gels

MDPI

Supplementary Materials

Dual-Responsive Hydrogels for Mercury Ion Detection and Removal from Wastewater

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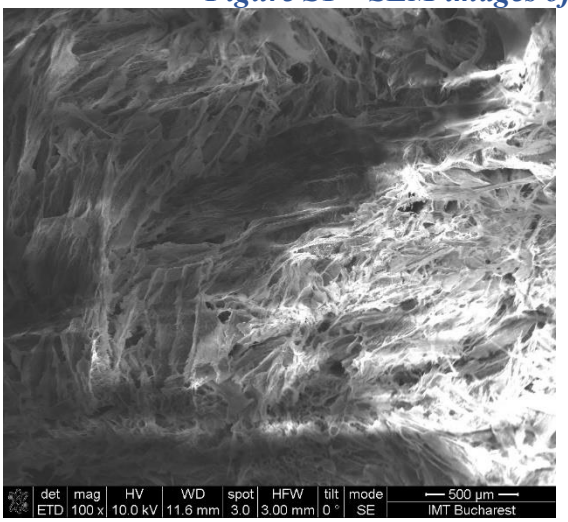
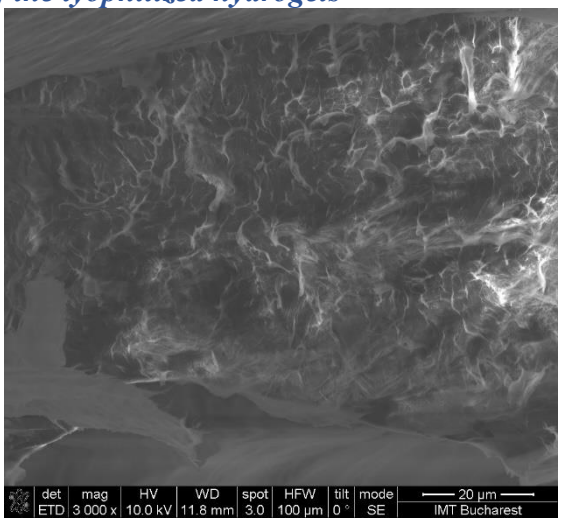
Sample

Figure S1 – SEM images of the lyophilized hydrogels

EDTA





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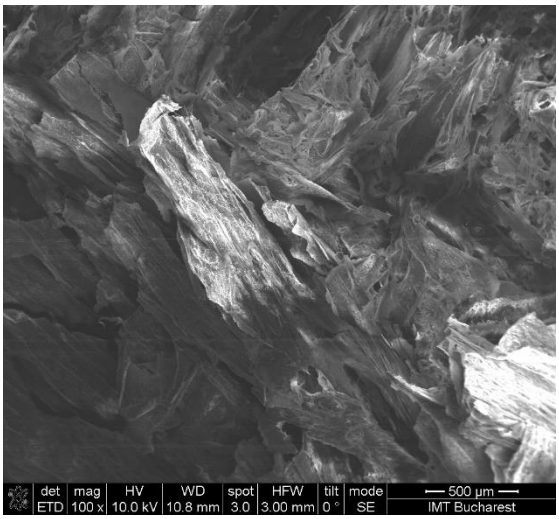
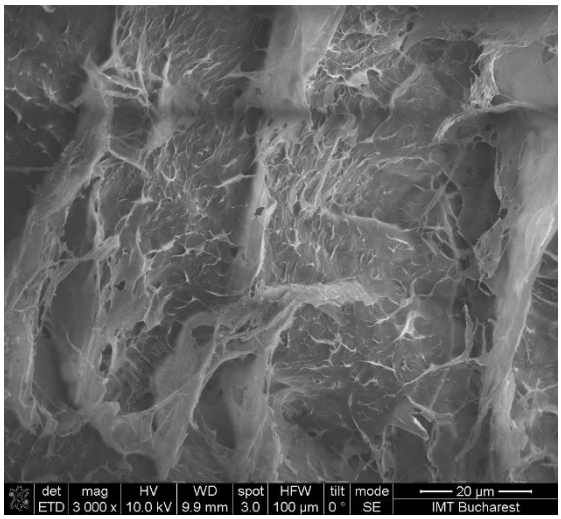
TETRA





