**Supporting Information for**

# Isosorbide Diallyl Based Antibacterial Thiol-Ene Photocured Coatings Containing Polymerizable Fluorous Quaternary Phosphonium Salt

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Total number of pages : **11 (S1-S11)**

Total number of figures : **9 (Figure S1-S9)**

**Cell viability assay**

The proliferation of the L929 mouse fibroblasts in the presence of was evaluated by MTT assay. Briefly, cells were seeded at a density of $10^5$ cells per well into a 96-well plate. PFQPS containing sample (30mg/ml) was prepared by adding Dulbecco's modified Eagle's medium (DMEM). Then the whole plate was incubated for 24h at 37°C under $CO_2$. After 24 hours of incubation, 20 µL of MTT (3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyl-tetrazolium bromide) solution (5 mg/mL in PBS) was added to each well. The formed dark blue formazan crystals in the cells were dissolved in DMSO (dimethyl sulfoxide) and the absorbance at 570 nm was measured with a microplate reader. 1% phenol solution was used as a positive control sample and for the negative control sample only the cell medium was used. The results are expressed as percentage with respect to the control sample that was not treated with PFQPS. All experiments were repeated 4 times.

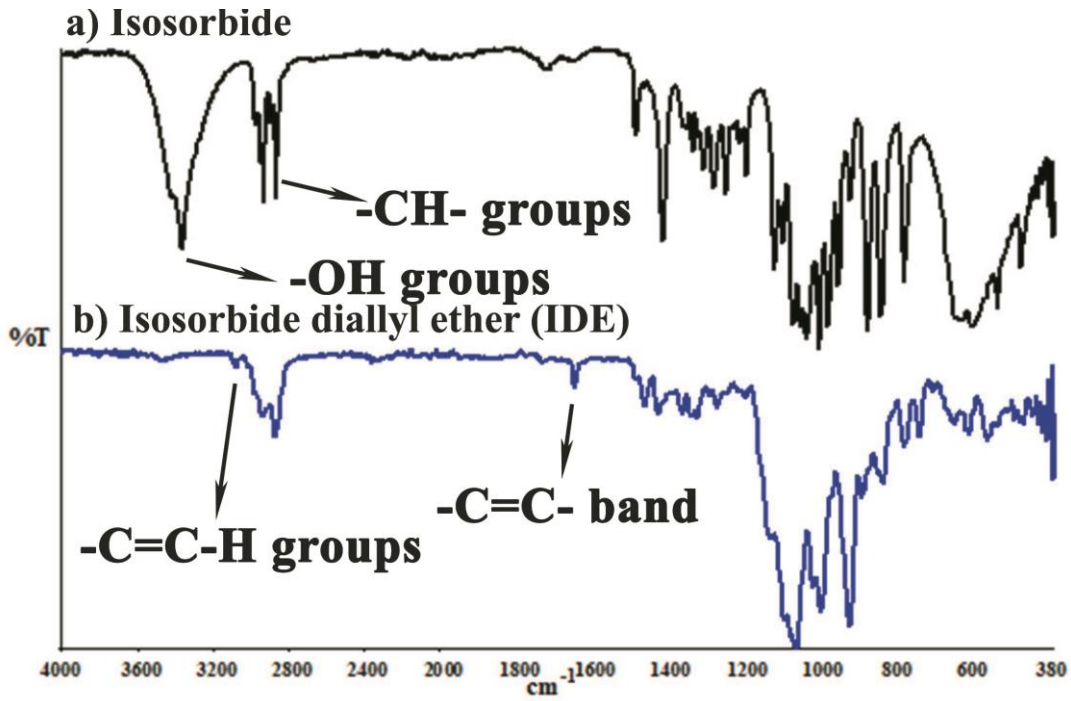



**Figure S1:** FTIR spectra of a) isosorbide and b) isosorbide diallyl ether

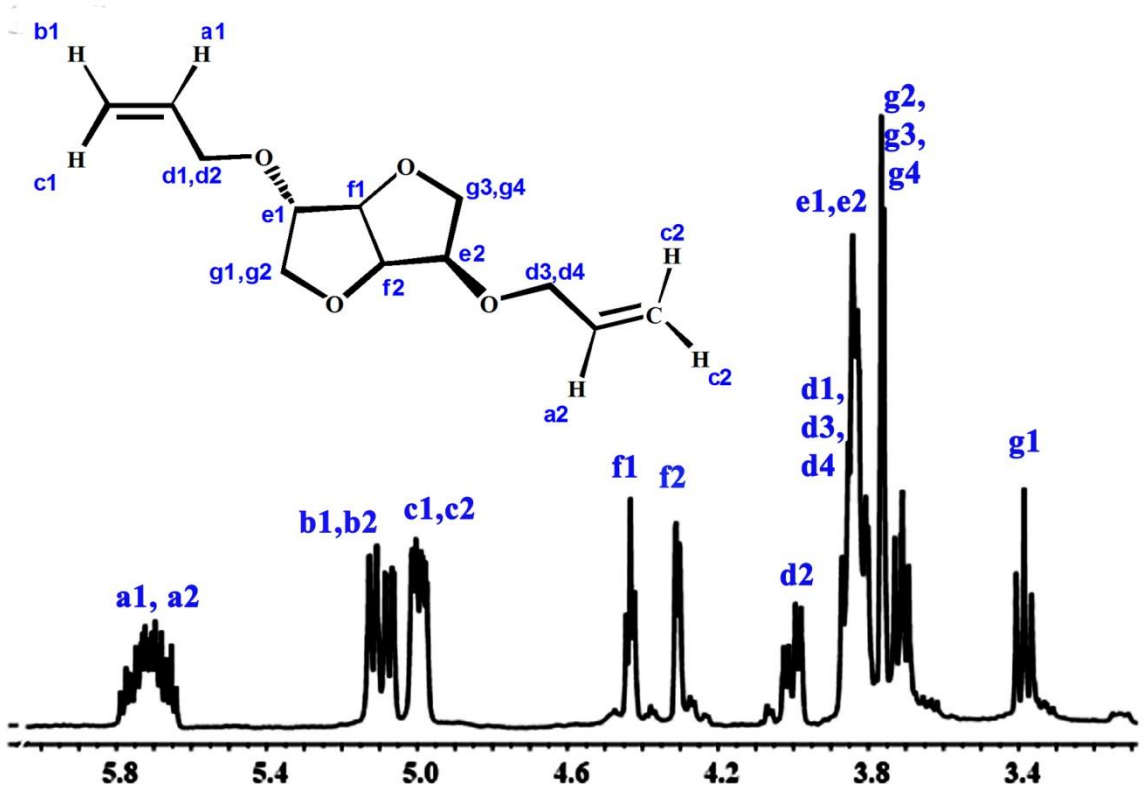



**Figure S2:** $^{1}$H-NMR of isosorbide diallyl ether

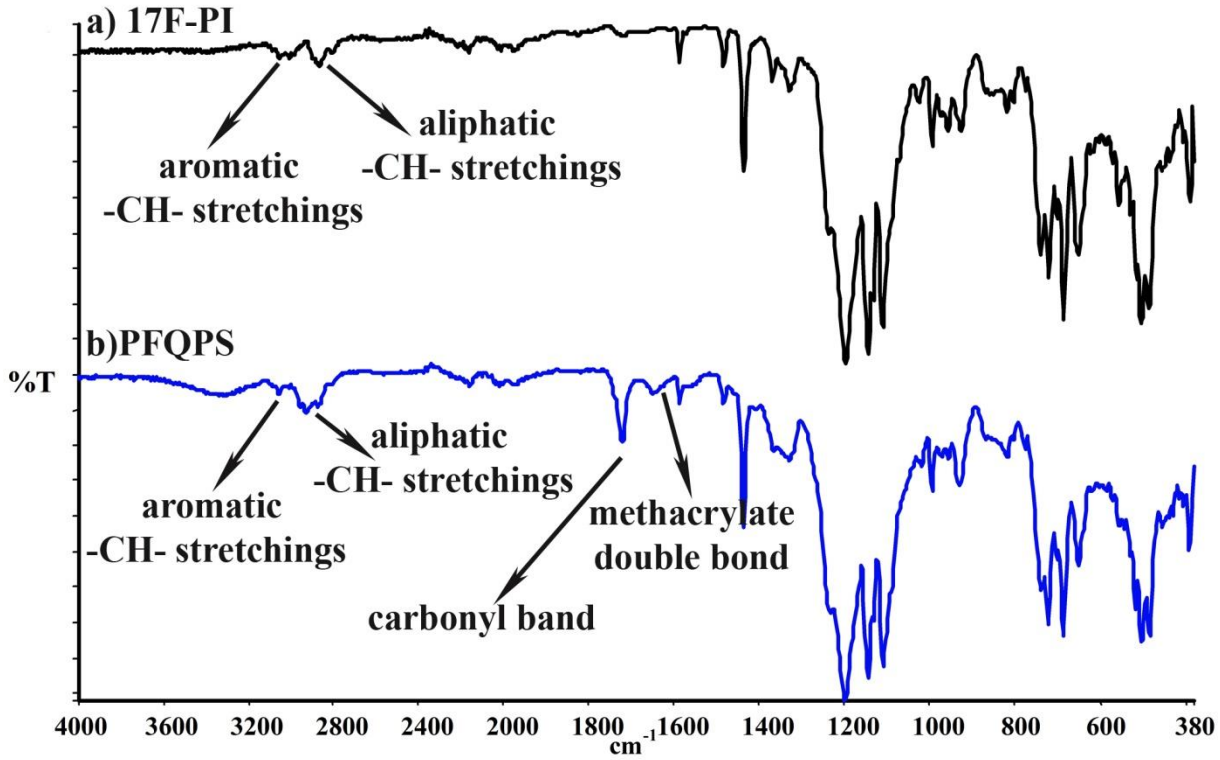



