

## Supporting Information for

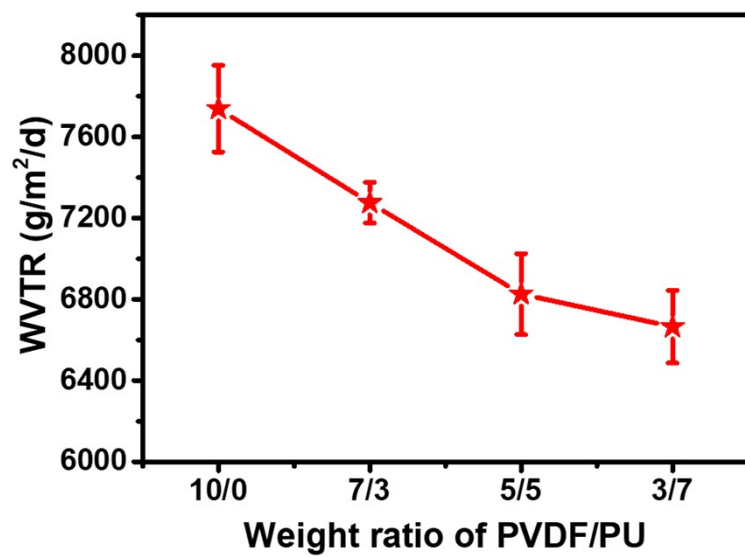
### **Multifunctional poly(vinylidene fluoride)/polyurethane/titanium dioxide nanofibrous membranes with enhanced ultraviolet-proof, resistant to blood penetration and waterproof performance**

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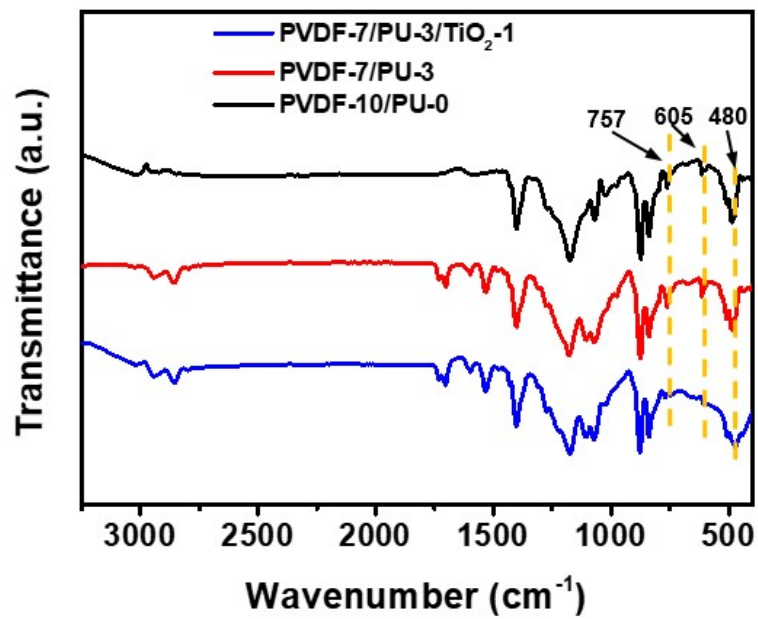
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**Fig. S1** WVTR values of PVDF/PU nanofibrous membranes with different weight ratios.



**Fig. S2** FT-IR spectra of PVDF-10/PU-0, PVDF-7/PU-3, and PVDF-7/PU-3/TiO<sub>2</sub>-1 nanofibrous membranes.

**Table S1** Tensile stress and breaking elongation data of PVDF/PU nanofibrous membranes and PVDF/PU/TiO<sub>2</sub> composite nanofibrous membranes.

<b>Samples</b>	<b>Tensile stress (MPa)</b>	<b>Strain (%)</b>
PVDF-10/PU-0	3.2	123
PVDF-7/PU-3	4.8	231
PVDF-5/PU-5	6.6	259
PVDF-3/PU-7	9.9	375
PVDF-7/PU-3/TiO <sub>2</sub> -0.5	11.7	227
PVDF-7/PU-3/TiO <sub>2</sub> -1	9.2	215
PVDF-7/PU-3/TiO <sub>2</sub> -2	7.2	212
PVDF-7/PU-3/TiO <sub>2</sub> -4	7.0	168

**Table S2** Ultraviolet protection factor (UPF), hydrostatic pressure and anti-synthetic blood penetration of PVDF/PU/TiO<sub>2</sub> composite nanofibrous membranes with different concentrations of TiO<sub>2</sub>.

<b>Concentration of TiO<sub>2</sub> (wt%)</b>	<b>UPF</b>	<b>Hydrostatic pressure (kPa)</b>	<b>Anti-synthetic blood penetration (kPa)</b>
0.5	510	26.8	1.75
1	867	24.3	3.5
2	1049	21.4	7
4	1351	20.9	7

**Table S3** Comparison of tensile stress, hydrostatic pressure, WVTR, anti–synthetic blood penetration, and UPF between the PVDF-7/PU-3/TiO<sub>2</sub>-1 nanofibrous membranes and the electrospun waterproof and breathable membranes in other researches.

<b>Other research</b>	<b>Tensile stress (MPa)</b>	<b>Hydrostatic pressure (kPa)</b>	<b>WVTR (g/m<sup>2</sup>/d)</b>	<b>Anti–synthetic blood penetration (kPa)</b>	<b>UPF</b>
PVDF-CNT/PU/PVDF-CNT sandwich-structured microporous membranes ( <b>Ref 21</b> )	–	38	8630	–	–
PVDF/hydrogel Janus membranes ( <b>Ref 22</b> )	–	70	13600	–	–
PVDF microporous membranes ( <b>Ref 23</b> )	1.42	62	10600	–	–
PU/photochromic microcapsule membranes ( <b>Ref 24</b> )	12.08	2.8	19278	–	–
PVDF-7/PU-3/TiO <sub>2</sub> -1 nanofibrous membranes ( <b>this work</b> )	9.2	24.3	7023	3.5	867