

EDITOR-IN-CHIEF

Professor Dr. Wanida Jinsart Department of Environmental Science Faculty of Science, Chulalongkorn University Phayatai Rd. Bangkok, Thailand environmentasiaj@gmail.com

HONORABLE CONSULTING EDITORS

Professor Dr. Rob Mars, *University of Liverpool, UK* Professor Dr. Chongrak Polprasert, *Thammasart University, Thailand*

ASSOCIATE EDITORS

Associate Professor Dr. Siranee Sreesai, Mahidol University, Thailand Assistant Professor Dr. Panwadee Suwattiga, King Mongkut's University of Technology North Bangkok, Thailand Dr. Peerapong Pornwongthong, King Mongkut's University of Technology North Bangkok, Thailand Assisant. Professor Dr. Racha Chaichana, Kasetsart University, Thailand

EDITORIAL BOARD

Professor Dr. Steven W. Edwards, University of Liverpool, UK Dr. Sarah Clement, University of Liverpool, UK Professor Dr. Tan Shan Hwai, University of Science Malaysia, Malaysia Professor Dr. Chitsan Lin, National Kaohsiung Marine University, Taiwan Professor Dr. Tran Hong Con, Vietnam National University, Vietnam Professor Dr. Masami Furuuchi, Kanazawa University, Japan Associate Professor Dr. Akihiko Terada, Tokyo University of Agriculture and Technology Japan Dr. Wei-Qin Zhang, University of Auckland, New Zealand Professor Dr. Somchai Osuwan, Chulalongkorn University, Thailand Associate Professor Dr. Sompong Doolgindachbaporn, Khon Kaen University, Thailand Associate Professor Dr. Benjaphorn Prapagdee, Mahidol University, Thailand Associate Professor Dr. Naiyanan Ariyakanon, Chulalongkorn University, Thailand Associate Professor Dr. Pongsak Noophan, Kasetsart University, Thailand Assistant Professor Dr. Thapat Silalertruksa, King Mongkut's University of Technology Thonburi, Thailand Assistant Professor Dr. Sittipong Dilokwanich, Mahidol University, Thailand Dr. Duangkamon Phihusut, Chulalongkorn University, Thailand Dr. Fairda Malem, Environmental Research and Training Center, Department of Environmental Quality Protection, Thailand Dr. Hatairattana Garivait, Environmental Research and Training Center, Department of Environmental Quality Protection, Thailand Dr. Worradorn Phairung, Prince of Songkla University, Thailand

WEBMASTER AND E-JOURNAL

Dr. Warapong Tungittiplakorn, King Mongkut's University of Technology North Bangkok, Thailand



TABLE OF CONTENT

Decolorization of Reactive Black 5 from Synthetic Dye Wastewater by Fenton Process Sermpong Sairiam, Pumis Thuptimdang, and Pisut Painmanakul	.1
Employment of Surface Modified Biomaterial in Sequestering Divalent Metal Ion J. Anuradha, and N. Muthulakshmi Andal	.9
Adsorption of Copper (II) and Nickel (II) by Chemical Modified Magnetic Biochar Derived from Eichhornia crassipes Chompoonut Chaiyaraksa, Watcharapol Boonyakiat, Wannisa Bukkontod, and Wanvisa Ngakom	[4
A Novel Catalyst from Water Treatment Sludge for Catalytic Ozonation to Degrade Phenol Apiradee Sukmilin, Banjong Boonchom, and Chalor Jarusutthirak	24
Elimination of Cr(VI) in Laboratory Wastewater Using Chitosan Coated Magnetite Nanoparticles (chitosan@Fe ₃ O ₄) Phetlada Sanchayanukun, and Sasithorn Muncharoen	32
Mobility Retardation of Cd, Pb and Mn in Acid Soil Using Phosphate Fertilizers <i>Chompoonut Chaiyaraksa, and Natthanan Rodsa</i>	49
Optimization Conditions for Increasing Cation Exchange Capacity of Coal Fly Ash Zeolite Modified with Chitosan Using Box-Behnken Design <i>Pathanin Sangaroon, Thares Srisatit, and Pongsert Sriprom</i>	58
Assessment of Endocrine Disrupting Chemicals Exposure in Sea Bass (<i>Lates calcarifer</i>) and Wild Fishes Using Vitellogenin as a Biomarker Witchuda Prasatkaew, Phochit Nanthanawat, and Chutima Thanomsit6	59
Morphological Characterization of Blood Cells in Five Important Estuarine Fish Species in Thailand During Juvenile Stages Naruebet Singkhanan, Jes Kettratad, Sinlapachai Senarat, Theerakamol Pengsakul, Chamnan Para, and Gen Kaneko	79
Correlation between Nutrients Distribution and Location of Green Mussel Farm Areas at the Coast of Phetchaburi, Phetchaburi Province, Thailand <i>Urairat Rattanavijit, Wit Tarnchalanukit, Kasem Chunkao, and Onanong Phewnil</i> 8	
Water Quality Assessment by Using of Water Quality Index for Mak Khaeng Canal, Udon Thani Province, Thailand Mathana Wongaree	96
E-SCI Knowledge Framework in Community Water Resources Management <i>Nuttakit Iamsomboon, Pattarawat Jeerapattanatorn, and Piya Duangpatra</i> 10)5
Priority Areas for Conservation Planning in Dong Na Tard Provincial Protected Area, Lao People's Democratic Republic (Lao PDR) <i>Somphong Chanthavong, and Inocencio E. Buot, Jr.</i>	16



