

TABASSUM MUMTAZ

Asia & Pacific

Environmental Microbiology

Principal Scientific Officer,
Institute of Food and Radiation Biology,
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Dhaka, Bangladesh

Dr. Tabassum Mumtaz, an environmental microbiologist from Bangladesh, works on the conversion of biomass and other waste materials into useful compounds using bacteria. Her work contributes to directly removing harmful materials from the environment as well as generating renewable energy in the process. Dr. Mumtaz specializes in producing polyhydroxyalkanoates (PHAs), bioplastics produced by special bacteria that are cultivated from compost, food waste, and wastewater, such as the effluents from palm oil production.

Dr. Mumtaz was born in Dhaka, Bangladesh. She received her PhD in Environmental Biotechnology from Universiti Putra Malaysia in 2011, under an OWSD PhD fellowship. After a post-doctoral position at the University Kebangsaan Malaysia from 2014-2015, she returned to the Bangladesh Atomic Energy Commission, where in addition to her research as a Principal Scientific Officer, she trains undergraduate students in basic laboratory techniques for microbiology. She has numerous publications including in several high-impact journals, and has acted as a reviewer of several journals. She is the author of a book, "Changes in the properties of LD-PE during biodegradation in soil."

Dr. Mumtaz's current research focuses on the remediation of wastewater by gamma radiation and the capability of radio-resistant bacteria for PHA production. In the future, she hopes to implement projects at BAEC on biohydrogen and bioethanol production from biomass. She believes that strategies focusing on pollution abatement and the concurrent generation of renewable energy and valuable green bioproducts (organic acids, bioplastics) can be achieved through collaborations with established industries in Bangladesh such as textile dyeing. These developments will have a big impact on the energy consumption of the country in the near future.

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Winning the OWSD-Elsevier Foundation Award is like receiving an Oscar to me. It will be a tremendous inspiration to me and to all women scientists in Bangladesh and the Asia-Pacific, to dream big and to do research beneficial to the environment and society.”

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