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Soil Air Water

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Editorial

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Environmental Monitoring—Important for Climate Protection Policy and Measures

Prisca M. Henheik

First Published: 12 December 2022

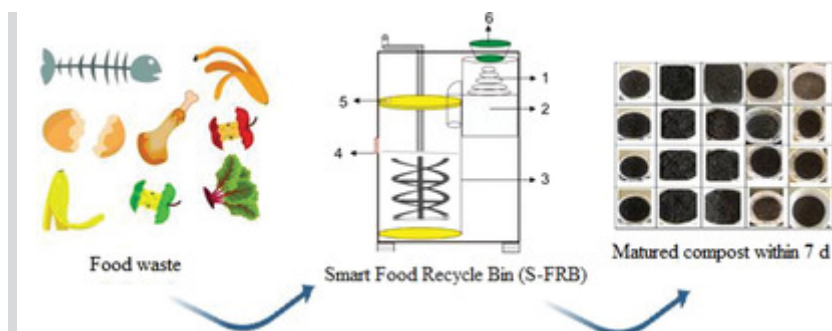
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Research Articles

Fast Treatment of Food Waste Utilizing a Smart Food Recycle Bin (S-FRB)

Wiharyanto Oktiawan, Mochtar Hadiwidodo, Ika Bagus Priyambada, Purwono Purwono

First Published: 02 September 2022



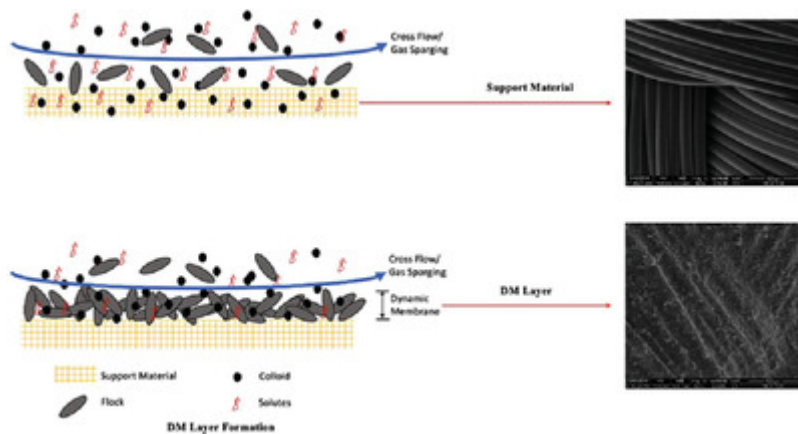
A portable food waste processor can make it easier for everyone to process food waste at a minimum on a household scale. Food waste is processed into compost quickly using smart food recycle bin (S-FRB). After being processed for 7 days, the food waste compost made from S-FRB can be utilized as plant fertilizer.

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Treatment of Municipal Wastewater by Hollow Fiber Dynamic Membrane Bioreactors

Onur Isik, Irem Orman, Amr Mustafa Abdelrahman, Mustafa Evren Ersahin, Hale Ozgun, Ibrahim Demir, Ismail Koyuncu

First Published: 07 September 2022



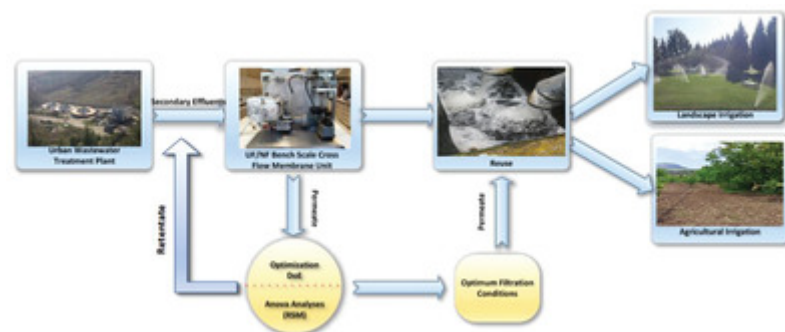
A polyester fabric hollow fiber dynamic membrane is used for municipal wastewater treatment. High treatment performance is obtained with over 93% of chemical oxygen demand removal efficiency and low particulate material concentration ($<10 \text{ mg L}^{-1}$). The use of hollow fiber dynamic membranes can provide compact membrane volume with high surface area, thus, the volume of the reactor can be further decreased.

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Water Recovery from Urban Wastewater for Irrigation using Ultrafiltration and Nanofiltration: Optimization and Performance

Aynur Yasar, [Esra Can Dogan](#), Hamza Savas Ayberk, Coskun Aydiner

First Published: 09 September 2022



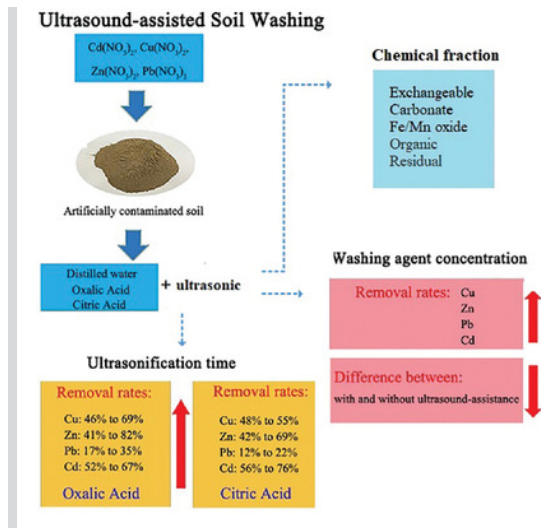
In experimental studies planned with the Taguchi method to obtain irrigation water from the secondary effluent, the performance results are verified by using analysis of variance and optimum filtration conditions are determined. Agricultural/landscape irrigation water is obtained in different classes with low pressure, high flux, and recovery rate with single-stage ultrafiltration or nanofiltration membrane compared to integrated systems.

[Abstract](#) | [Full text](#) | [PDF](#) | [References](#) | [Request permissions](#)

Ultrasound-Assisted Soil Washing for Metals-Contaminated Soil Using Various Washing Solutions

[Liwei He](#), Xuejin Zhou, Jingjing Cao, Liang Shen

First Published: 16 September 2022



The removal of potentially toxic metals (Cu, Pb, Zn, Cd) in the soil through ultrasound-assisted washing process by using different agents (distilled water, CA, and OA) are studied. The research indicates that ultrasound-assisted soil washing could significantly enhance the removal rate, the removal of carbonate, Fe/Mn oxide, and organic matter-bound fractions are obviously improved under ultrasound assistance.

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