Janus Membrane

Subjects: Green & Sustainable Science & Technology

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A Janus Membrane is a membrane whose two faces carry opposite wettability or distinct chemical functionality, so each side interacts differently with the liquids it meets [1]. Membrane emulsification paired with solvent pervaporation produces functional magnetic and Janus nanobeads continuously [1]. Dual hydrogen-bonding stabilised Janus membranes combine anti-fouling, anti-wetting and anti-scaling action in vacuum membrane distillation [2]. Polyamide layer transfer growth with beta zeolite incorporation delivers the same synergy through a different fabrication route [3]. Faces of opposite wettability can prompt the synchronous synthesis and separation of hydrophobic ionic liquids [4]. The molecular design of homological dialkylated naphthalene diimides illustrates the building-block chemistry behind next-generation organic electronic layers [5].

asymmetric wettability | membrane distillation | wettability | anti-fouling | ionic liquid | asymmetric membrane

References

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