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Nanomaterial's based Chromium speciation in environmental samples: A review

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#### **ACCEPTED MANUSCRIPT**

### Nanomaterial's based Chromium speciation in environmental

2	samples: A	review

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#### Abstract

To investigate critical health effects, a supporting speciation analysis is often matter of concern in order to identify figure of the bioconcentration or biomagnification of elements like chromium. Chromium speciation study requires high capacity separation and high sensitivity detection because chromium naturally exists in small quantities. Scientific literature supports chromium speciation at trace levels by using different nanomaterials and methodologies. Nanoparticles adsorbent based speciation technique is a current state-of-art technique due to its exceptional surface area chemistry, maximum mechanical strength, optical, magnetism, unique electrical, catalytic and photonic properties. The present review is aimed to discuss significance of chromium speciation and specific properties of different nanoparticles as adsorbent and also explore the new possible nanomaterials for chromium speciation. All data used for chromium speciation with various kind of nano adsorbent has also been tabulated with their analytical figure of merit.

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