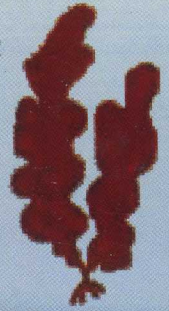


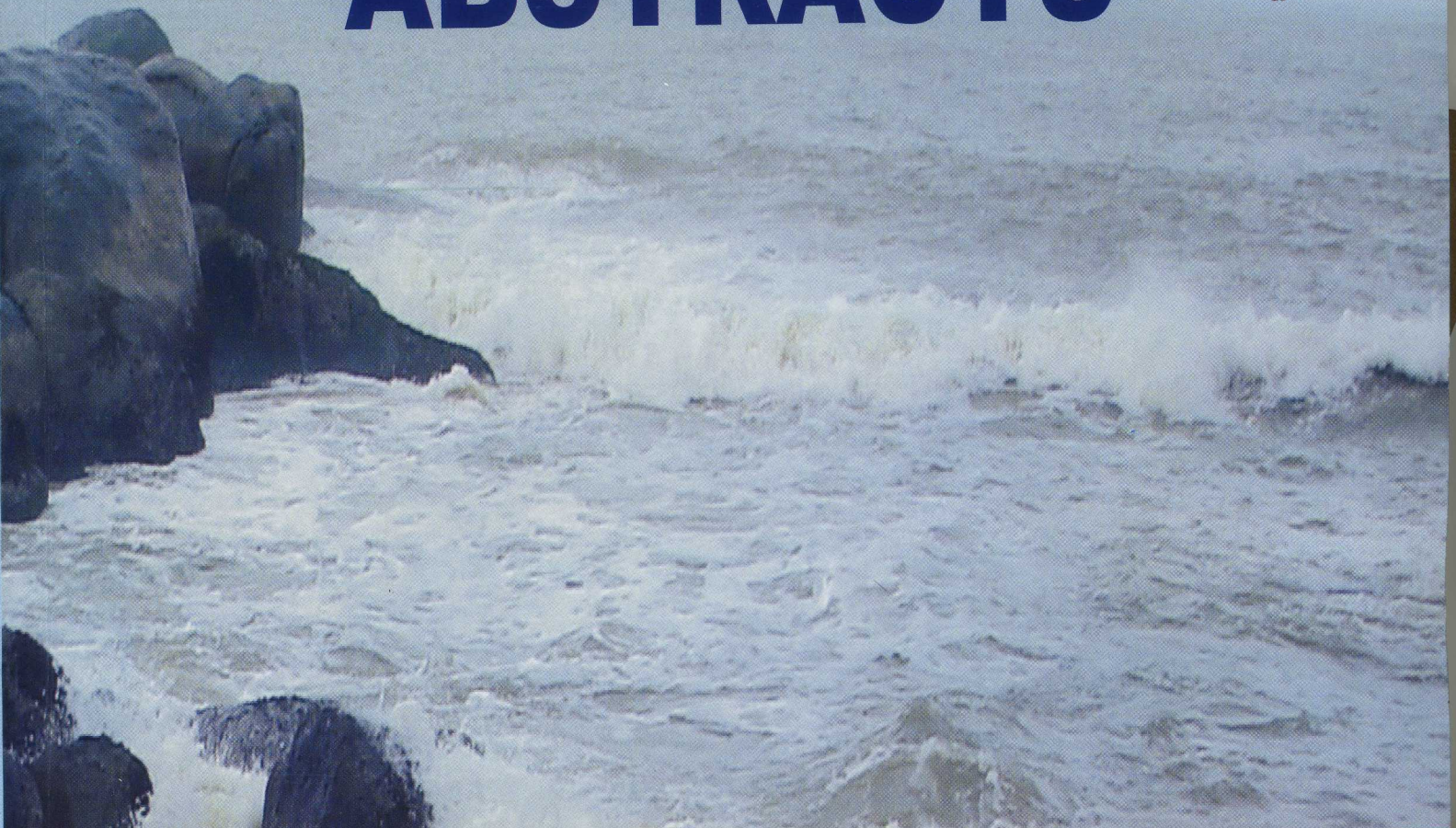
7<sup>th</sup> Asia-Pacific Conference on Algal Biotechnology

Algal Biotechnology in the Asia-Pacific Region: New Challenges and Opportunities for the 21st Century

December 1-4, 2009, New Delhi - India



# ABSTRACTS



Jointly Organized by  
DEPARTMENT OF BOTANY, UNIVERSITY OF DELHI, DELHI, INDIA  
INDIAN PHYCOLOGICAL SOCIETY, NEW DELHI, INDIA



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Under the Auspices of Asia-Pacific Society for Applied Phycology**

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# ABSTRACTS

*Edited by*

**DINABANDHU SAHOO**

Notes: The Abstracts have been published as submitted by the participants. However, certain modifications have been made for the sake of format and brevity.

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Oral Pres

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IL-13 S

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CP-2 S

## Metal Concentration and Structural Changes in Coralline Algae from Hydrothermal Vents

CP-56

**Ruben P. Couto<sup>1,2,\*</sup>, Ana I. Neto<sup>2,3</sup> and Armindo S. Rodrigues<sup>1,2</sup>**

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<sup>2</sup> Departamento de Biologia, Universidade dos Açores, 9501-801 Ponta Delgada, Apartado 1422, Portugal.

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One of the striking features of the Azores is the presence of active shallow water hydrothermal activity. Organisms that live in such environments are chronically exposed to increased temperature and metal concentrations and reduced pH, therefore presenting great potential as sentinels of the effects derived from such exposure. The present study aimed at evaluating metal concentration in specimens of *Corallina elongata* J. Ellis & Solander collected at sites exposed and not exposed to shallow water hydrothermal activity and evaluating changes in its anatomical and calcareous structures. Specimens were collected at four sites, one with hydrothermal activity and three without. Concentrations of Ca, Mg, Zn, Rb, Mn and Cd in the collected specimens were determined and their calcium carbonated structure was morphometrically analysed by electron microscopy scan. Thicker cell walls and a bleached appearance were observed on *C. elongata* specimens collected at the hydrothermal location. Increased concentrations of elements associated to volcanic activity such as Zn, Rb and Mn were also observed in these specimens. This study reports on metal accumulation and changes in the carbonated structure of *C. elongata*, adding new data for further research on the influence of shallow water hydrothermal vents on communities living in such habitats. Results also provide an insight on how coralline algae might be affected by ocean acidification.

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## Eco-Friendly Approach for Pollution Abatement

CP-57

**L. Uma, D. Prabakaran and G. Subramanian**

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One of the major challenges is the management of environment which is related to health. This needs prioritization. Green chemistry is a way that makes the process less toxic, with less energy and less waste by design. Renewability, sustainability and other life - cycle attributes are incorporated into the process.

The paper will address on the pollution abatement by the **green catalyst** of "marine cyanobacteria" - oxidoreductases, (azoreductase, laccase, ployphenol oxidase and peroxidases), hydrolases (nitrilase) metal reductase (chromium, iron) and transferases (glutathione S transferase. GST).

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