Table 1. Comparison between our study and literature in terms of overall porosity and average pore size.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| PES (wt. %) | Type of process | Porosity (%) | Average Pore size (nm) | References |
| 15 | Ultrafiltration | 80.5 | 146.6 | [1] |
| 17 | Ultrafiltration | 74.80 | 5.76 | [2] |
| 15 | Ultrafiltration | ≈ 45 | ≈ 25 | [3] |
| 16 | Ultrafiltration | 82 | ---- | [4] |
| --- | Ultrafiltration | 13.2 | 14 | [5] |
| 16 | Ultrafiltration | 77.1 ± 1.3 | 12.0 ± 0.5 | [6] |
|  |
|  |
|  |
|  |
|  |
| 15 |  | 70 | **54 ± 10** | **Our study** |

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Clarifications

1. Frequency = 2, unit = 1/s, frequency can control the number of peaks, for example if I increase the frequency, this means the number of peaks will increase.
2. I did not measure the average pore size of the 3D composite membrane. As you know the dimeter of our model is 50 mm, so I cannot use the POROLUX (47 mm is the maximum diameter can measure). I measured the average pore size of active layer only.
3. For membrane resistance, I used Dr John’s method and I found the literature used different method, for example, the resistance for polyethersulfone (Millipore Co.) membrane with a MWCO of 100 kDa is *Rm = 3.11 × 1011* (m−1) [7]. Meanwhile, in our study is $1.8 ×10^{-16} m^{-1}$

|  |  |  |
| --- | --- | --- |
| PES (wt. %) | Hydraulic resistance (Rm) (m-1) | Reference  |
| 15 | 6 \* 10^13 | [8] |
| 18 | 4\*10^14 | [9] |
| 18 | 0.404 \* 10^13 | [10] |
| 15 | 0.55 \*10^16 | Our study  |