بسم الله الرحمن الرحيم

MONA MAGHRABY

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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التوثيق الإلكتروني والميكروفيلم

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MONA MAGHRABY

Techno-economic Estimation of Textile Wastewater Treatment using Combined System: Batch Optimization, Continuous Feed, and Scaling-up Studies

By

Ahmed Karam Abdelghany Badawi

A Thesis Submitted to the
Faculty of Engineering at Cairo University
in Partial Fulfillment of the
Requirements for the Degree of
DOCTORATE OF PHILOSOPHY
in
Civil Engineering-Public Works

FACULTY OF ENGINEERING, CAIRO UNIVERSITY
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Under the Supervision of

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TECHNO-ECONOMIC ESTIMATION OF TEXTILE WASTEWATER TREATMENT USING COMBINED SYSTEM: BATCH OPTIMIZATION, CONTINUOUS FEED, AND SCALING-UP STUDIES

Key Words:
Textile wastewater; Coagulation; Adsorption; Filtration; Nanomaterials.

Summary:

This study investigates the feasibility of using hybrid treatment system for textile wastewater treatment produced from local textile factory. Data gained from batch, continuous feed and techno economic studies verified the efficiency of applying coagulation/flocculation, adsorption and filtration integrated treatment system at low cost for real textile wastewater treatment. This work showed the enhanced textile wastewater treatment, opening the way for many industrial and environmental applications.

Disclaimer

I hereby declare that this thesis is my own original work and that no part of it has been submitted for a degree qualification at any other university or institute. I further declare that I have appropriately acknowledged all sources used and have cited them in the references section.

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