

Customized Spinnerets for Hollow Fiber Membrane Fabrication



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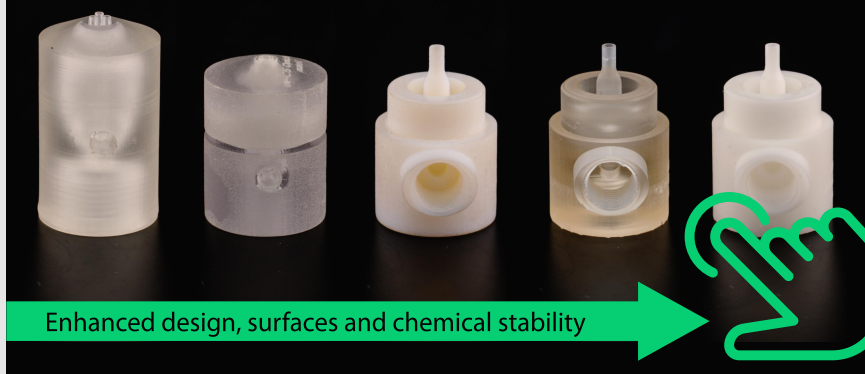
State-of-the-art Spinnerets

Conventional machined steel spinnerets

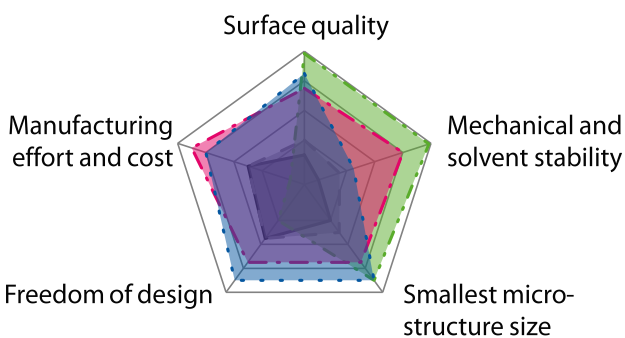
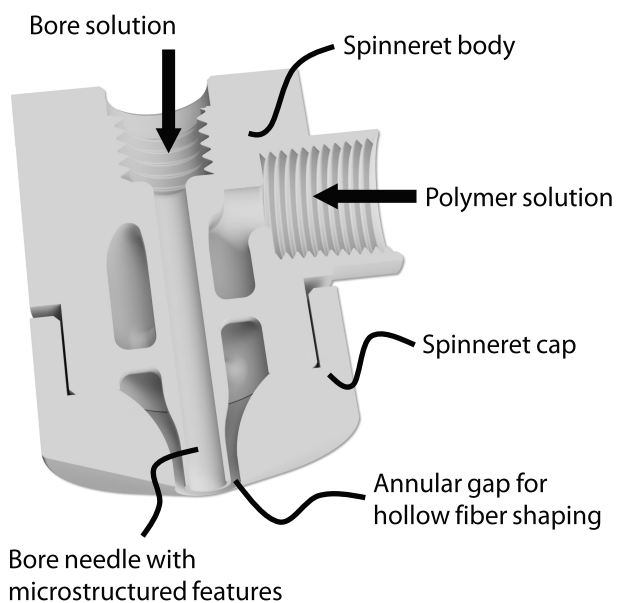


Customized Next Level Spinnerets

Complex shaped, microstructured 3D printed polymer spinnerets

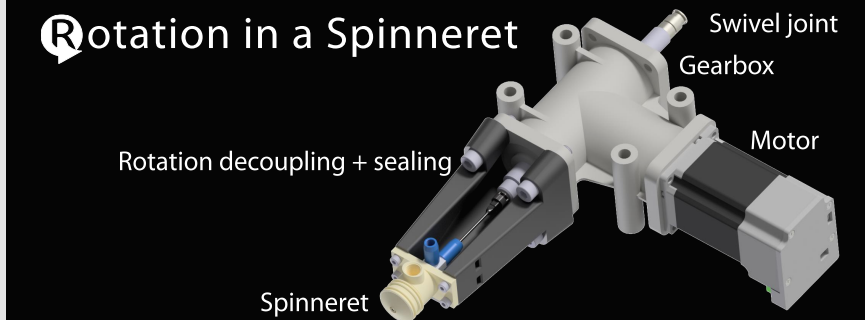


Base Spinneret Design

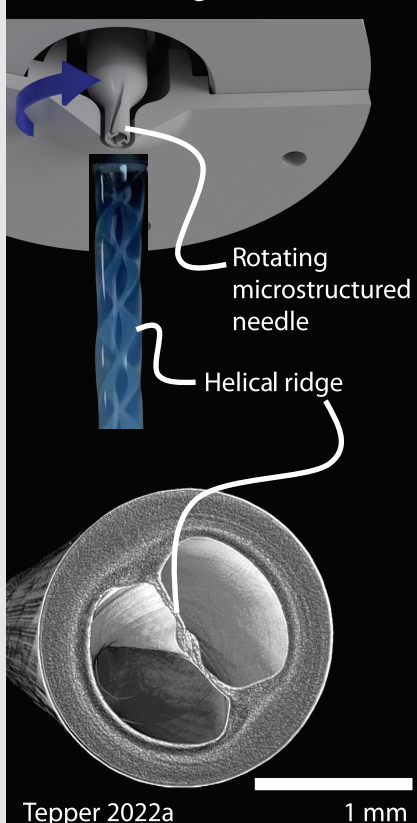


- VeroClear
- RGD 525
- Rigid Resin
- High Temp Resin V2
- Stainless steel

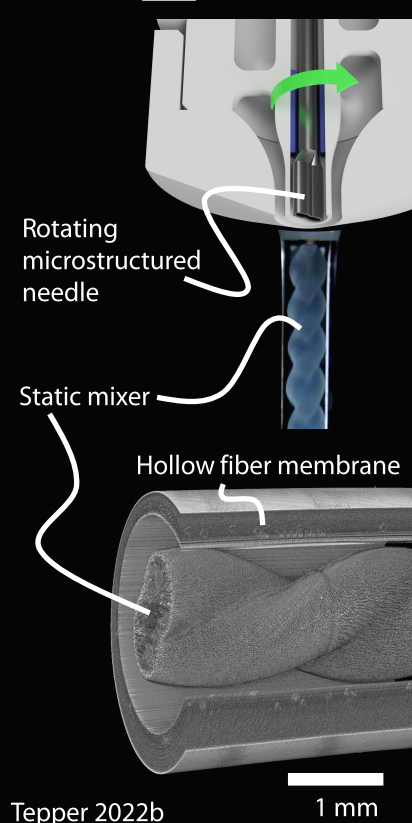
Rotation in a Spinneret



Helical Ridge Membranes



Static Mixer Membranes



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Tepper 2022a | M. Tepper, L. Fehlemann, J. Rubner, T. Luelf, H. Roth, M. Wessling. Rotating microstructured spinnerets produce helical ridge membranes to overcome mass transfer limitations, *J. of Membr. Sci.* 643 (2022) 119988.

Tepper 2022b | M. Tepper, Y. Eminoglu, N. Mehling, J. Walorski, H. Roth, M. Wessling. Rotation-In-a-Spinneret integrates static mixers inside hollow fiber membranes, *J. of Membr. Sci.* 656 (2022) 120599.

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