

# Supplementary Materials

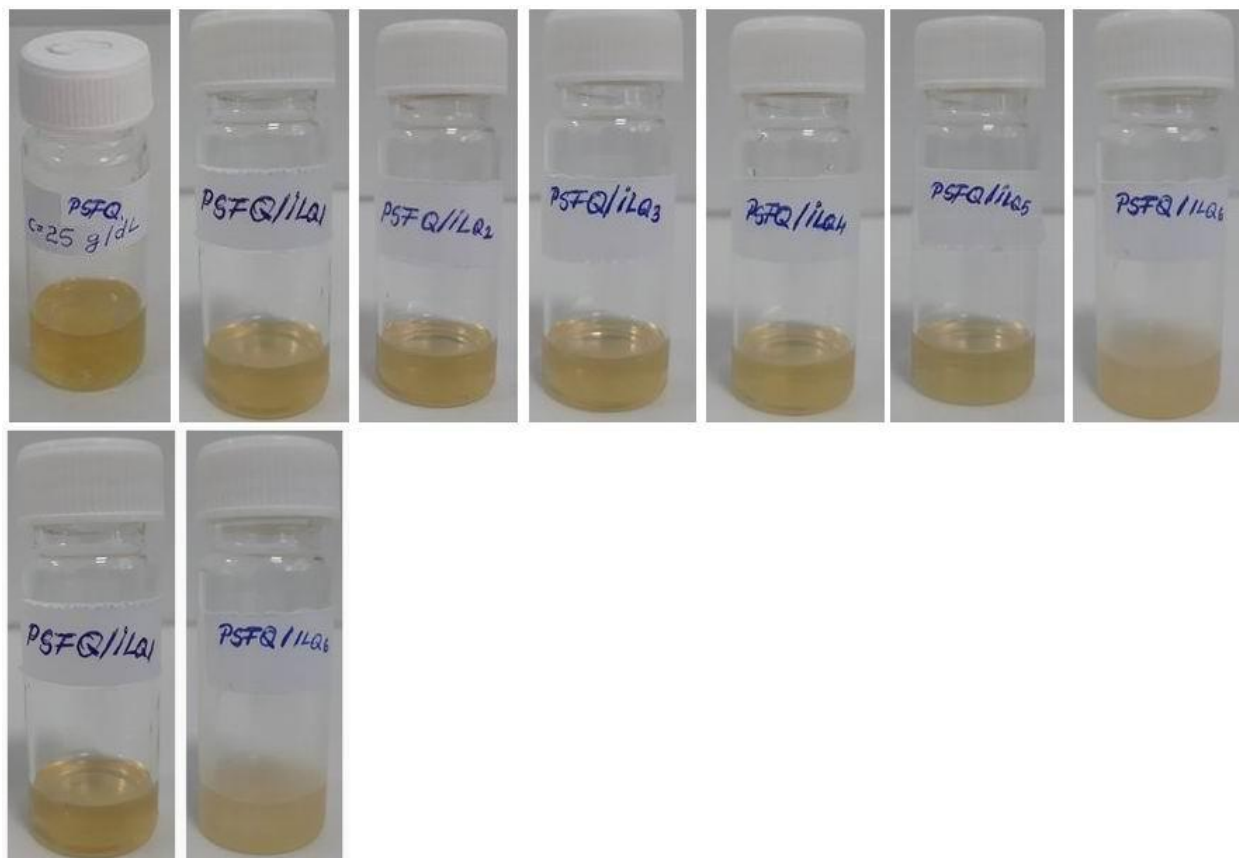
## Metal ions removal from contaminated water using membranes functionalized with ionic liquids

