

Abstracts of 2nd International Symposium on Plastic Pollution

Editors

- Hyunook Kim
- Sunghee Joo
- Monu Verma
- Ingyu Lee

3-4 November, 2022

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Hyunook Kim
Sunghee Joo
Monu Verma
Ingyu Lee
(Editors)

*Abstracts of
2nd International Symposium
on Plastic Pollution*

*[SYM-1 & SYM-2: Challenges and Possible
Solutions of Plastic Pollution]
[SYM-3: Toxicity Assessment of Plastics]*

3rd-4th November 2022

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- [SYM-1~2] Challenges and Possible Solutions of Plastic Pollution
- [SYM-3] Toxicity Assessment of Plastics

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Symposium Organizer

Plastic-Free Specialized Graduate School, University of Seoul, South Korea

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2nd International Symposium on Plastic Pollution

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About the Symposium

The Second International Symposium on Plastic Pollution, hosted on the 3rd to 4th November 2022, was organized both online and offline (hybrid). Presenters and attendees participated in person on Jeju Island, South Korea and virtually via Zoom. This symposium was organized by “Plastic Free” Specialized Graduate School, University of Seoul. The symposium covers “Challenges and Possible Solutions of Plastic Pollution” and “Toxicity Assessment of Plastics”. The symposium was special as it brought together researchers from multidisciplinary fields, bringing new research ideas and creating collaboration in the field of plastic pollution. With 20 experts from 7 countries, and two special sessions with different themes, the symposium offered a perfect platform for attendees to share their research ideas. We would like to express our gratitude to all contributors, in particular the invited speakers, for their active participation and scientific contributions to the symposium. In addition, we sincerely acknowledge the funding agencies (The Ministry of Environment & KEITI), which supported the hosting of this symposium.

Symposium Schedule



K.S. E.A. ^{서단} ^{협찬} 한국환경분석학회

November 3 [Thursday] Jeju-Island Pacific Hotel

(1st Ground floor, SHANGRILA)

[SYM-1] Challenges and Possible Solutions of Plastic Pollution

Chairs: Prof. Yeejoon Yoon, Yonsei University & Prof. Robert Mitchell, UNIST

13:30 –13:40	<p>[Opening Ceremony] Opening Remark: Prof. Hyunook Kim, University of Seoul</p>
13:40 – 14:00 (20 분)	<p>Dr. Sun-Kyoung Shin, National Institute of Environmental Research, National Institute of Environmental Research : Microplastics research trends in Korea</p>
14:00 – 14:20 (20 분)	<p>Dr. Jae-Woo Kim (KOTITI) (S. Korea) : Research of the assessment method for microplastics removal efficiency in washing machine</p>
14:20 – 14:40 (20 분)	<p>Prof. Changseok Han Inha University, (S. Korea) : Environmental aging of polymer nanocomposites and their characterization</p>
14:40 – 15:00 (20 분)	<p>Prof. Young-Min Kim, Daegu University (S. Korea) : Effective Py-GC/MS analysis method for the quantification of microplastics in various kinds of environmental matrix</p>
15:00 – 15:20 (20 분)	<p>Dr. Ju-Seok Lee, Korea Institute of Bioscience and Biotechnology (S. Korea) : Evaluation of biodegradability and performance of degradation additive for commercial mulch films in Korea</p>
15:20 – 15:40 (20 분)	<p>Prof. Jeong Jae Kim, Hanbat National University (S. Korea) : Development of real-time detection system of microplastic in tap water</p>

15:40 – 16:00 (20 분)	Break time
16:00 – 16:20 (20 분)	Prof. Robert J. Mitchell (UNIST, S. Korea) : Microplastics as a source of antibiotic resistance and bacterial pathogens
16:20 – 16:40 (20 분)	Prof. Anish Kumar Warriar (Manipal Institute of Technology) (India) : Microplastic pollution studies in India – A review
16:40 – 17:00 (20 분)	Prof. Hefa Cheng, Peking University (China) : Microplastic pollution in Bangladesh: Research and management needs
17:00 – 17:20 (20 분)	Prof. Sun-Hyung Kim, University of Seoul (S. Korea) : Another story of MADS-Box genes – AGL12, AGS14 and AGL19
17:20 – 17:40 (20 분)	Prof. Agamuthu Pariatamby, Sunway University (Malaysia) : Challenges and sustainable solutions to plastics pollution in the ecosystem

November 4 [Friday] Jeju-Island Pacific Hotel

(1st Ground floor, SHANGRILA)

[SYM-2] Challenges and Possible Solutions of Plastic Pollution (Con't)

Chair: Prof. Changseok Han, Inha University

09:00 – 09:20 (20 분)	Prof. Woo-Taeg Kwon, Eulji University (S. Korea) : Airborne microplastics: Occurrence and detection methods of microplastics
09:20 – 09:40 (20 분)	Prof. Yejoon Yoon, Yonsei University (S. Korea) : Development of microplastic sampling and pretreatment device by μ -Raman spectroscopy and distribution characteristics of microplastics in fresh water
09:40 – 10:00	Prof. Chihhao Fan, National Taiwan University (Taiwan)

(20 분)	: Advances in microplastic study: occurrence, fate, assessment, and impacts on the environment
10:00 – 10:20 (20 분)	Prof. Shu-Yuan Pan, National Taiwan University (Taiwan) : Development of circular economy technologies towards net Zero emission plastics industry
10:20 – 10:40 (20 분)	Prof. Cheng-Di Dong, National Kaohsiung Marine University (Taiwan) : The contamination of microplastics in marine environment: Occurrence, distribution, effects, and health impacts
10:40 – 11:00 (20 분)	Prof. Justin Chun-Te Lin, Feng Chia University (Taiwan) : Investigating types and distributions of adsorbed persistent organic pollutants from terrestrial to marine floating microplastics (MPs)
[SYM-3] Toxicity Assessment of Plastics	
Chair: Prof. Sunghee Joo, Plastic-Free Specialized Graduate School, University of Seoul	
11:00 – 11:20 (20 분)	Prof. Trisia Farrelly, Massey University (New Zealand) : Is there any such thing as a toxic-free circular economy for plastics?
11:20 – 11:40 (20 분)	Prof. Shimelis Kebede, Addis Ababa University (Ethiopia) : Emerging concern and current knowledge of microplastic in Ethiopia
11:40 – 12:00 (20 분)	Dr. Jui-Yen (Thomas) Lin (/Prof. Chin-Pao Huang), University of Delaware (USA) : Surface acidity of hydrous ultrafine plastics particles in simple electrolyte
12:00 – 13:00	Closing ceremony

※ The program runs "hybrid (both online and offline)" presentations.

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This symposium was supported by Korea Environment Industry & Technology Institute (KEITI) through Plastic Free Specialized Graduate School, funded by Korea Ministry of Environment (MOE).

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