

Environment, Chemistry and Biology IV

Edited by

Ms. Liu Juan

Environment, Chemistry and Biology

Selected, peer reviewed papers from the
2015 4th International Conference on
Environment, Chemistry and Biology
(ICECB 2015)
November 19-21, 2015, Auckland, New Zealand

Edited by

Liu Juan



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PREFACE

Dear Distinguished Delegates and Guests,

The Organizing Committee warmly welcomes our distinguished delegates and guests to the 2015 4th International Conference on Environment, Chemistry and Biology (ICECB 2015) held on November, 19-21, 2015 in Auckland, New Zealand.

ICECB 2015 are sponsored by Asia-Pacific Chemical, Biological & Environmental Engineering Society (APCBEEES), and supported by APCBEEES Members and scholars from universities all round the world. If you have attended a conference sponsored by APCBEEES before, you are aware that the conferences together report the results of research efforts in a broad range of Environment, Chemistry and Biology. These conferences are aimed at discussing with all of you the wide range of problems encountered in present and future high technologies. ICECB 2015 are organized to gather members of our international community scientists so that researchers from around the world can present their leading-edge work, expanding our community's knowledge and insight into the significant challenges currently being addressed in that research. The conference Program Committee is itself quite diverse and truly international, with membership from the Americas, Europe, Asia, Africa and Oceania.

This proceeding records the fully refereed papers presented at the conference. The main conference themes and tracks are Environment, Chemistry and Biology. The main goal of these events is to provide international scientific forums for exchange of new ideas in a number of fields that interact in-depth through discussions with their peers from around the world. Both inward research; core areas of Environment, Chemistry and Biology and outward research; multi-disciplinary, inter-disciplinary, and applications will be covered during these events.

The conference has solicited and gathered technical research submissions related to all aspects of major conference themes and tracks. All the submitted papers in the proceeding have been peer reviewed by the reviewers drawn from the scientific committee, external reviewers and editorial board depending on the subject matter of the paper. Reviewing and initial selection were undertaken electronically. After the rigorous peer-review process, the submitted papers were selected on the basis of originality, significance, and clarity for the purpose of the conference. The selected papers and additional late-breaking contributions to be presented as lectures will make an existing technical program. The conference program is extremely rich, featuring high-impact presentations.

The high quality of the program – guaranteed by the presence of an unparalleled number of internationally recognized top experts – can be assessed when reading the contents of the program. The conference will therefore be a unique event, where attendees will be able to appreciate the latest results in their field of expertise, and to acquire additional knowledge in other fields. The program has been structured to favor interactions among attendees coming from many diverse horizons, scientifically, geographically, from academia and from industry. Included in this will to favor interactions are social events at prestigious sites.

We would like to thank the program chairs, organization staff, and the members of the program committees for their work. Thanks also go to Editor Ms. Liu Juan, Asia-Pacific Chemical, Biological & Environmental Engineering Society, for their wonderful editorial service to this proceeding.

We are grateful to all those who have contributed to the success of ICECB 2015. We hope

that all participants and other interested readers benefit scientifically from the proceedings and also find it stimulating in the process. Finally, we would like to wish you success in your technical presentations and social networking.

We hope you have a unique, rewarding and enjoyable week at ICECB 2015 in Auckland, New Zealand.

With our warmest regards,

The Organizing Committees
November, 19-21, 2015
New Zealand.

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