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Polyimide foams with outstanding flame resistance and mechanical properties by the incorporation of noncovalent bond modified graphene oxide

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supplementary material

Figure S1 showed the cell size distribution of PI foam with different GO content. It can be seen the cell distribution was uniform, when the GO content reached 0.3%. This moment, the cells became homogeneously distributed gradually and the cell distribution was narrow. After modified by Do, the average cell diameter further decreased and most of them distributed between 0.3mm and 0.5mm, which led to the uniformity of foam.

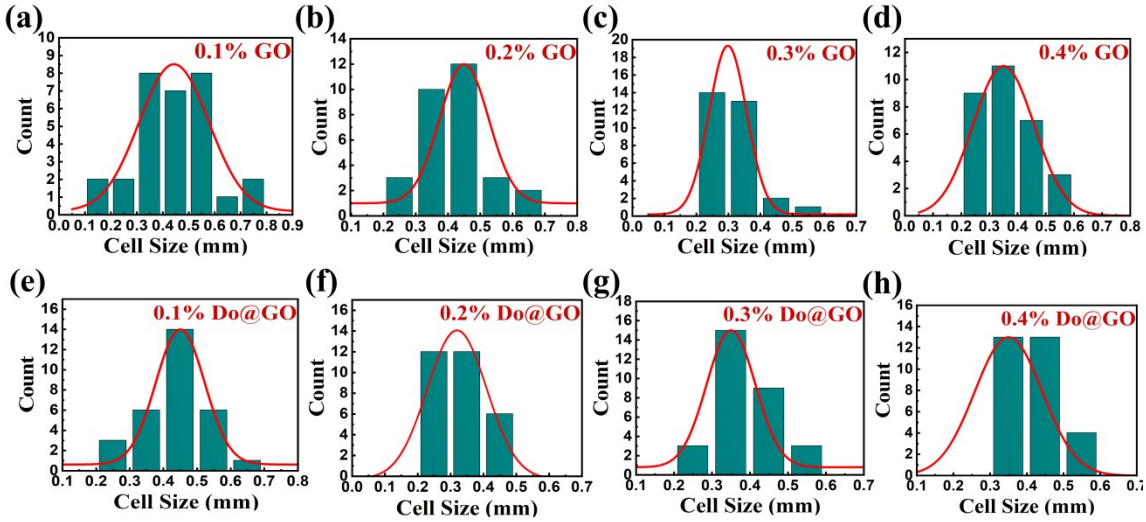

Figure S1. The cell size distribution of PI foam with different GO content. a-d-without dopamine modification, e-h-dopamine modification

Figure S2 showed the TGA and DTG curves of PI foam with different content of GO and Do@GO in nitrogen atmosphere.

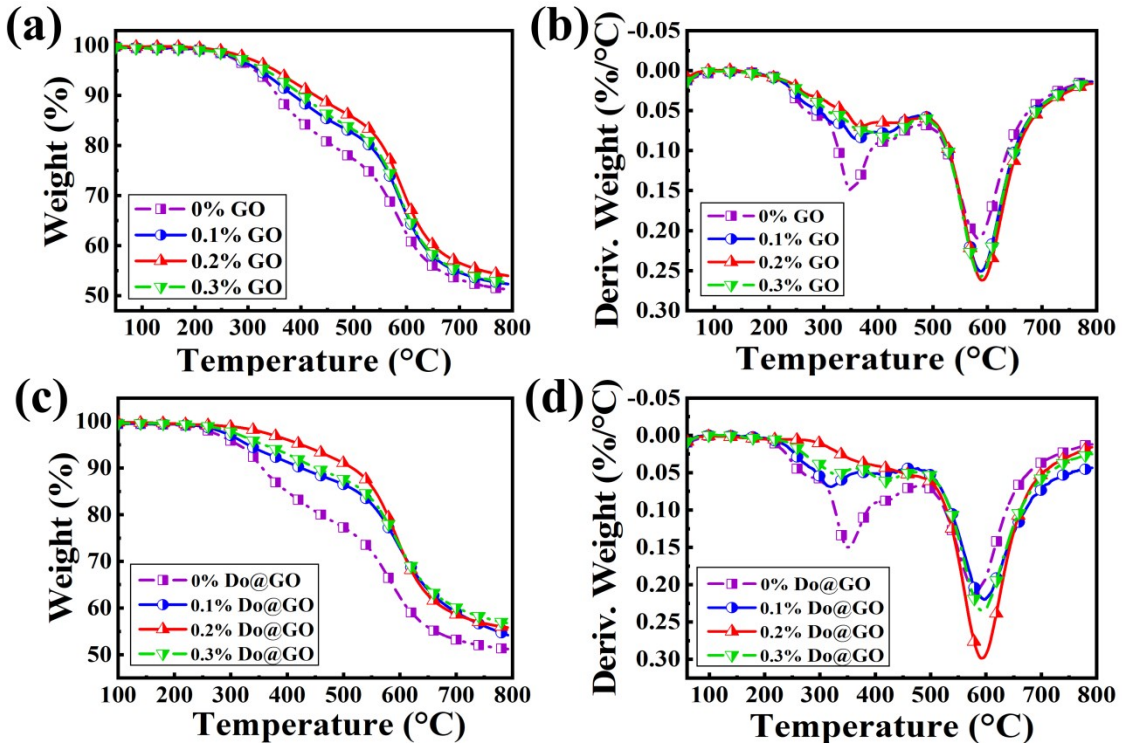

Figure S2. TGA and DTG curves of PI foams with different content of GO and Do@GO in nitrogen atmosphere. a-TGA curve of PI/GO, b-DTG curve of PI/GO, c-TGA curve of PI/Do@GO, d-DTG curve of PI/Do@GO.

Video of testing the flame retardancy of PI foam.mp4

File S3. Video of testing the flame retardancy of PI foam.