### Accepted Manuscript

Title: Feasibility, mechanisms, and optimisation of organic pollutant degradation by thermally activated persulphate

Authors: Ikechukwu A. Ike, John D. Orbell, Mikel Duke

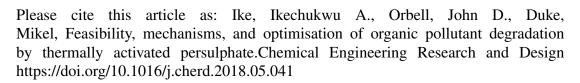
PII: S0263-8762(18)30282-X

DOI: https://doi.org/10.1016/j.cherd.2018.05.041

Reference: CHERD 3205

To appear in:

Received date: 24-1-2018 Revised date: 3-5-2018 Accepted date: 29-5-2018



This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



## ACCEPTED MANUSCRIPT

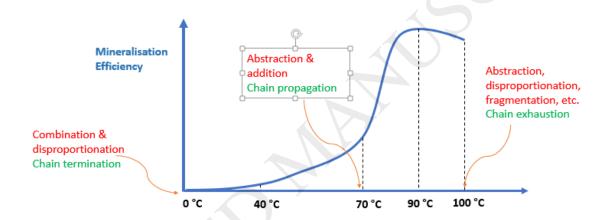
# Feasibility, mechanisms, and optimisation of organic pollutant degradation by thermally activated persulphate

#### Ikechukwu A. Ike, John D. Orbell, and Mikel Duke

Institute for Sustainability and Innovation, College of Engineering and Science, Victoria University,

Melbourne, Victoria 8001, Australia

#### **Graphical abstract**



#### **Highlights**

- Radical kinetic energy is crucial to oxidation effectiveness
- Degradation by persulphate (PS) is optimised at 90 °C
- The kinetic energy of radicals determines reaction type
- PS activation for wastewater treatment feasible using waste heat
- Radical quenching by alcohol or ice bath are equivalent

#### Download English Version:

# https://daneshyari.com/en/article/7005649

Download Persian Version:

https://daneshyari.com/article/7005649

Daneshyari.com