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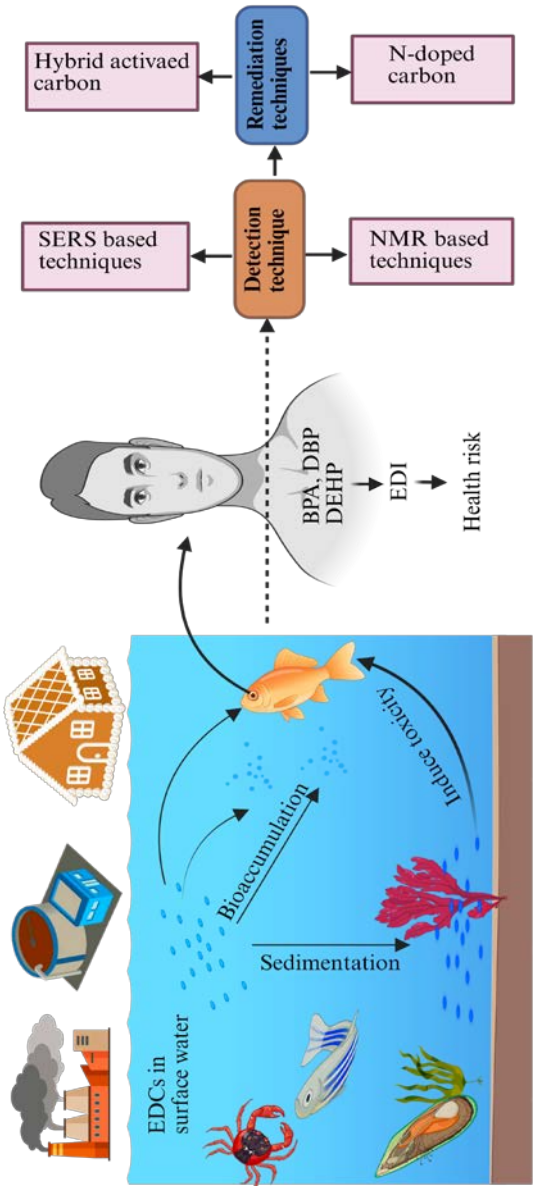
Endocrine-disrupting chemicals in aquatic ecosystems and their impacts on aquatic organisms and humans with advances in detection and remediation

Key words: Endocrine-disrupting chemical; Bioaccumulation; Health risk; Biosensor-based detection; Hybrid activated carbon; N-doped carbon adsorbent

Review summary

This review mainly focused on the sources, toxic impacts, detection methods, and remediation strategies of EDCs in aquatic ecosystems, highlighting their environmental and human health risks



- **EDCs threaten ecosystems and human health through bioaccumulation and toxicity**
- **Advanced detection (SERS, NMR) and carbon-based remediation show promise**
- **Global policies and future research are needed for sustainable management**

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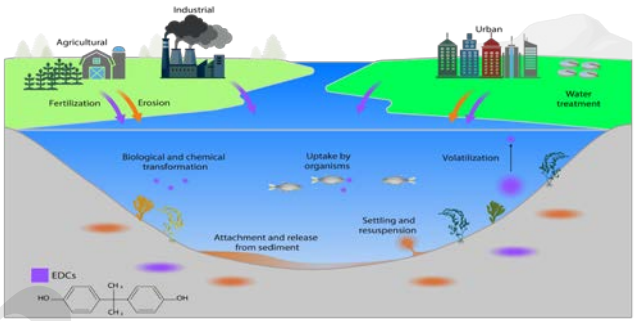
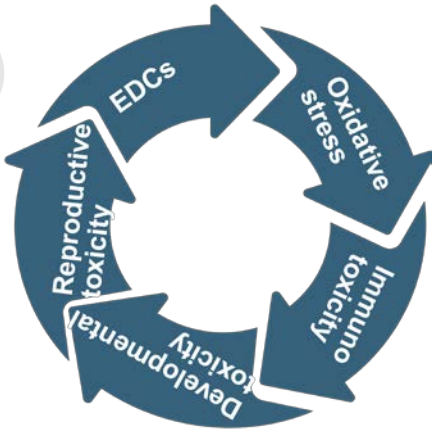
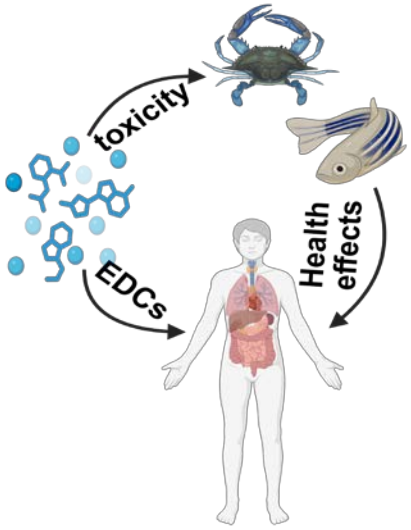
Innovative points