TABLE OF CONTENT (Cont.)

Early Assessment of Shipping Route and Coral Cover as Drivers of Acroporid White Syndrome Outbreak in Karimunjawa, Java Sea, Indonesia Agus Sabdono, Ocky Karna Radjasa, and Diah Permata Wijayanti	126
Sea Breeze Climate and Human Thermal Comfort over Gaza, Palestine Z. Al Abadla, Uwe Schlink, M. M. Abdel Wahab, and S. M. Robaa	.136
Land-Cover Change Detection in a Part of Cameron Highlands, Malaysia Using ETM+ Satellite Imagery and Support Vector Machine (SVM) Algorithm Ayub Mohammadi, Himan Shahabi, and Baharin Bin Ahmad	.145
Morphometric Analysis of Upstream Sungai Batu Catchment in Selangor, Malaysia Using Geographical Information System (GIS) Nur Khaliesah Abdul Malik, Latifah Abd Manaf, Nor Rohaizah Jamil, Mohd Hafiz Rosli, and Fasihah Mohd Yusof	.155
Metallothionein as a biomarker of heavy metal (Cd, Cu, Zn, Pb, Hg, Ni, Cr) pollution in hermit crab (<i>Clibanarius signatus</i>) Mohammad Talebi Matin, Ali Mashinchian, Mahmood Sinaei, and Shahla Jamili	164
Study of Conservation and Wise Use of Two Important Indian Wetlands Using Contingent Valuation Technique <i>Malabika Biswas Roy, Sujit Pal, Mihir Pal, Pankaj Kumar Roy, and Abhishek Kumar</i>	172

JOURNAL POLICY

EnvironmentAsia is the international journal published *triannually* by the Thai Society of Higher Education Institutes on Environment (TSHE). The Journal publishes original research and review papers preferably in English covering all areas of Environmental studies. Preference, however, is given to the papers of the following areas:

Environmental Pollution & Safety Assessment Environmental Management, Protection and Conservation Environmental Economics Environmental Engineering Public Health and Sanitation Impact assessment of Pollution and Pollutants Environmental Biology and Molecular Biology, Toxicant induced alterations in organisms General Toxicology (chronic, subchronic and acute), response to toxic agents at community, species, tissue, cellular & sub cellular levels All areas of Environmental Sciences

This Journal is an open access journal. The users have the right to read, download, copy, distribute, print, search, or link to the full texts of these articles.

Paper should submitted in English. The journal will not accept articles, which have been published or are being considered for publication by another journal, nor should papers published here be submitted to other journals. Authors need not be members of the TSHE. Manuscripts must conform to the guidelines given below.

All the papers published in the Journal, are reviewed by a group of referees for their scientific merit. Manuscript decisions are solely based on the results of peer reviews, and to eliminate bias reviewers receive manuscript with blind title page. The journal, published both as hard-copies, available by subscription and freely available on the web at http://www.tshe.org/EA Views expressed by contributors are not necessarily those of the TSHE.

INSTRUCTIONS FOR AUTHOR

The Journal publishes Research Papers (not exceeding 4000 words,) and Reviews (not exceeding 5000 words). The manuscript should not exceed 16 B5 pages (with top and bottom margin of 1 cm, left margin of 2.5 cm, right margin of 2 cm, and spacing between column of 0.5 cm).

1. Manuscript Preparation

Manuscript should be prepared strictly as per guidelines given below.

Manuscript should contain the Title followed by Author name(s), Author(s) affiliations, Abstract (about 200 words), 4-5 Keywords and Text proper.