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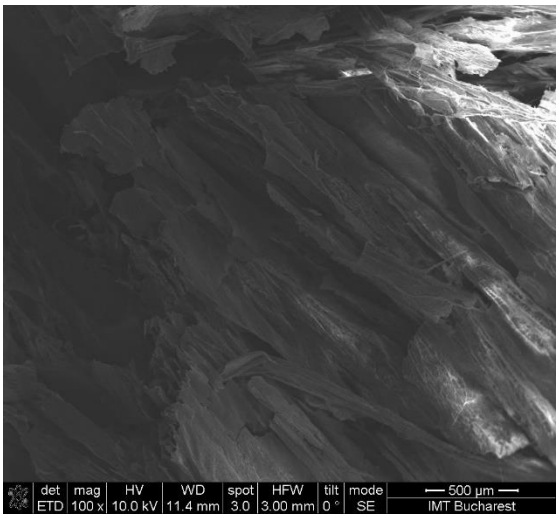

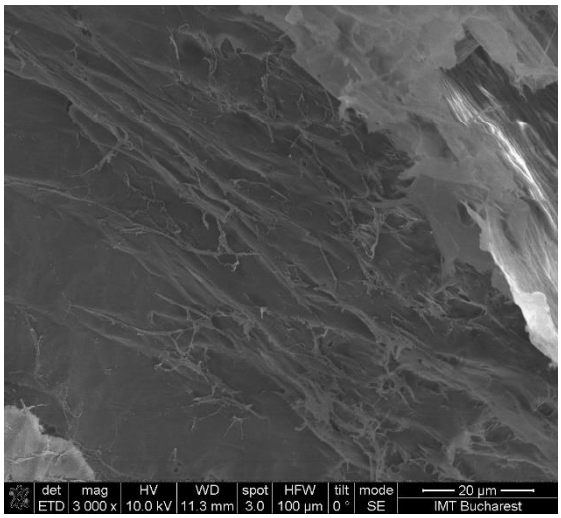

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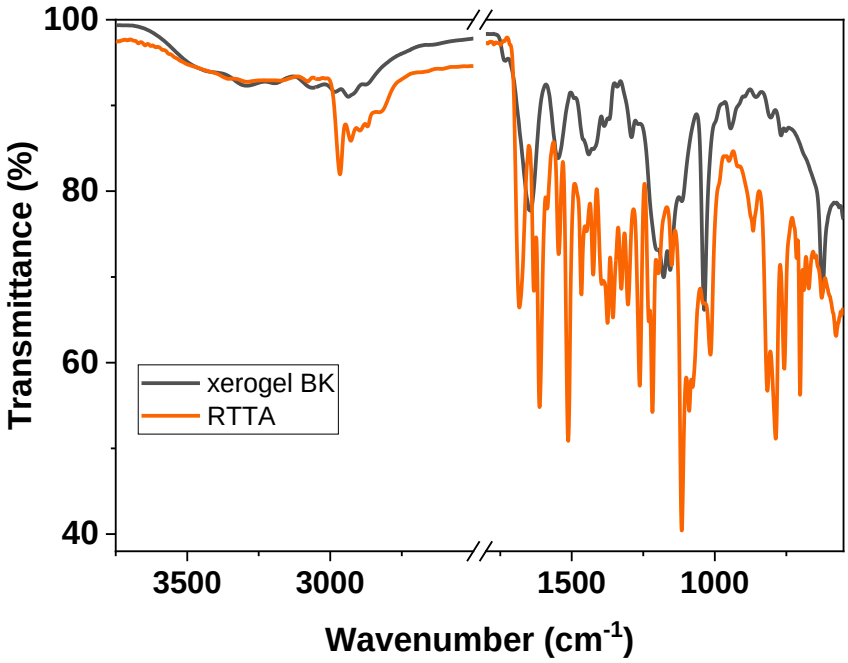
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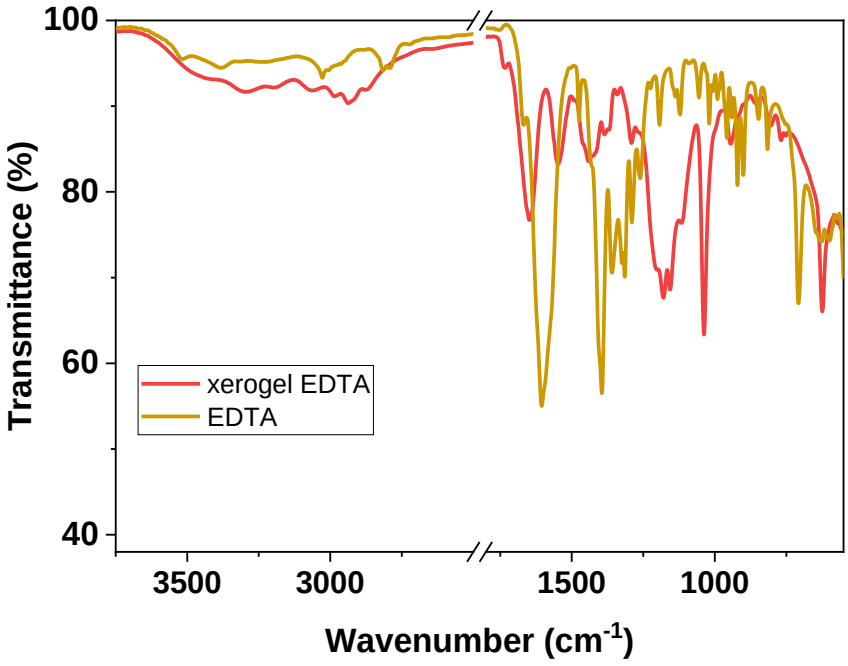
80
60
40
Transmittance (%)
3500
3000
1500
1000
Wavenumber (cm-1)
xerogel BK
RTTA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60
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Transmittance (%)
3500
