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Abstract

An ideal feed spacer balances high flux and low pressure drop while minimizing fouling. In this work, several feed spacer with complex triply periodic minimal surface (TPMS) geometries were designed and fabricated using additive manufacturing (AM) processing. AM technology was employed to vary the voidage and directionality of the spacers. The fabricated spacers were tested to determine their impact on mass transfer, pressure drop and critical flux in a flat-sheet ultrafiltration (UF) setup for protein separation in aqueous medium. Dimensionless numbers