Heavy metal contaminants removal from wastewater using the potential filamentous fungi biomass: A review

ABSTRACT

Heavy metal pollution of wastewater currently becomes a key environmental problem throughout the whole world. Conventional methods for the removal of heavy metals from aqueous solutions are not economically and environmental friendly because it has produced massive quantity of toxic chemical compounds. Recently, the removal of heavy metals from wastewater are extensively used various conventional methods such as chemical precipitation, coagulation-flocculation, flotation, ion exchange and membrane filtration. Biological treatments, especially filamentous fungi have gained an increasing attention for heavy metal removal and recovery due to their upright performances, low cost and huge quantities. The filamentous fungi have a great potential to produce large amount of biomasses which are widely used for metal adsorption capacities of Pb, Zn, Cd, Cu, Cr, As and Ni. Production of biomass has offered great potential for adopting metal-recovery system. The main aim of this review paper is to discuss the available information of heavy metals removal for the utilization of filamentous fungi biomass and scrutinize the practical of exploiting them for heavy metal remediation