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1500
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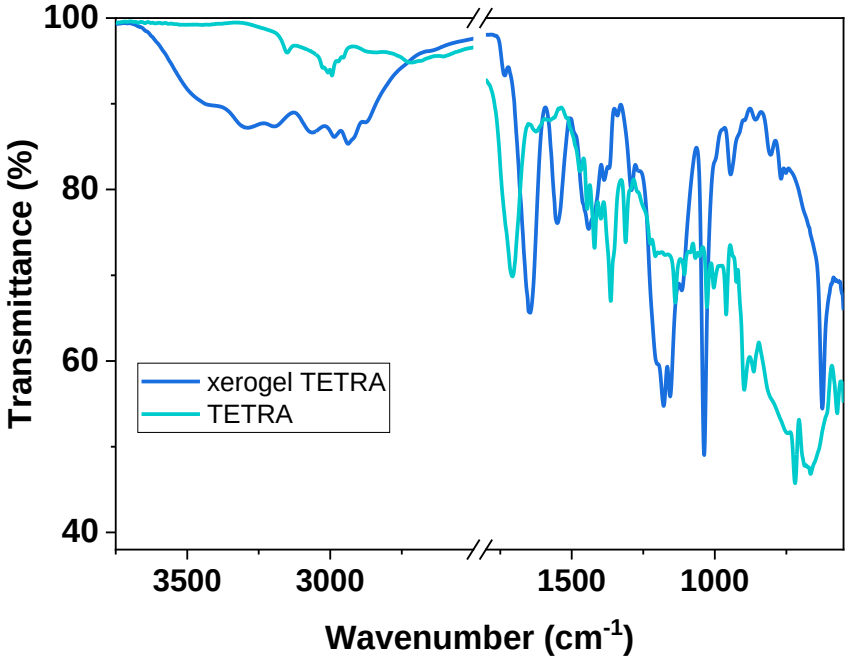
Wavenumber (cm-1)
xerogel EDTA
EDTA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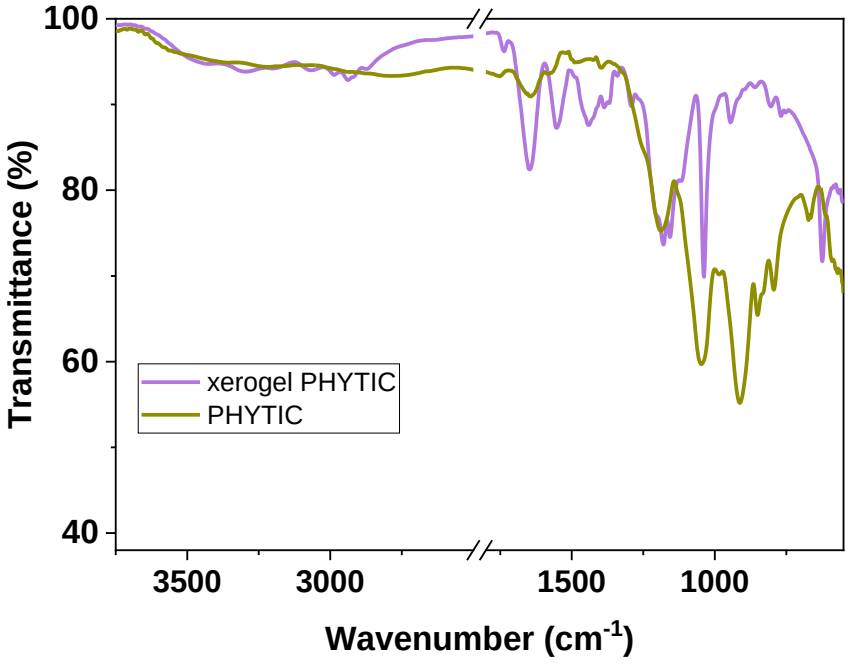
40
Transmittance (%)
xerogel TETRA
TETRA
3500
3000
1500
1000
Wavenumber (cm-1)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60
40
Transmittance (%)
xerogel PHYTIC
PHYTIC
3500
3000
1500
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Wavenumber (cm-1)

