

Special Session :

Material flow structure in a carbon neutral society

Organized by
Keisuke NANSAI (National Institute for Environmental Studies)
and Yasuhiro HIRAI (Kyoto University)

The rapid decarbonisation of energy use is needed toward a carbon-neutral society. While the power generation industry is accelerating the spread and high efficiency of renewable energy, it is still challenging to electrify the thermal energy required for the life cycle of materials, and it is therefore vital to reduce greenhouse gas emissions (GHGs) by enhancing the efficiency of materials use.

This special session aims to discuss the structure of material flow transition to lead a carbon neutral society for each material life cycle stage (production, regeneration, and disposal) via sharing the latest research results from 6 presenters. We would like to have fruitful discussions with all the participants.

Program

*Chair:

Prof. Keisuke NANSAI (National Institute for Environmental Studies, Japan)

Prof. Yasuhiro HIRAI (Kyoto University, Japan)

“Optimization of wide-area treatment of municipal solid waste in Japan toward 2050”
by Yasuhiro HIRAI (Kyoto University, Japan)

“Carbon emission reduction potential of China’s cement industry by utilizing municipal solid waste (MSW) at the provincial levels”
by Yuwei ZHOU (The University of Tokyo, Japan)

“Attributes for assessing zero waste targets in construction projects”
by Nilmini Pradeepika WEERASINGHE (RMIT University, Australia)

“Driving towards Net-Zero: Assessing GHG emission reduction potential through circular economy strategies in China and Japan's passenger car sector”
by Ziyang HE (The University of Tokyo, Japan)

“Impact of recycling intensity on material circulation: A case study of carbon neutral technologies”
by Guochang XU (National Institute for Environmental Studies, Japan)

“Investigating dematerialization pathways towards a carbon-neutral society”
by Sho HATA (National Institute for Environmental Studies, Japan)

Followed by QA session.