

**Prof Dinesh Mohan and his team from School of Environmental Sciences have published a major publication in Chemical Reviews (impact factor = 52.613)**

**Professor Dinesh Mohan** and his team from School of Environmental Sciences have published a major publication entitled “**Pharmaceuticals of Emerging Concern in Aquatic Systems: Chemistry, Occurrence, Effects, and Removal Methods**” in **Chemical Reviews (impact factor = 52.613)**. This is the highest impact factor journal in which any JNU faculty member has ever had a paper published. This paper covers the topic of pharmaceutical compound pollutants released into the environment worldwide, their distribution, fate, breakdown, effects on health, removal and remediation techniques, and recommendations for the future. This publication spans the breadth of pharmaceutical contamination as a pollutant class of emerging concern in the environment, citing 1006 references. This is a topic of great and growing concern in India.

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# CHEMICAL REVIEWS

Cite This: Chem. Rev. XXXX, XXX, XXX–XXX

Review

pubs.acs.org/CR

## Pharmaceuticals of Emerging Concern in Aquatic Systems: Chemistry, Occurrence, Effects, and Removal Methods

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**ABSTRACT:** In the last few decades, pharmaceuticals, credited with saving millions of lives, have emerged as a new class of environmental contaminant. These compounds can have both chronic and acute harmful effects on natural flora and fauna. The presence of pharmaceutical contaminants in ground waters, surface waters (lakes, rivers, and streams), sea water, wastewater treatment plants (influent and effluent), soils, and sludges has been well documented. A range of methods including oxidation, photolysis, UV-degradation, nanofiltration, reverse osmosis, and adsorption has been used for their remediation from aqueous systems. Many methods have been commercially limited by toxic sludge generation, incomplete removal, high capital and operating costs, and the need for skilled operating and maintenance personnel. Adsorption technologies are a low-cost alternative, easily used in developing countries where there is a dearth of advanced technologies, skilled personnel, and available capital, and adsorption appears to be the most broadly feasible pharmaceutical removal method. Adsorption remediation methods are easily integrated with wastewater treatment plants (WWTPs). Herein, we have reviewed the literature (1990–2018) illustrating the rising environmental pharmaceutical contamination concerns as well as remediation efforts emphasizing adsorption.