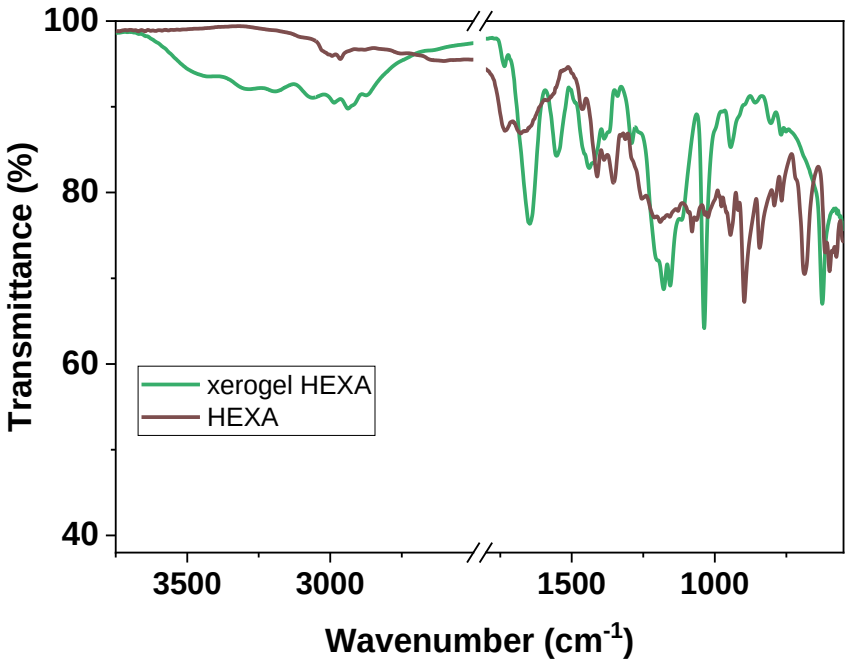


Figure S2 – FTIR plots

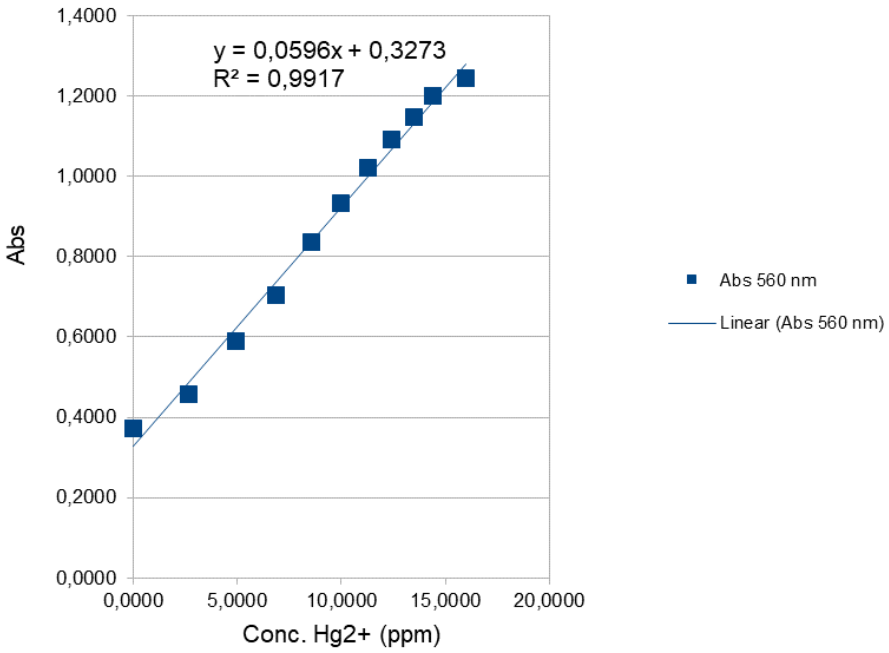
