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Interaction of toxic chemicals with microplastics: A critical review

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13 ABSTRACT

14 Occurrence of microplastics (MPs) in the environment has attracted great attention as it
15 has become a global concern. This review aims to systematically demonstrate the role of
16 marine microplastic as a novel medium for environmental partitioning of chemicals in the
17 ocean, which can cause toxic effects in the ecological environment. This review assimilated
18 and analyzed available data published between 1972 and 2017 on the interaction between
19 MPs and selected chemicals. Firstly, the review analyzes the occurrence of chemicals in MPs
20 and outlines their distribution patterns. Then possible mechanisms of the interaction between
21 MPs and organic chemicals and potential controlling factors were critically studied. Finally,
22 the hazards of MPs and affiliated organic chemicals to marine organisms were shortly
23 summarized.

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