

# Abstracts of 1st International Symposium on Plastic Pollution *[Removal, Analysis, and Risk Assessment of Microplastics]*

Editors

- Sunghee Joo
- Hyunook Kim
- Byoung-In Sang

28-29 October, 2021

Organized by



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# Plastic Pollution



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Global Health Threat in the 21<sup>st</sup> century

Sunghee Joo  
Hyunook Kim  
Byoung-In Sang  
(Editors)

*Abstracts of*  
*1st International Symposium*  
*on Plastic Pollution*  
*[Removal, Analysis, and Risk*  
*Assessment of Microplastics]*

*28<sup>th</sup>–29<sup>th</sup> October 2021*

*Organized by*

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- Hanyang University, South Korea

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Abstracts of 1st International Symposium on Plastic Pollution: Removal, Analysis, and Risk Assessment of Microplastics (28<sup>th</sup>–29<sup>th</sup> October 2021)

*Editors*

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*Symposium Organizers*

- Post Plastic, a specialized program of the Graduate School, University of Seoul, South Korea
- Hanyang University, South Korea

*Symposium Sponsor*

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## Table of Contents

Disclaimer .....	i
About the Symposium .....	v
Symposium Schedule.....	vii
Keynote Speakers List.....	x
Acknowledgement.....	xi
Use of Recycled Plastic Materials in Roads and their Potential for Microplastics Release <i>Filippo Giustozzi, Marie Enfrin</i> .....	1
Microplastics in the Agroecosystem: An Emerging Threat to the Plant and Soil Health <i>Huadong Zang, Jie Zhou, Zhaohai Zeng</i> .....	5
Removal of Microplastics by Advanced Nanomaterials <i>Surbhi Sharma and Soumen Basu</i> .....	8
Microplastics Pollution: Integrated Approaches and Solutions <i>Bupe G Mwanza</i> .....	11
Membrane Fouling by Nano/Micro Plastics: Challenges and Potential Mitigation Strategies <i>M. Enfrin, L. F. Dumeé and J. Lee</i> .....	14
Qualitative Identification of Microplastics: A Preliminary Study Using Fourier-transform Infrared (FTIR) Spectroscopy <i>Chihhao Fan, Ya-Zhen Huang, Jhen-Nan Lin and Junwei Li</i> .....	16
Microplastics Research Trends and Future Challenges in the Korean Environmental Fields <i>Sun Kyoung Shin</i> .....	18
Effects of Micro- and Nano-plastics Wastes on Human Health <i>Tejraj M. Aminabhavi, Megha M. Nadagouda and Saquib Hasnain</i> .....	21
Plastic Detection Using a Multi--method Approach: Comparative Case Studies from Coastal Tourism Sites <i>Carol Maione, Gabriela Fernandez</i> .....	23

Index Models for Environmental Micro- and Nano- Sized Plastics <i>Christian Ebere Enyoh, Wang Qingyue, Andrew Wirnkor Verla, Tanzin Chowdhury</i> .....	28
Disposable Face Masks: Analysis of the Release of Synthetic Micro and Nano Particles and Chemical Contaminants - Linked to the COVID-19 Pandemic <i>Sarper Sarp</i> .....	30
Impact of Microplastic Contaminants on Marine Environment and its Life <i>A. Sundaramanickam and A. Nithin</i> .....	35
Ingestion of Microplastics in Fish <i>Huahong Shi, Bowen Li, Weiwenhui Liang, Cuizu Ma, Lei Su</i> .....	37
Microplastics in Edible Salts and their Removal Strategy <i>Naveenkumar A. Yaranal, S. Senthilmurugan, Kaustubha Mohanty</i> .....	40
A Preliminary Analysis on the Separation of Ultrafine Plastics Particles from Water <i>Jui-Yen Lin, Jing Hua Tzeng, Chin-Pao Huang</i> .....	42
Characterization and Analysis of Microplastics and Nanoplastics in Water <i>Inggyu Lee, Jusung Oh, Sunghee Joo, Hyunook Kim</i> .....	45
Effect of Plastic and Micro-plastic on Climate Change <i>Nirban Laskar</i> .....	47
Monitoring, Control and Assessment of Plastic Wastes: A Life-cycle Thinking for Circularity <i>Shu-Yuan Pan, Ting-Kai Chen, and Hung-Pin Huang</i> .....	49
Stormwater Treatment Systems- A Long-term Sink or Source of Microplastics? <i>Sanjay Mohanty, Vera S. Koutnik, and Jamie Leonard</i> .....	51
Systematic Meta-analysis of Microplastic Concentrations in Aqueous Ecosystems <i>Alina Zehra and Sadasivam Anbumani</i> .....	53



## **About the Symposium**

The First International Symposium on Plastic Pollution, hosted on the 28<sup>th</sup> to 29<sup>th</sup> October, 2021, was organized both online and offline (hybrid), due to the COVID-19 pandemic. Presenters and attendees participated in person on Jeju Island, South Korea and virtually via Zoom, through pre-recorded videos which were played during the special sessions. This symposium is the first of its kind, and was organized by Post Plastic, a specialized program of the Graduate School, University of Seoul, and co-hosted by Hanyang University. The symposium covers preventive measures; the characterization and analysis of microplastics and nanoplastics; and the effects of plastic particles on the environment and on public health. 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 more than 20 experts from 12 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.



