

Electronic Supplementary Information

Chemically modified electrospun silica nanofibers for promoting growth and differentiation of neural stem cell

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Table S1. Contact angle of the modified silica nanofiber substrates

Substrates	Concentration of APTS (M)	Reaction time (h)	Contact angle (°)
SNF	0	8	8.08 ± 2.73°
SNF-AP0.05M	0.05	1	56.09 ± 3.69°
SNF-AP1M	1	1	81.88 ± 2.00°
SNF-AP1M	1	8	107.46 ± 12.70°
SNF-AP2M	2	8	124.34 ± 2.23°
SNF-AP3M	3	8	124.9 ± 3.19°

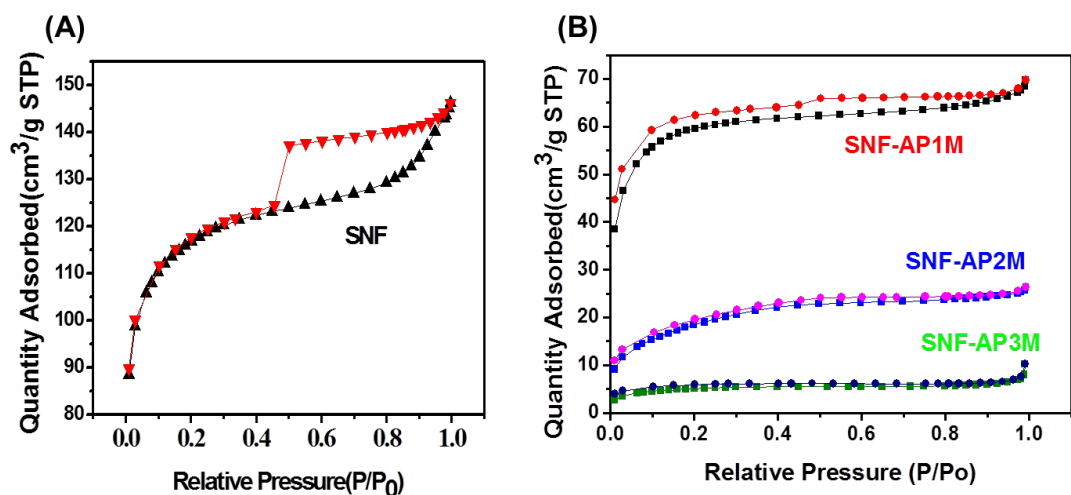


Fig. S1 BET isotherms of SNF, SNF-AP1M, SNF-AP2M and SNF-AP3M.

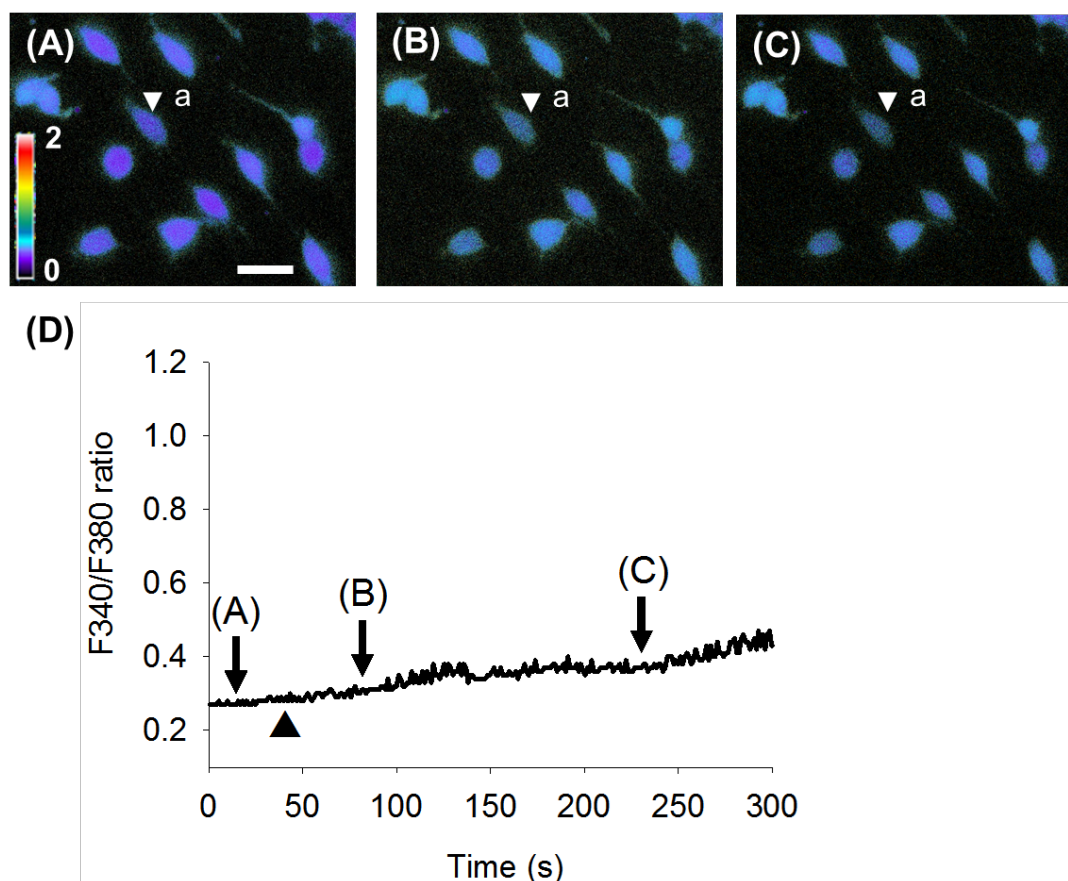


Fig. S2 Voltage-sensitive Ca^{2+} channel activity was measured by the change in the $[\text{Ca}^{2+}]_i$, estimated using fura-2, in responsive to the high K^+ -induced depolarization of cells. The pseudocolor image represents the Fura-2 $F_{340/380}$ ratio, as shown by the color calibration bar. The images of (A-C) were taken at different time point. (D) Arrow head indicates the point of high K^+ addition. The $[\text{Ca}^{2+}]_i$ is expressed as $F_{340/380}$ fluorescence ratio of cell a, indicated by triangle in (A-C). The arrows (A-C) correspond to the images in (A-C). Scale bar represents 25 μm .