

# IP MARKETPLACE

## CONNECTING INNOVATION TO YOUR BUSINESS

### TECH OFFER

## A Method for Treatment of Wastewater Using Heterogeneous Iron Oxide Catalysts



### ▶ MORE INFORMATION

#### MEGA-TREND

- Water and Transport
- Renewable
- Infrastructure Development: Power
- Environment and Water

#### TECHNOLOGY READINESS LEVEL (TRL)

- TRL 4

#### PATENT/ GRANTED NUMBER

- MY-177130-A

### ▶ TECHNOLOGY OVERVIEW

The present invention provides a method for treatment of wastewater comprising the steps of impregnating an oxide of iron with at least two transition metals selected from fifth period of the periodic table to obtain an impregnated oxide of iron, introducing the impregnated oxide of iron in the wastewater containing at least one pollutant to form a mixture, stirring the mixture to obtain a heterogeneous impregnated oxide of iron adsorbing the at least one pollutant of the wastewater, and adding an oxidizing agent selected from a group consisting of organic peroxide to the mixture to degrade the at least one adsorbed pollutant of the wastewater. The pollutant preferably includes a dye solution and an aromatic compound. More specifically, the oxide of iron is magnetite, the at least two transition metals comprise Niobium and Molybdenum and the oxidizing agent is hydrogen peroxide having a concentration of 30 % w/w.

### CONTACT US!

Dr. Lee Ching Shya, RTTP

UMCIE Business Officer

Email: [leecs@um.edu.my](mailto:leecs@um.edu.my)

Phone: +603 – 7967 7352 / 013-2250151