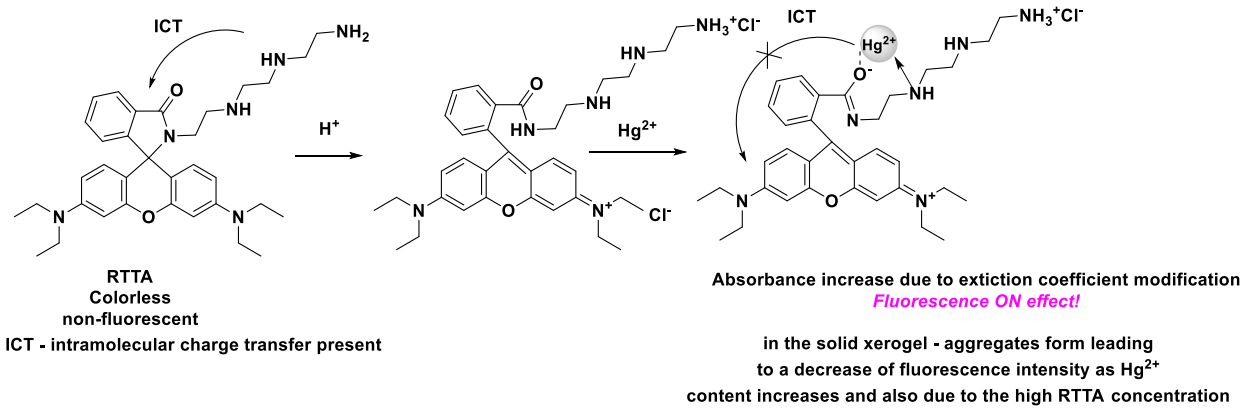
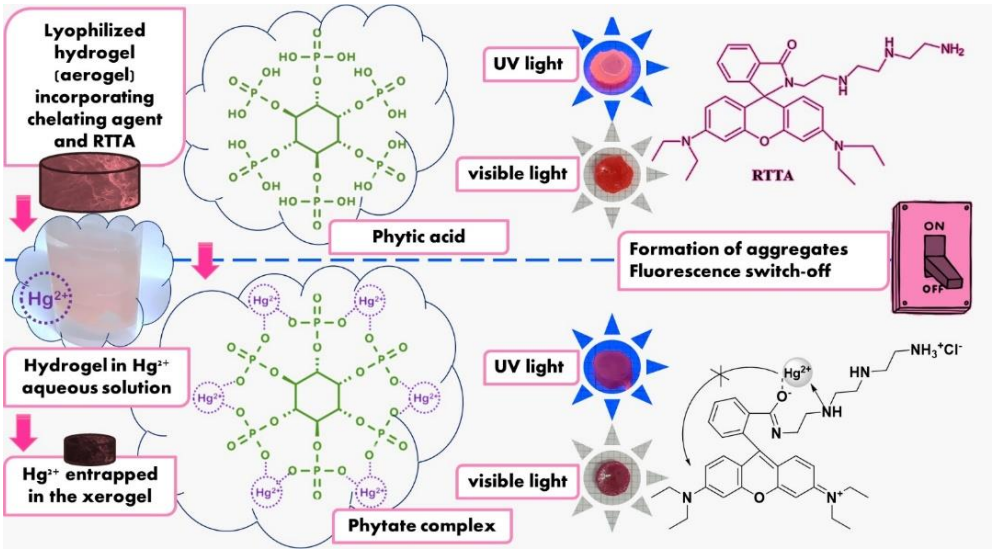


