Supplementary Material (ESI) for Journal of Materials Chemistry

Electrospinning fabrication, structural and mechanical characterization of rod-like virus-based composite nanofibers

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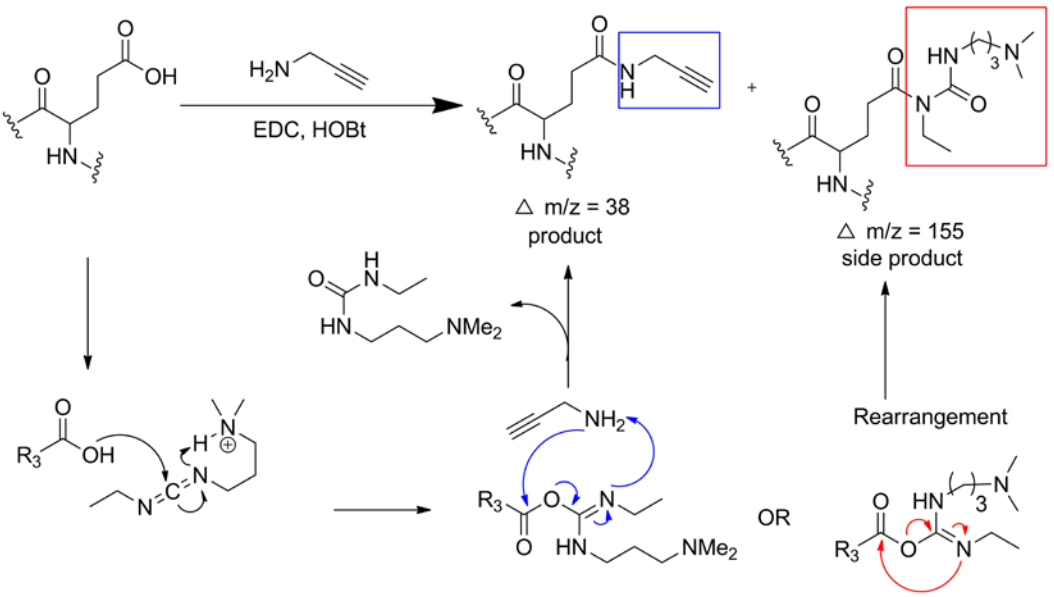
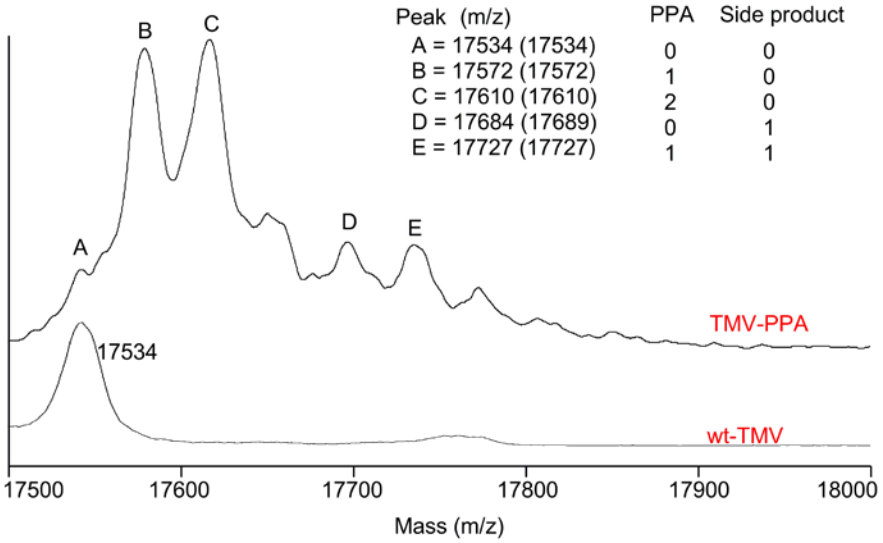
1. EDC coupling mechanism





MALDI-TOF MS spectra of the subunit protein of wild type TMV were characterized and shown in following peaks: A (wt-TMV 17534 m/z); B (17572 m/z) is one PPA modified TMV; C (17610 m/z) is two PPA modified TMV; D (17684 m/z) is the protein labeled with a single side product; and E

(17727 m/z) belongs to the protein labeled with a PPA plus a side product from the EDC assisted coupling reaction. The further CuAAC reaction with TMV-PPA produce product peaks at 17805 m/z (the conversion from peak B at 17572 m/z), 17843 and 18076 m/z (conversions of one and two anthracenes modified TMV-PPA at 17610 m/z), and peak at 17960 m/z (from the reaction of anthracene with TMV-PPA side product at 17727 m/z).

Table S1. BHK cell density on PVA, PVATMV, and PVA-TMV-RGD substrates

cell incubation time	PVA (cells/mm^2)	PVA-TMV (cells/mm^2)	PVA-TMV-RGD (cells/mm^2)
1 hr	131.7 ± 18.18	135.7 ± 21.5816	381.3 ± 24.21
12 hr	94.4 ± 18.39	63.04 ± 8.37	342.39 ±29.3