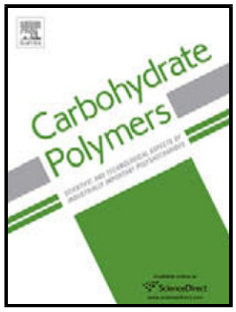

Title: Characterization, genetic regulation and production of cyanobacterial exopolysaccharides and its applicability for heavy metal removal

Authors: Biswanath Bhunia, Uma Shankar Prasad Uday, Gunapati Oinam, Abhijit Mondal, Tarun Kanti Bandyopadhyay, Onkar Nath Tiwari

PII: S0144-8617(17)31133-5
DOI: https://doi.org/10.1016/j.carbpol.2017.09.091
Reference: CARP 12836

To appear in:

Received date: 22-8-2017
Revised date: 15-9-2017
Accepted date: 26-9-2017

Please cite this article as: Bhunia, Biswanath., Prasad Uday, Uma Shankar., Oinam, Gunapati., Mondal, Abhijit., Bandyopadhyay, Tarun Kanti., & Tiwari, Onkar Nath., Characterization, genetic regulation and production of cyanobacterial exopolysaccharides and its applicability for heavy metal removal.*Carbohydrate Polymers* https://doi.org/10.1016/j.carbpol.2017.09.091

Characterization, genetic regulation and production of cyanobacterial exopolysaccharides and its applicability for heavy metal removal

Biswanath Bhunia[1], Uma Shankar Prasad Uday[2], Gunapati Oinam[3],Abhijit Mondal[2], Tarun Kanti Bandyopadhyay[2] and Onkar Nath Tiwari[4*]

[1]Department of Bio Engineering, National Institute of Technology, Agartala-799046, India

[2]Department of Chemical Engineering, National Institute of Technology, Agartala-799046, India

[3]DBT-Institute of Bioresources and Sustainable Development, Imphal-795001, Manipur, India

[4]Centre for Conservation and Utilisation of Blue Green Algae, Division of Microbiology, Indian Agricultural Research Institute (ICAR), New Delhi-110012, India

***** Correspondence: ontiwari1968@gmail.com; Tel.: +91 9862564743

Highlights

- Structure-property relationships for cyanobacterial exopolysaccharides (EPSs)
- Genetic regulation, biosynthesis and extraction of cyanobacterial EPSs
- Potential applications for heavy metal removal

Abstract:

Cyanobacteria are uniquely suited for the development of sustainable bioproduction platforms but are currently underutilized due to lack of genetic tools. Exopolysaccharide (EPS) is of significant biotechnological importance due to their technological application in various industries. It has been found that most of the research works are focused on isolation