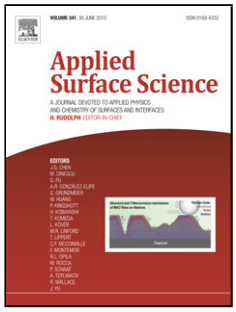

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Improved surface hydrophilicity and antifouling property of polysulfone ultrafiltration membrane with poly(ethylene glycol) methyl ether methacrylate grafted graphene oxide nanofillers

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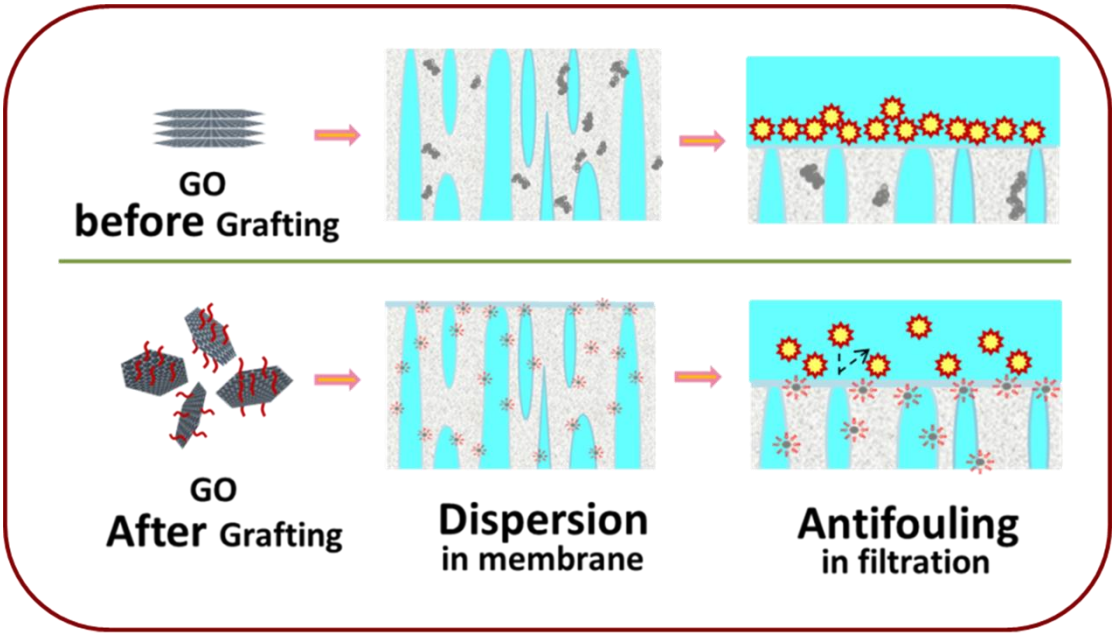
Graphical Abstract



Highlights

- The GO-g-P(PEGMA) nanofillers were synthesized for the first time using surface initiate atom transfer radical polymerization (SI-ATRP) method.
- A novel hydrophilic and antifouling polysulfone ultrafiltration membrane with GO-g-P(PEGMA) as nanofiller was prepared.
- The prepared nanocomposite membranes (PSF/GO-g-P(PEGMA)) showed better separation and antifouling performance than the control membranes (PSF/GO).
- The blending GO-g-P(PEGMA) nanofillers stably existed in/on the prepared nanocomposite membranes even after 30 days of washing time.