Title should be concised and typed in single column Times New Roman 14 Bold

Author Name(s) Times New Roman 12

Affiliation(s) Times New Roman 12 Italic

Abstract should be in single column and indicate the significant findings with data / data-range and conclusions of the paper. Times New Roman 12

Keywords should be in single column and adequately index the subject matter. Times New Roman 12, separate each word with semicolon

Text proper should be typed in *single column and subdivided into sections*: Introduction, Materials and Methods, Results and Discussion, Acknowledgements and References/Bibliographies. The title of each section Times New Roman 12 Bold. Subtitle Times New Roman 12 Italic.

- **Introduction** (Times New Roman 12) should include precisely the aims of the study. It should be as concise as possible with no sub headings. Exhaustive reviewing of literature should be avoided, only necessary and latest ones which are required to indicate the reason for the research undertaken and the essential background should be given.
- **Materials and Methods** (Times New Roman 12) should be sufficiently detailed to enable the experiments to be reproduced. The techniques and methodology adopted should be supported with standard references.
- **Results and Discussion** (Times New Roman 12) should be either combined or separated. Results may be split into sub headings. Data emerging out from the study should be included, arranged in the unified and coherent sequence and should be statistically analyzed. The same data should not be presented both in Tabular and Graphic forms. Only necessary tables and figures should be given. Long confused and irrelevant discussion should be scrupulously avoided. It should deal with interpretations and the conclusions drawn, based on results and supported by relevant references. Repetition of data, statements and expressions should be curtailed.
- Acknowledgement (Times New Roman 12) should include the names of those who contributed substantially to the work described in the manuscript but do not fulfill the requirements for the authorship. It should also include sponsors/funding agency of the project of which the work described is a part.
- **References/Bibliographies** (Times New Roman 10) should be cited in the Text by the surname of the author(s), and the year. In case of more than two authors, surname of the first author followed by et al., and the year should be cited in the text. References in languages other than English must be referred to by an English translation.

In the list of references/bibliographies, full and complete references/bibliographies should be given in the following style and punctuation, arranged alphabetically by first author's surname.

Paper in a Journal

Bradford MM. (1976). A rapid and sensitive method for the quantitation of microgram quantities of protein using the principle of protein-dye binding. Analytical Biochemistry; 72:248-54.

Burch BH, Siegel LA. (1971). Improved method for measurement of delta-aminolevulenic acid dehydratase activity of human erythrocytes. Clinical Chemistry;17:1038-41.

Fleming DE, Chettle D, Wetmur JG, Desnick RJ, Robin JP, Boulay D, Richard NS, Gordon CL, Webber CE. (1998). Effect of the delta-aminolevulinate dehydratase polymorphism on the accumulation of lead in bone and blood in lead smelter workers. Environmental Research; 77: 49-61.

Book

APHA. (1998). Standards Methods for examination of water and wastewater. 20th ed. APHA, AWWA, WPCF, Washington DC, USA; 135-41.

Henry JB. (1979). Clinical diagnosis and management by laboratory method. 16th ed. PA:WB Saunders Co., Philadelphia, USA; 513-15.

Chapter in a Book

Wilkinson CF. (1990). Introduction and overview. In: The effects of pesticides on human health (Eds: Bakers SR, Wilkinson CF). Princeton Scientific Publishing Co. Inc., New Jersey, USA.; 15-20.

Unpublished research including online and personal communication should not be given in the Text and Reference sections. Footnotes should be avoided as far as possible.

The figures and tables must be placed at the end of the paper. Table and figure titles should be clearly demonstrated.

2. Manuscript Submission

Manuscript should be submitted by email to Editor in chief Professor Dr.Wanida Jinsart at *environmentasiaj@gmail.com*.

Panel nominated of two or more potential reviewers for reviewing the manuscript along with their complete contact postal addresses and email address is preferred.

Submission of manuscript to this Journal implies that it is not under consideration for publication elsewhere, its submission for publication has been approved by all the authors and the institution where the research was carried out. This journal does not charge submission, processing and publication fee.

Plagiarism Policy: The Journal is equipped by plagiarism detection system. Any manuscript submitted for publication in *EnvironmentAsia* is checked for plagiarism before editorial and peer reviewing processes.

3. Copyright

Copyright of the paper published in *EnvironmentAsia* belongs to the Thai Society of Higher Education Institutes on Environment (TSHE).

Paper and all correspondence should be addressed/submitted to:

Professor Dr.Wanida Jinsart *Editor in Chief, EnvironmentAsia* Department of Environmental Science, Faculty of Science Chulalongkorn University, Phayatai Rd., Bangkok 10330, Thailand **Email Address: environmentasiaj@gmail.com**