

## Development of Nanostructured Materials for the Elimination of Emerging Pollutants in Water through Adsorption Processes

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**Abstract :** The present work shows in the first place, the manufacture of the perovskitic material used as adsorbent, by means of two different methods to obtain two types of perovskites ( $\text{LaFeO}_3$  and  $\text{BiFeO}_3$ ). The results of this work show the characteristics of this manufactured material, as well as the synthesis yields obtained, achieving a better result for the self-combustion synthesis. Secondly, from the manufactured perovskites, an adsorption system has been developed, at the laboratory level, for the adsorption of the emerging pollutants Trimethoprim, Ciprofloxacin and Ibuprofen.

**Keywords :** nanostructured materials, emerging pollutants, water, adsorption processes

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