Figure S3 – UV-Vis calibration curve



Scheme S1. RTTA Hg^{2+} interaction steps and mechanism for absorption and emission properties modification



Scheme S2. Method principle

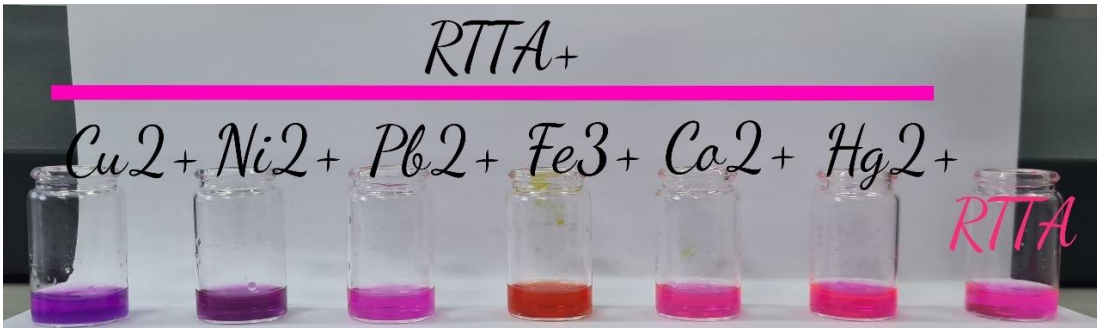


Figure S4 - Images of RTTA solution color modification due to interaction with different cations

