

## Accepted Manuscript

Title: Preparation and Application of Pyraclostrobin  
Microcapsule Formulations

Authors: Mingwei Li, Weiming Xu, Deyu Hu, Baoan Song

PII: S0927-7757(18)30483-7  
DOI: <https://doi.org/10.1016/j.colsurfa.2018.06.009>  
Reference: COLSUA 22578



To appear in: *Colloids and Surfaces A: Physicochem. Eng. Aspects*

Received date: 6-3-2018  
Revised date: 1-6-2018  
Accepted date: 2-6-2018

Please cite this article as: Li M, Xu W, Hu D, Song B, Preparation and Application of Pyraclostrobin Microcapsule Formulations, *Colloids and Surfaces A: Physicochemical and Engineering Aspects* (2018), <https://doi.org/10.1016/j.colsurfa.2018.06.009>

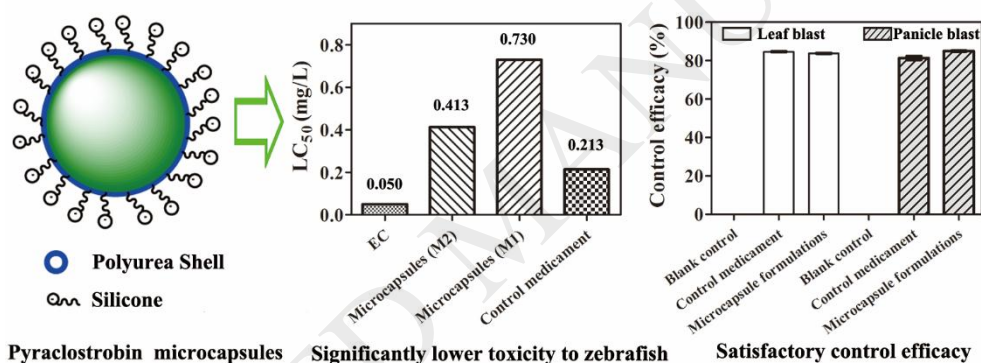
This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please 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.

## Preparation and Application of Pyraclostrobin Microcapsule Formulations

Mingwei Li, Weiming Xu, Deyu Hu, and Baoan Song\*

*State Key Laboratory Breeding Base of Green Pesticide and Agricultural Bioengineering, Key Laboratory of Green Pesticide and Agricultural Bioengineering, Ministry of Education, Centre for Research and Development of Fine Chemicals, Guizhou University, Guiyang 550025, China*

### Graphical abstract



### ABSTRACT

In this paper, pyraclostrobin-loaded polyurea microcapsules were prepared through interfacial polymerization reaction between isocyanates and amines. The microcapsules had size distribution ranging from 0.815  $\mu\text{m}$  to 8.674  $\mu\text{m}$ , nearly spherical shapes, and excellent encapsulation efficiency ( $EE > 90\%$ ). The release of pyraclostrobin from microcapsules was controlled by diffusion and erosion. The results of acute toxicity to zebrafish, spreadability on rice blades, and control effect on rice blast showed that the microcapsule formulations had significantly decreased toxicity to zebrafish (lower by 8–9-fold than that of emulsifiable concentrate), high

Download English Version:

<https://daneshyari.com/en/article/6977375>

Download Persian Version:

<https://daneshyari.com/article/6977375>

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