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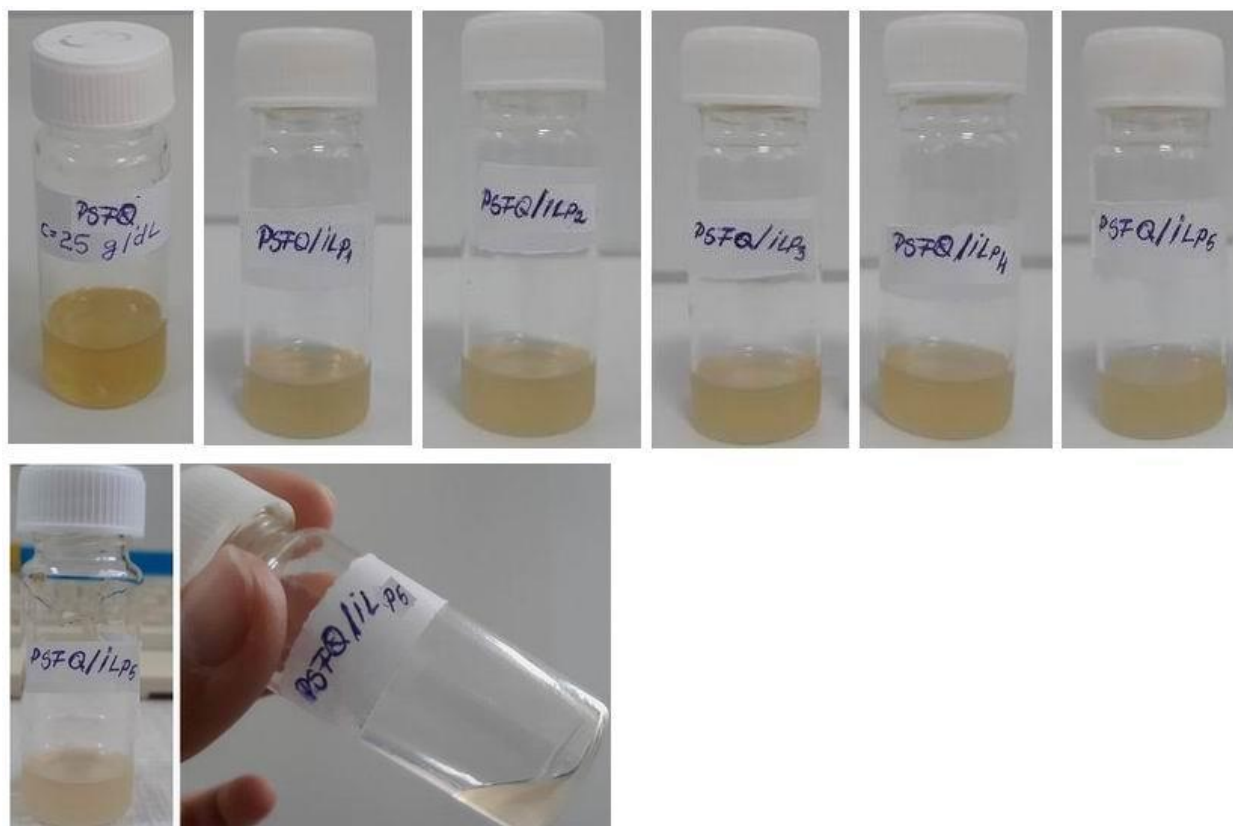
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**Figure S1.** Solutions of quaternized polysulfone (PSFQ) with Aliquat 336 ionic liquid (ILQ) in different mixing ratios of 25 g/dL concentration: 0 wt.% content of Aliquat 336 (PSFQ), 3 wt.% content of Aliquat 336 (PSFQ/ILQ<sub>1</sub>), 5 wt.% content of Aliquat 336 (PSFQ/ILQ<sub>2</sub>), 10 wt.% content of Aliquat 336 (PSFQ/ILQ<sub>3</sub>), 15 wt.% content of Aliquat 336 (PSFQ/ILQ<sub>4</sub>), 20 wt.% content of Aliquat 336 (PSFQ/ILQ<sub>5</sub>), 25 wt.% content of Aliquat 336 (PSFQ/ILQ<sub>6</sub>). Visualization of the compatibility limit for the studied system (3 wt.% content of Aliquat 336 (PSFQ/ILQ<sub>1</sub>) compared with 25 wt.% content of Aliquat 336 (PSFQ/ILQ<sub>6</sub>).



**Figure S2.** Solutions of quaternized polysulfone (PSFQ) with Cyphos IL 101 ionic liquid (ILP) in different mixing ratios of 25 g/dL concentration: 0 wt.% content of Cyphos IL 101 (PSFQ), 3 wt.% content of Cyphos IL 101 (PSFQ/IL<sub>P1</sub>), 5 wt.% content of Cyphos IL 101 (PSFQ/IL<sub>P2</sub>), 10 wt.% content of Cyphos IL 101 (PSFQ/IL<sub>P3</sub>), 15 wt.% content of Cyphos IL 101 (PSFQ/IL<sub>P4</sub>), 20 wt.% content of Cyphos IL 101 (PSFQ/IL<sub>P5</sub>). Visualization of the compatibility limit for the studied system (20 wt.% content of Cyphos IL 101 (PSFQ/IL<sub>Q5</sub>)).