

## Supplementary information

### **3D-printed monolithic biofilters based on polylactic acid (PLA) - hydroxyapatite (HAp) composite for heavy metal removal from aqueous medium**

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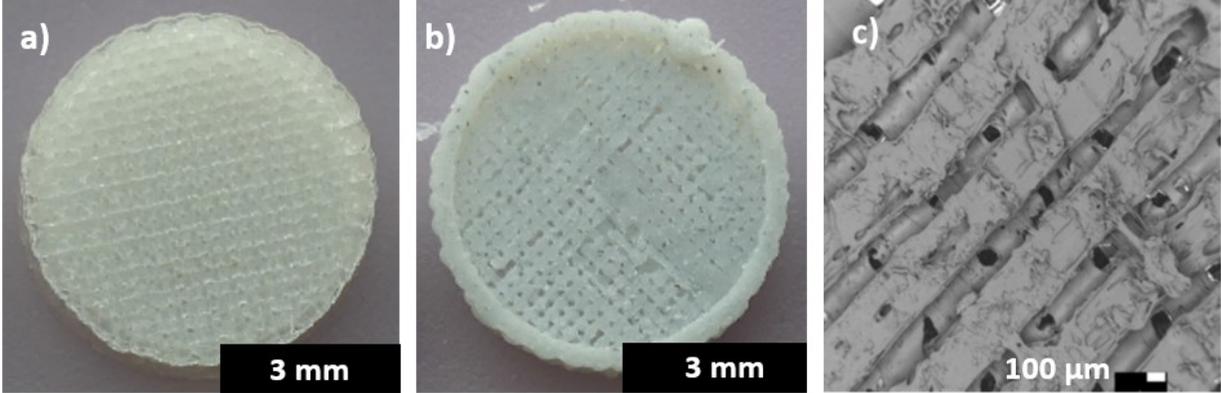
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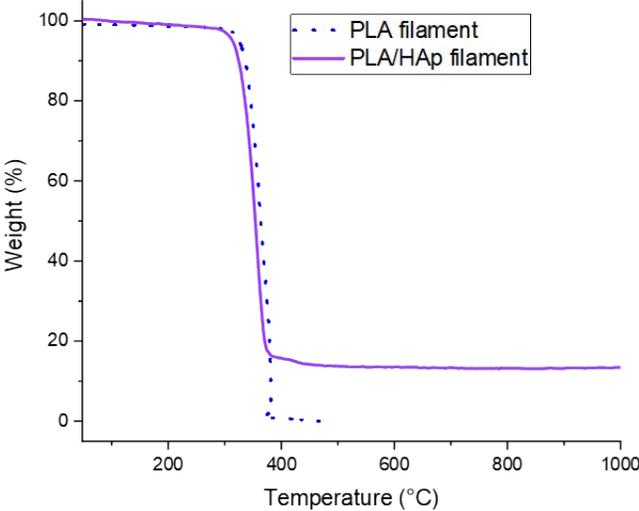
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**Figure S1.** Disc-shapes models for ion adsorption study a) PLA, b) HAp/PLA, c) SEM porosity structure measurement



**Figure S2.** Thermal stability of the PLA and PLA/HAp 3D printing filaments

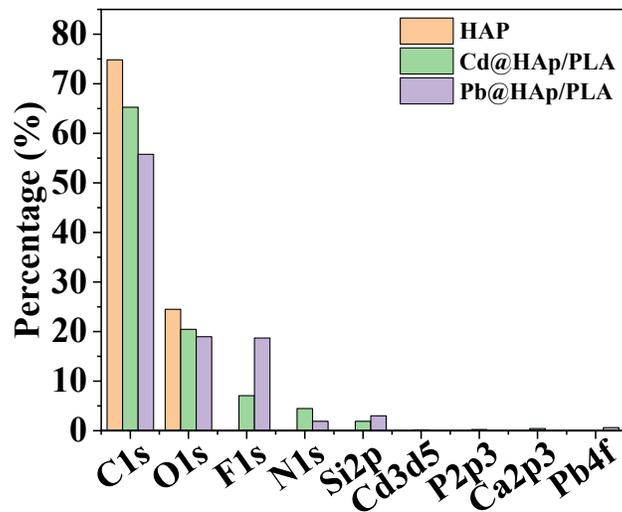


Figure S3 Elemental composition using XPS data.

