



Laboratory Pilot: Membrane Bioreactor

Research is being conducted on processes that integrate biological reactions with membrane separation systems, including the use of membrane bioreactors under aerobic and anaerobic conditions. The characterization and strategies for limiting membrane clogging are also the subject of studies, as is the reuse of wastewater after treatment. Attention is paid to the elimination of organic micropollutants as well as to the study of the impact of Colloidal and Dissolved Organic Matter (CDOM) on the effectiveness of various wastewater treatment techniques.

Particular attention is paid to modeling, performance optimization and integration of biological reactions with membrane separation to remove dissolved compounds from water, aiming to improve the reliability of the systems involved.

These extraction methods are guided by objectives aligned with sustainable development and the circular economy. These objectives are broken down into two main axes: (i) ensuring the availability of secondary raw material resources, through the reuse of water and the recovery of nutrients, and (ii) the reduction of energy consumed.

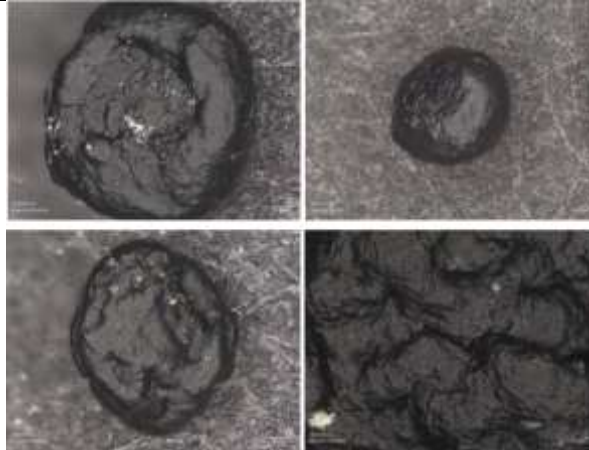
Contact: [Marc Héran](#), [Geoffroy Lesage](#)

Highlights :

- LIFE REWA - RecycledWater for LIFE (LIFE20 ENV/FR/000192) : 2021-2026 - <https://www.montpellier3m.fr/vivre-cycles-de-leau/projet-life-rewa>



- ANR JCJC BàMAn - Positive Energy Water Treatment by Anaerobic Membrane Bioreactor: 2018-2023 – <https://anr.fr/Projet-ANR-18-CE04-0001>



Anaerobic granular sludge

- WOC WOD - DÉFI CLÉ WATER OCCITANIE – 2022-2025- Localized withdrawals of raw wastewater for direct reuse in urban and peri-urban areas - <https://woc.edu.umontpellier.fr/organisation-des-projets-defi-cle-water-occitanie/projets-structurants-defi-cle-water-occitanie/woc-wod/>
- BREW - DÉFI CLÉ WATER OCCITANIE – 2022-2024 - Qualification of gray water from beer brewing activity. - <https://woc.edu.umontpellier.fr/organisation-des-projets-defi-cle-water-occitanie/projets-emergents-defi-cle-water-occitanie/brew/>
- MUSE - ALLEA - Let's adapt the treatment of wastewater for agronomic use – 2020-2023. <https://www.g-eau.fr/index.php/fr/recherche/projets-en-cours/item/1302-allea-adaptions-le-traitement-de-l-eau-usee-pour-un-usage-agronomique>



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