sup> of treated water
- Theoretical CO<sub>2</sub> biofixation: 0.51 kg CO<sub>2</sub> per m<sup>3</sup> of treated water

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