## Accepted Manuscript

Title: An environmentally-friendly chitosan-lysozyme biocomposite for the effective removal of dyes and heavy metals from aqueous solutions

Authors: Karthik Rathinam, Swatantra Pratap Singh,

Christopher J. Arnusch, Roni Kasher

PII: S0144-8617(18)30846-4

DOI: https://doi.org/10.1016/j.carbpol.2018.07.055

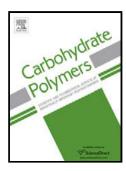
Reference: CARP 13855

To appear in:

Received date: 21-3-2018 Revised date: 16-7-2018 Accepted date: 16-7-2018

Please cite this article as: Rathinam K, Singh SP, Arnusch CJ, Kasher R, An environmentally-friendly chitosan-lysozyme biocomposite for the effective removal of dyes and heavy metals from aqueous solutions, *Carbohydrate Polymers* (2018), https://doi.org/10.1016/j.carbpol.2018.07.055

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

# An environmentally-friendly chitosan-lysozyme biocomposite for the effective removal of dyes and heavy metals from aqueous solutions

Karthik Rathinam, Swatantra Pratap Singh, Christopher J. Arnusch\*, and Roni Kasher\*

Department of Desalination and Water Treatment, The Zuckerberg Institute for Water Research,

The Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev, Sede Boqer

Campus, 84990, Israel.

#### Highlights:

- An environmentally-friendly chitosan-lysozyme biocomposite (CLC) was syntehsized
- Chitosan-lysozyme was an effective adsorbent for organic dye and Cr(VI) ions
- Concurrent removal of dye and heavy metals Cr(VI), Cd(II) and Ni(II) from mixtures
- Reduction of Cr(VI) to Cr(III) was evidenced by XPS analysis

<sup>\*</sup>Corresponding authors e-mail: arnusch@bgu.ac.il (CJA) and kasher@bgu.ac.il (RK).

#### Download English Version:

# https://daneshyari.com/en/article/7780963

Download Persian Version:

https://daneshyari.com/article/7780963

<u>Daneshyari.com</u>