

## Accepted Manuscript

Carbon and hydrogen isotope fractionation of phthalate esters during degradation by sulfate and hydroxyl radicals

Dan Zhang, Langping Wu, Jun Yao, Hartmut Herrmann, Hans-Hermann Richnow

PII: S1385-8947(18)30613-2  
DOI: <https://doi.org/10.1016/j.cej.2018.04.047>  
Reference: CEJ 18847

To appear in: *Chemical Engineering Journal*

Received Date: 7 November 2017  
Revised Date: 4 April 2018  
Accepted Date: 7 April 2018

Please cite this article as: D. Zhang, L. Wu, J. Yao, H. Herrmann, H-H. Richnow, Carbon and hydrogen isotope fractionation of phthalate esters during degradation by sulfate and hydroxyl radicals, *Chemical Engineering Journal* (2018), doi: <https://doi.org/10.1016/j.cej.2018.04.047>

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.



# Carbon and hydrogen isotope fractionation of phthalate esters during degradation by sulfate and hydroxyl radicals

Dan Zhang<sup>1,2</sup>, Langping Wu<sup>2</sup>, Jun Yao<sup>3\*\*</sup>, Hartmut Herrmann<sup>4</sup>, Hans-Hermann Richnow<sup>2,3\*</sup>

<sup>1</sup>School of Energy and Environmental Engineering, University of Science and Technology Beijing, Xueyuan Road No.30, Haidian District, Beijing 100083, PR China

<sup>2</sup>Department of Isotope Biogeochemistry, Helmholtz Centre for Environmental Research-UFZ, Permoserstraße 15, Leipzig 04318, Germany

<sup>3</sup>School of Water Resources and Environment, China University of Geosciences (Beijing), Xueyuan Road No.29, Haidian District, Beijing 100083, PR China

<sup>4</sup>Atmospheric Chemistry Department (ACD), Leibniz Institute for Tropospheric Research (TROPOS), Permoserstraße 15, Leipzig 04318, Germany

\* To whom correspondence should be addressed

\* hans.richnow@ufz.de Tel.: +49 (0) 341 235 1212, Fax: +49 (0) 341 235 1443

\*\* yaojun@cugb.edu.cn Tel.: +86 (0)10 82321958, Fax: +86 (0)10 82321958

Download English Version:

<https://daneshyari.com/en/article/6579021>

Download Persian Version:

<https://daneshyari.com/article/6579021>

[Daneshyari.com](https://daneshyari.com)