# Plastic Pollution



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# Symposium Schedule

October 28 (Thu) MAISON GLAD JEJU Jade Hall

## SYM-1: Preventive Measures of Plastic Pollution

Time Slot	Speaker(s)	Topic
14:00-14:25	<b>Sun-Kyoung Shin</b> National Institute of Environmental Research (South Korea)	Microplastics Research Trends and Future Challenges in the Korean Environmental Fields
14:25-14:50	<b>Filippo Giustozzi &amp; Marie Enfrin</b> Civil and Infrastructure Engineering, RMIT University (Australia)	Use of Recycled Plastic Materials in Roads and their Potential for Microplastics Release
14:50-15:10	<b>Huadong Zang</b> China Agricultural University (China)	Microplastics in the agroecosystem: An emerging threat to the plant and soil health
15:10-15:30	<b>Soumen Basu</b> Thapar Institute of Engineering & Technology (India)	Removal of Microplastics by Advanced Nanomaterials
15:30-15:50	<b>Bupe Getrude Mwanza</b> University of Zambia (Zambia)	Microplastics Pollution: Integrated Approaches and Solutions
15:50-16:10	<b>Prosper Naah, Angnunavuri</b> University of Energy and Natural Resources (Ghana)	Occurrence of Plastic Particles in Potable Water: Current State of Science for Environmental Regulation in Ghana
16:10-16:30	<b>Judy Lee</b> The University of Surrey (UK)	Membrane fouling by nano/micro plastics: challenges and potential mitigation strategies
16:30-16:50	<b>Sandhya Babel</b> Thammasat University (Thailand)	Microplastics Contamination in a High Population Density Area of the Chao Phraya River: Abundance, characteristic and interaction with heavy metals
16:50-17:15	<b>Chihhao Fan</b> National Taiwan University (Taiwan)	Qualitative Identification of Microplastics: A Preliminary Study Using Fourier-transform infrared (FTIR) spectroscopy
<b>17:15-18:00</b>	<b>Live Q&amp;A</b>	

October 29 (Fri) MAISON GLAD JEJU Jade Hall

**SYM-2: Risk Assessment and Analysis of Plastics**

<b>Time Slot</b>	<b>Speaker(s)</b>	<b>Topic</b>
09:00-09:25	<b>Tejraj M Aminabhavi</b> Karnatak University (India)	Effects of Micro- and Nano-plastics Wastes on Human Health
09:25-09:45	<b>Carol Maione &amp; Gabriela Fernandez</b> Polytechnic University of Milan (Italy) San Diego State University (USA)	Plastic detection using a multi-method approach: Comparative case studies from coastal tourism sites
09:45-10:05	<b>Christian Ebere Enyoh</b> Imo State University (Nigeria)	Index Models for Environmental Micro- and Nano- Sized Plastics
10:05-10:30	<b>Sarper Sarp</b> Cwwater, Swansea University (UK)	Disposable face masks- Analysis of the release of synthetic micro and nanoparticles and chemical contaminants- linked to the COVID-19 pandemic
10:30-10:50	<b>Arumugam Sundaramanickam</b> Annamalai university (India)	Impact of microplastic contaminants on marine environment and its life
10:50-11:10	<b>Huahong Shi</b> East China Normal University (China)	Ingestion of microplastics in fish
11:10-12:00	<b>Poster</b>	
12:00-13:00	<b>Lunch</b>	

October 29 (Fri) MAISON GLAD JEJU Jade Hall (After Lunch)

SYM-2 (Con't): Risk Assessment and Analysis of Plastics

Time Slot	Speaker(s)	Topic
13:00-13:20	<b>Kaustubha Mohanty</b> Indian Institute of Technology Guwahati (India)	Microplastics in edible salts and their removal strategy
13:20-13:40	<b>Chin-Pao (C.P.) Huang</b> University of Delaware (USA)	A preliminary analysis on the separation of ultrafine plastics particles from water
13:40-14:00	<b>Ingyu Lee</b> University of Seoul (South Korea)	Characterization and Analysis of Microplastics and Nanoplastics in Water
14:00-14:20	<b>Nirban Laskar</b> Mizoram University (India)	Effect of Plastic and Micro-plastic on Climate Change
14:20-14:45	<b>Shu-Yuan (Sean) Pan</b> National Taiwan University (Taiwan)	Monitoring, Control and Assessment of Plastic Wastes: A Life-Cycle Thinking for Circularity
14:45-15:10	<b>Sanjay K. Mohanty</b> The University of California, Los Angeles (UCLA, USA)	Stormwater treatment systems – a long-term sink or source of microplastics?
15:10-15:30	<b>Sadasivam Anbumani</b> CSIR-Indian Institute of Toxicology Research (India)	Systematic Meta-analysis of Microplastic Concentrations in Aqueous Ecosystems
15:30-16:30	<b>Live Q&amp;A session</b>	

## Keynote Speakers List

- Sun-Kyoung Shin
- Filippo Giustozzi & Marie Enfrin
- Chihhao Fan
- Tejraj M Aminabhavi
- Carol Maione & Gabriela Fernandez
- Sarper Sarp
- Shu-Yuan (Sean) Pan

## **Acknowledgement**

This symposium was supported by Korea Environment Industry & Technology Institute (KEITI) through Post Plastic, a specialized program of the Graduate School funded by Korea Ministry of Environment (MOE).

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