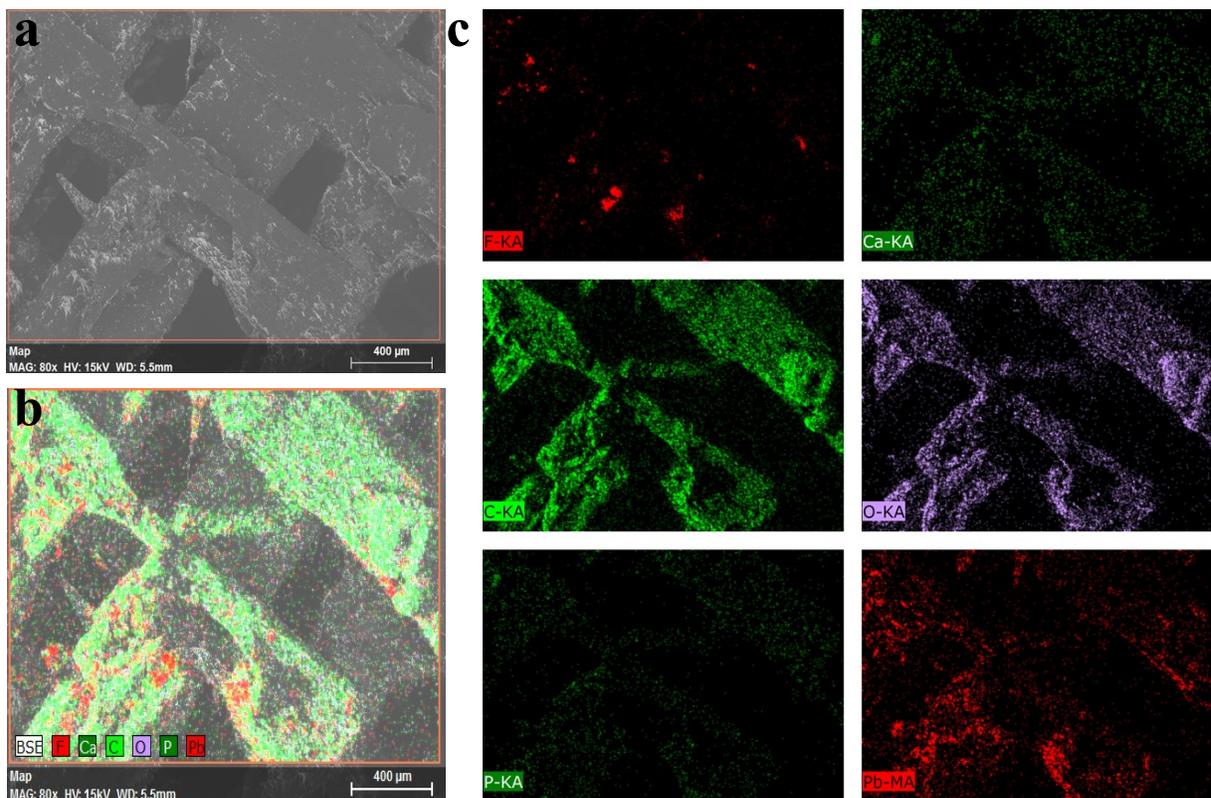
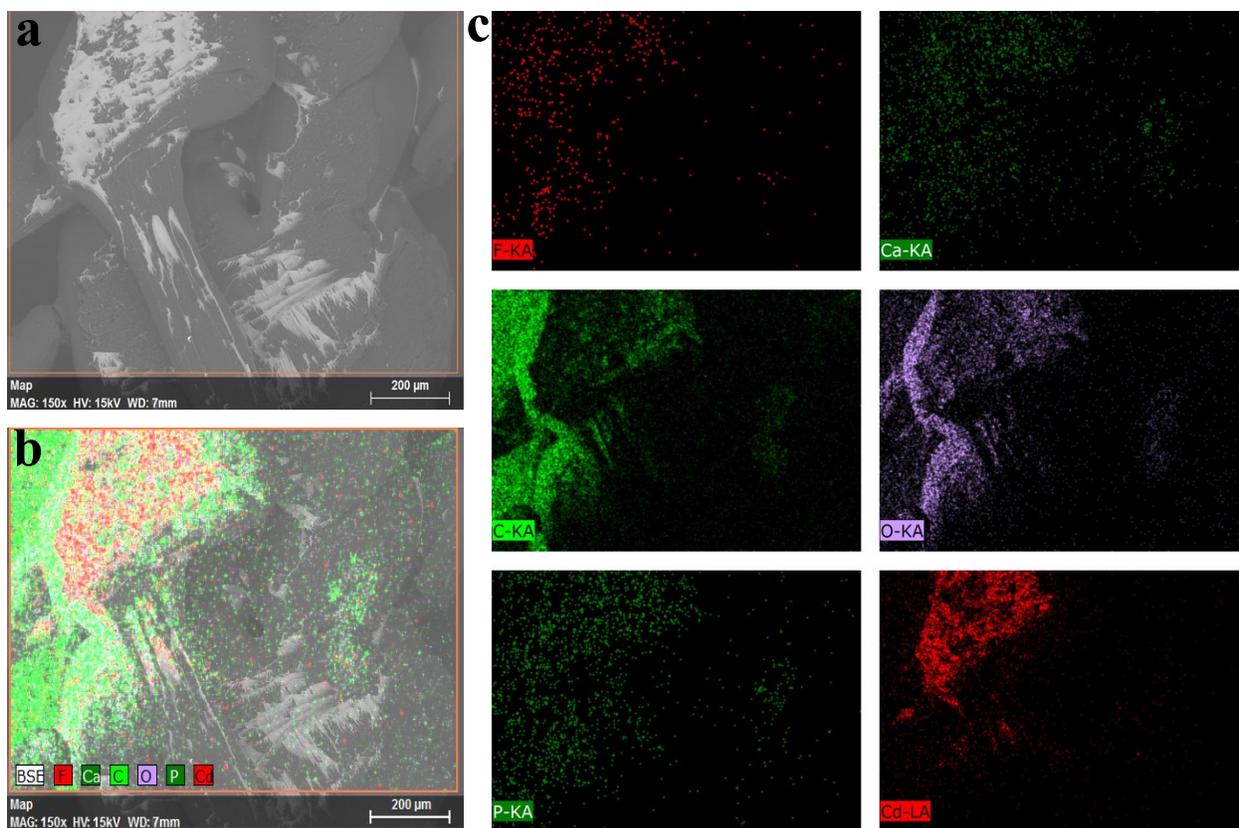


Figure S4 Characterization of Pb adsorbed into HAp/PLA using a) SEM image, b) EDX mapping and c) elemental mapping.



**Figure S5** Characterization of Cd adsorbed into HAp/PLA using a) SEM image, b) EDX mapping and c) elemental mapping.