- **Comprehensive integration of EDC sources and pathways**



- **Novel mechanistic insights across aquatic organisms**



- **Seafood-derived EDCs pose significant risks to human health**

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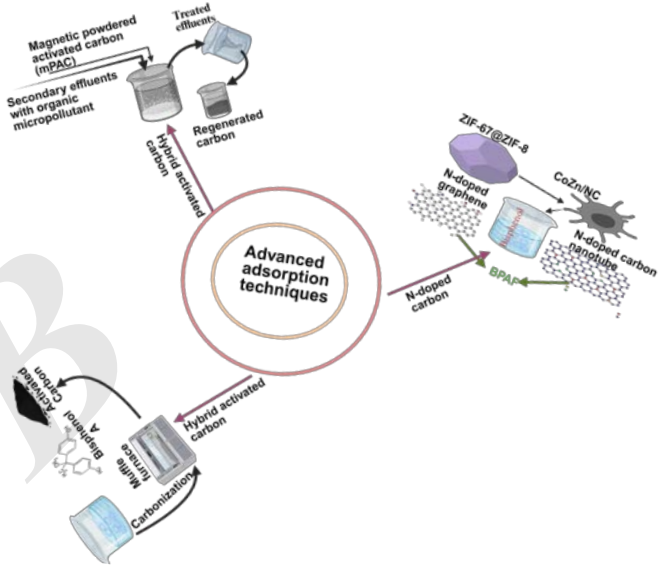
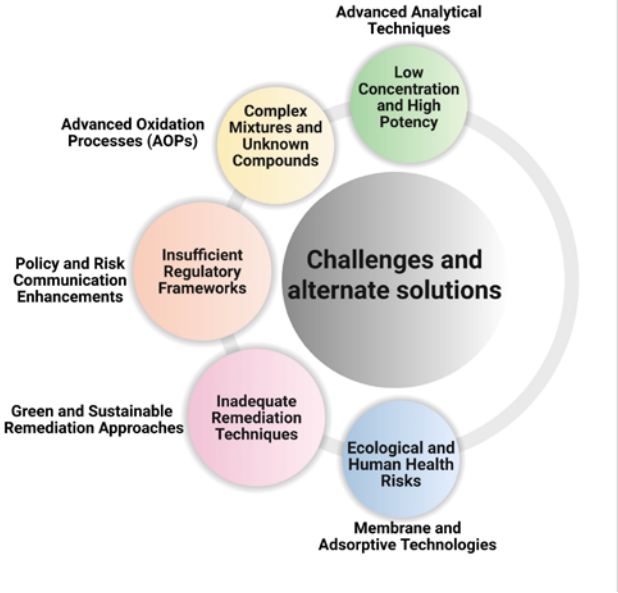
Innovative points

- **Emphasis on the newly developed detection and remediation techniques**



- **Challenges and alternative solutions in EDCs Remediation**



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