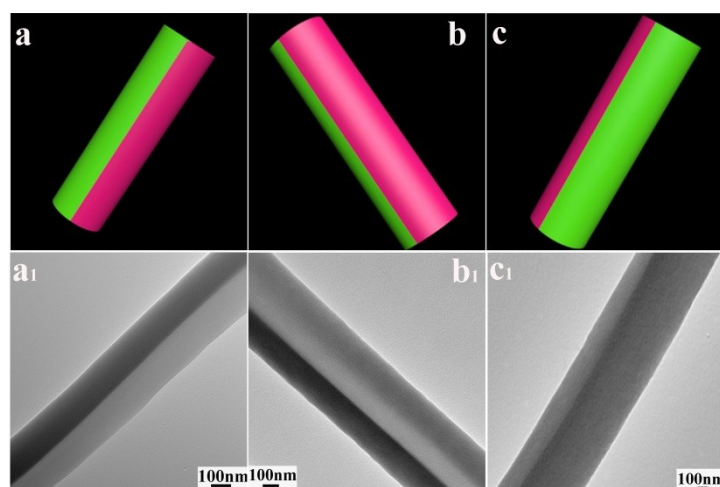


## Supplementary Information

### Novel PAN/PVP Janus ultrafine fiber membrane and its application for biphasic drug release

Yuting Geng, Pan Zhang, Qiutong Wang, Yangxiu Liu, Kai Pan\*

#### 1. TEM images



**Fig. S1.** (a)-(c):structural schematic diagram of PAN/PVP Janus ultrafine fibers. (a1)-(c1):TEM images of PAN/PVP Janus ultrafine fibers.

#### 2. Elemental analysis

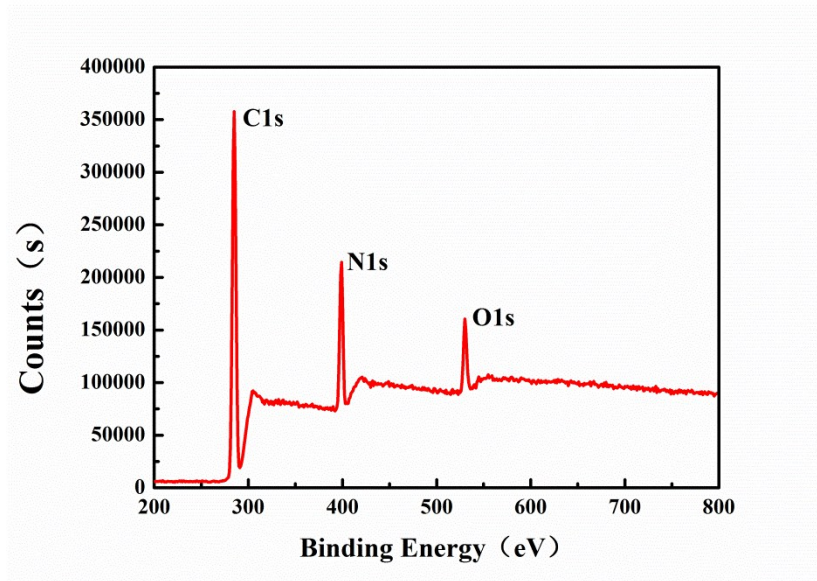


Fig. S2. XPS spectra of PAN/PVP composite UFM

Table1: The atomic content of UFM

Element	Janus NFM	composite NFM	Janus NFM immersed into water for 1h
C1s	77.29%	77.21%	76.98%
N1s	13.87%	17.06%	21.2%
O1s	8.84%	5.72%	1.82%

### 3. Drug release

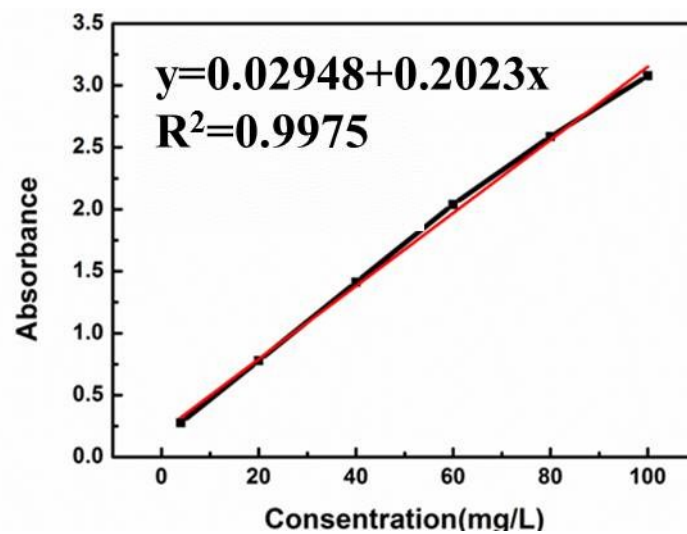
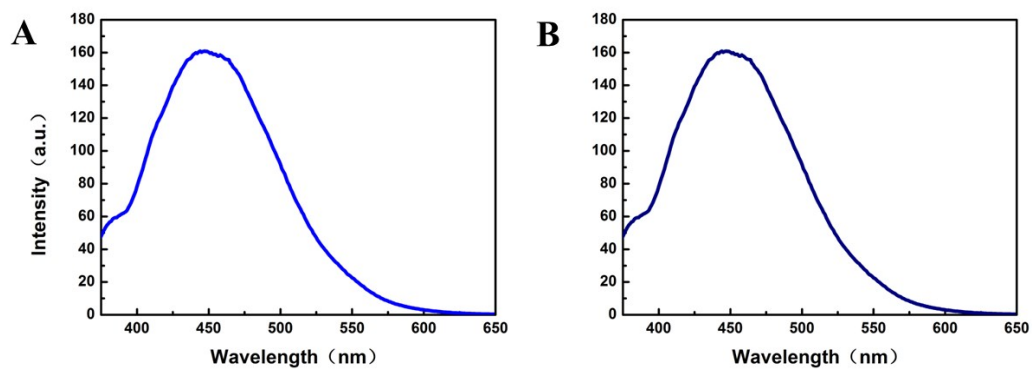
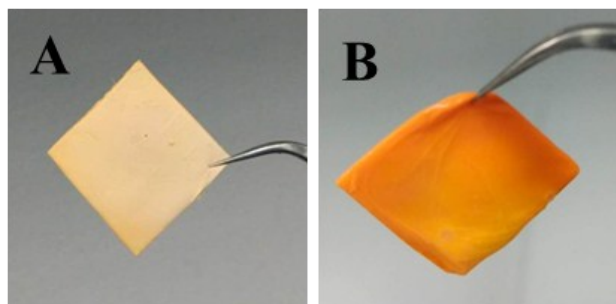


Fig. S3. Calibration curve of dexamethasone:  $y=0.02948+0.2023x$



**Fig. S4.** PL spectra of 1, 8-naphthalene anhydride/DMF solution(A) and 1, 8-naphthalene anhydride:

dexamethasone=1:1/DMF(B)



**Fig. S5.** Digital photos of Janus UFM before (A) and after (B) drug release.