

Plastics: Pollution Challenges and Innovations

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More than 8 billion metric tons of plastic has been produced since only 1950, and while plastic has become an essential component of our society and we can't imagine our lives without it, it's universal use has resulted in contamination in every corner of the globe: from the deepest depths of our oceans to remote mountain tops. While the material and waste from widespread global use is produced by humans, plastic, and especially microplastic is transported by air and water to remote locations of our planet. While we have seen ecotoxic impacts, especially to animals such as sea birds, turtles and whales, we don't yet know what this means for us, as humans, nor do we understand the full implications to our global ecosystems. We do however, know enough to try to mitigate this issue – and engineers and scientists are working on various interventions spanning the entire value chain.

Our first speaker Jeremy Conkle (Texas A&M-Corpus Christi) will introduce the extent and nature of plastic contamination and the movement between reservoirs, impacts of marine plastics in coastal and marine environments and the importance of citizen science and open data to address this issue through a landmark legal decision he played a part in. Our second speaker, Desiree Plata (MIT/Yale) will talk about Green Engineering and the sustainability of materials flow in the plastics economy, recycling and the value of materials, as well as the fossil fuel sources of plastics. Our third speaker is going to represent social entrepreneurship from RePurpose, Svanika Balasubramanian will talk about their plastic "off-set" technology of funding the informal waste sector in India to address both environmental and social justice issues related to plastic pollution.