

Innovative and Integrated Technologies for the Treatment of Industrial Wastewater

Innovative and Integrated Technologies for the Treatment of Industrial Wastewater deals with advanced technological solutions for the treatment of industrial wastewater such as aerobic granular biomass based systems, advanced oxidation processes integrated with biological treatments, membrane contactors and membrane chemical reactors. Wastewater from pharmaceutical, chemical and food industries as well as landfill leachates are specifically considered as representative of major problems encountered when treating industrial streams. The economic and environmental sustainability of the above solutions are also reported in the book and compared with the alternatives currently available in the market by life cycle assessment (LCA) and life cycle costing (LCC) methodologies. The implementation of the considered solutions at large scale could support and enhance the competitiveness of different industrial sectors, including the water technology sector, in the global market.



Innovative and Integrated Technologies for the Treatment of Industrial Wastewater also makes a contribution towards defining:

- new concepts, processes and technologies in wastewater treatment with potential benefits for the stable quality of effluents, energy and operational costs saving, and the protection of the environment
- new sets of advanced standards for wastewater treatment
- new methodologies for the definition of wastewater treatment needs and framework conditions
- new information supporting development and implementation of water legislation.

Contents

Aerobic granular biomass based processes; Integrated processes; Membrane based processes; LCA and LCC evaluation

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