

Highlights

- Rice waste was converted to biochar at different temperatures for wastewater remediation
- Rice straw derived biochar showed a higher adsorption capacity compared to rice husk biochar
- High retention capacity of heavy metals indicated the order $Fe > Pb > Cu > Cd > Zn > Cr$
- Removal efficiencies of 78, 75 and 99% were achieved for 17- β estradiol, estrone, and progesterone, respectively.