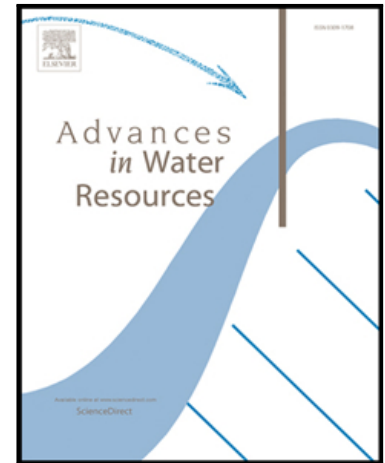


## Accepted Manuscript

Elucidating the impact of micro-scale heterogeneous bacterial distribution on biodegradation

Susanne I. Schmidt , Jan-Ulrich Kreft , Rae Mackay ,  
Cristian Picioreanu , Martin Thullner

PII: S0309-1708(17)30730-3  
DOI: [10.1016/j.advwatres.2018.01.013](https://doi.org/10.1016/j.advwatres.2018.01.013)  
Reference: ADWR 3069



To appear in: *Advances in Water Resources*

Received date: 20 July 2017  
Revised date: 11 January 2018  
Accepted date: 15 January 2018

Please cite this article as: Susanne I. Schmidt , Jan-Ulrich Kreft , Rae Mackay , Cristian Picioreanu , Martin Thullner , Elucidating the impact of micro-scale heterogeneous bacterial distribution on biodegradation, *Advances in Water Resources* (2018), doi: [10.1016/j.advwatres.2018.01.013](https://doi.org/10.1016/j.advwatres.2018.01.013)

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.

**Highlights**

- The heterogeneous micro-scale microbial growth in pores reduces bioavailability
- This growth form can reduce degradation rates by up to an order of magnitude.
- Effective mass transfer rates for such limited biodegradation are derived.
- A conceptual approach how these results may be scaled up is provided for two substances: acetate and toluene.

ACCEPTED MANUSCRIPT

Download English Version:

<https://daneshyari.com/en/article/8883289>

Download Persian Version:

<https://daneshyari.com/article/8883289>

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