



**Figure S1.** SEM images of PAA and 1 wt% MD containing PAA hydrogel films at radiation dose of 25 kGy.

## Methods

Surface morphologies were investigated using scanning electron microscopy (SEM, JSM-6390, JEOL, Japan) with working distance of 10 mm and an electron beam of 10 kV. To observe the high resolution SEM images, samples were coated with gold for 70 s by sputter-coating.

## Results

The drug-containing hydrogel films can be applied as a therapeutic dressing to release the drug when attached to a particular target and the film represents smooth morphologies. The surface morphologies of PAA and MD/PAA25 hydrogel films were observed by SEM, as shown in Figure S1. The hydrogel films were confirmed that were smooth morphologies regardless of contained MD or not contained MD.