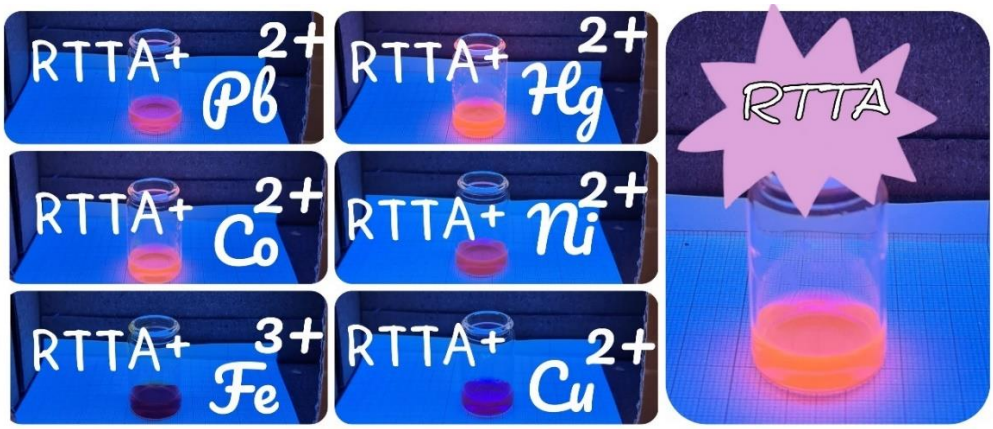
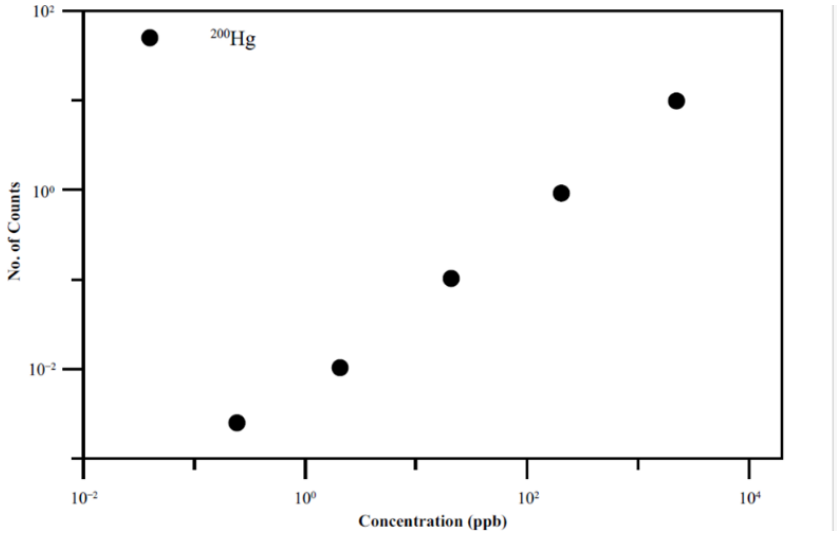


Figure S5 - Images of RTTA solution emission modification due interaction with cations



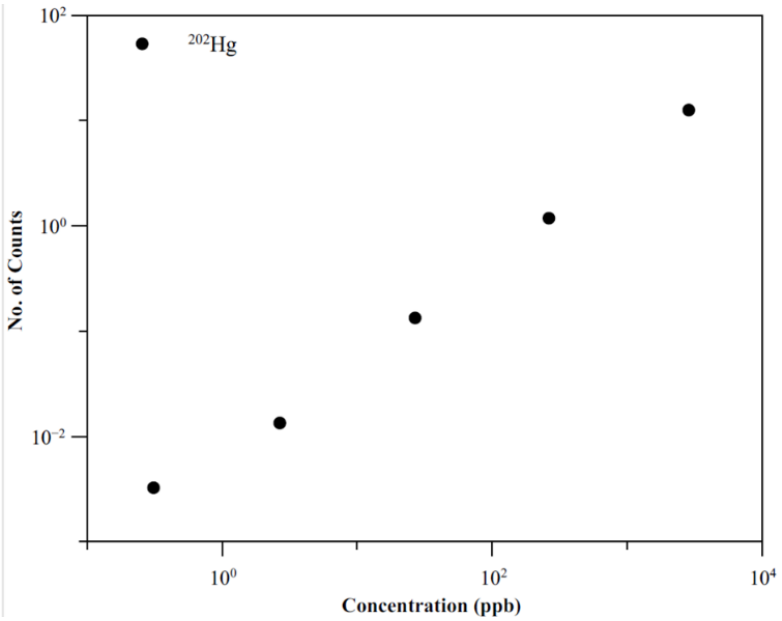


Figure S6 – ICP-MS calibration

Table S1. ICP-MS Accuracy

	^{200}Hg [1]	^{202}Hg [1]
Accuracy	107.07%	107.20%

Table S2. Spike Concentrations

	Spike 100 %	Spike 10%
Concentration (ppm, mg/kg)	946	94.77