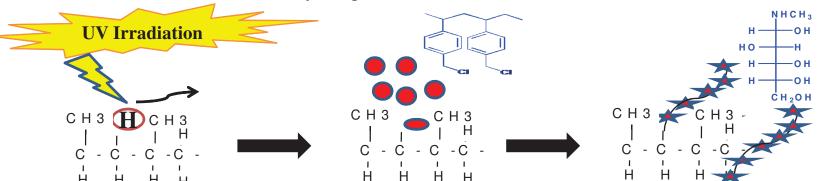
## Extractive Fixed-site polymer sorbent for selective boron removal from natural water

## **Preparation of sorbents**

Grafting of vinylbenzyl chloride monomer with piperazine as a crosslinker

■ Chemical treatment with N-methyl D-glucamine - selective for boron



Polypropylene irradiation

**Grafting with VBCl** 

## **Optimised parameters**

- ✓ pH for maximum uptake: 5-9
- ✓ Sorption capacity : 28 mg g<sup>-1</sup>
- ✓ Desorption by 0.1M HCl
- ✓ Quantitative uptake in spiked seawater samples

Developed polymer sorbent had fast kinetics with a high uptake capacity

J Hazard Mater, In Press, Accepted Manuscript