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Marine Pollution Bulletin  
Volume 168, July 2021, Article number 112429

## Nanoparticles as vectors of other contaminants in estuarine suspended sediments: Natural and real conditions (Article)

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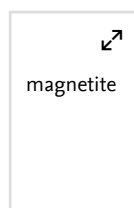
### Abstract

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Studying the behaviour and danger of nanoparticles (NPs, minerals and amorphous phases) in the estuarine ecosystem is presently incomplete by the lack of measurable description of NPs in the ecological conditions, such as suspended-sediments (SS). In the last years, several works have revealed the toxic consequences of ultra-fine and nanoparticulate compounds on diverse systems, raising apprehensions over the nanocontaminants behaviour and destiny in the numerous ecological partitions. The general objective of the manuscript is to explain the geochemical conditions of the LES (Laguna estuarine system, southern Brazil) suspended sediments covering an area around the main South American coal plant, enhancing the creation of future public policies for environmental recovery projects. Subsequently the discharge of nanoparticles and toxic element (TE) in the ecosystem, NPs react with several constituents of the nature and suffers active alteration progressions. Contamination coming from engineering actions, wastewater, are something identifiable, however when these contaminations are accompanied by other contamination sources (e.g. mining and farming) the work gets defaulted. By combining material about the concentration of TE contaminants and NPs occurrences, this work offers novel visions into contaminant contact and the possible effects of such exposure on estuarine systems in Brazil. The results presented here will be useful for different areas of estuaries around the world. © 2021 Elsevier Ltd

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#### Funding text




The authors thank CAPES (Coordination for the Improvement of Higher Education Personnel) and CNPq (National Council for Scientific and Technological Development) for the financial support.

ISSN: 0025326X  
 CODEN: MPNBA  
 Source Type: Journal  
 Original language: English

DOI: 10.1016/j.marpolbul.2021.112429  
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