**Figure S3:** FTIR spectra of a) 17F-PI and b) PFQPS

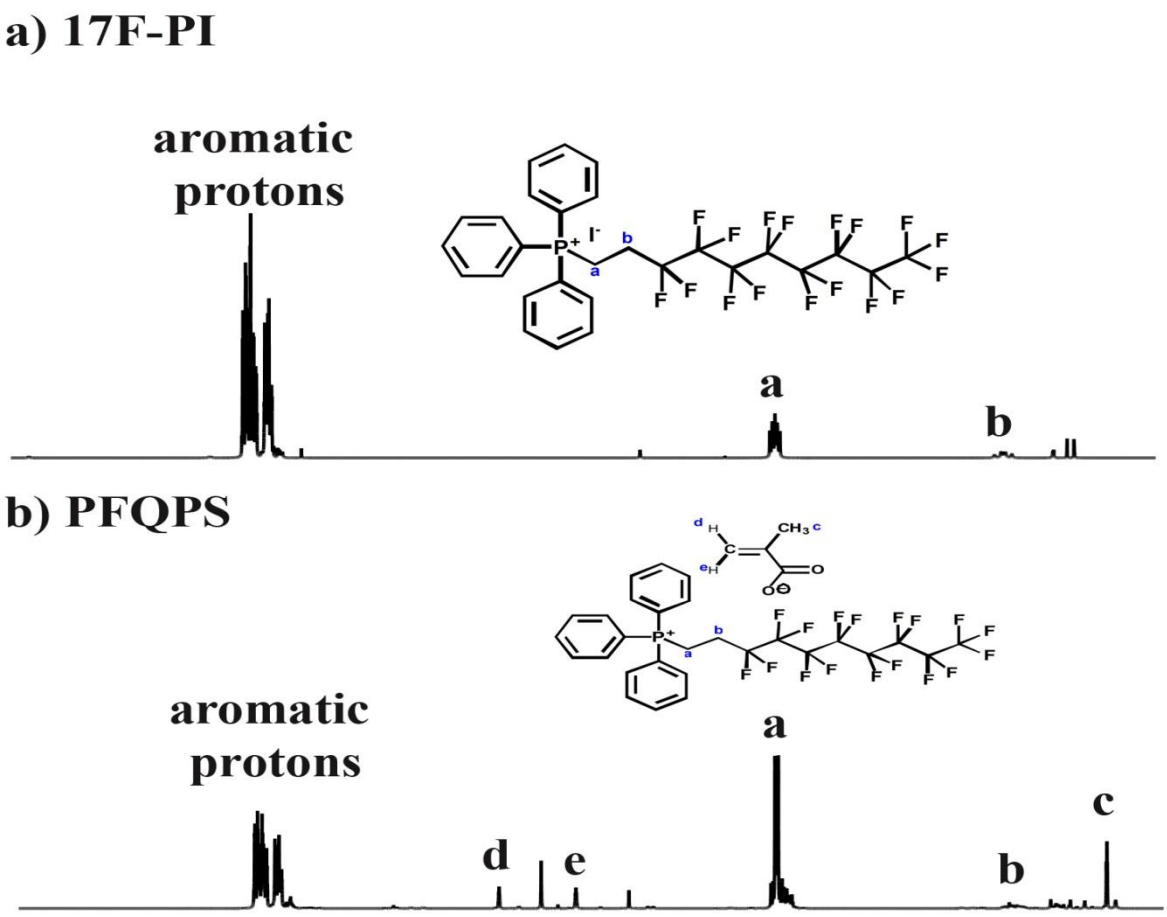



**Figure S4:** $^{1}$H-NMR of a) 17F-PI and b) PFQPS

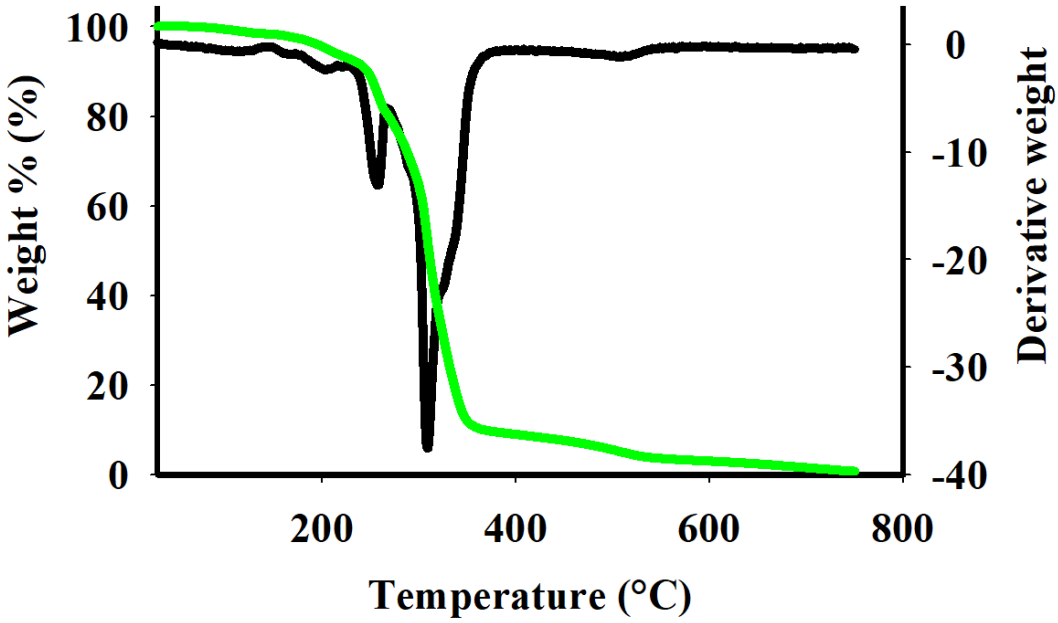



**Figure S5:** TGA spectrum of PFQPS

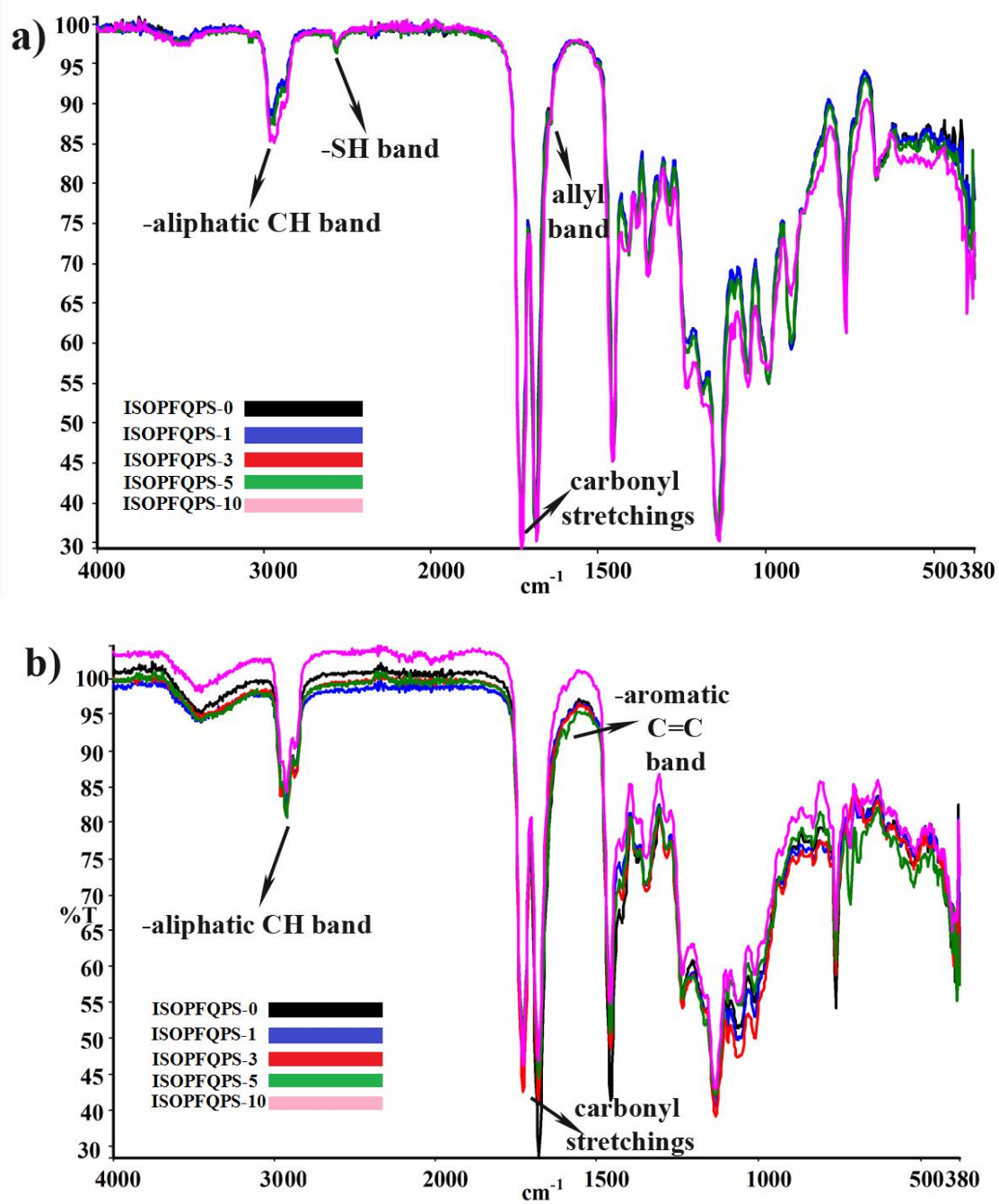



**Figure S6:** FTIR spectra of the photocured resins: a) before curing and b) after curing

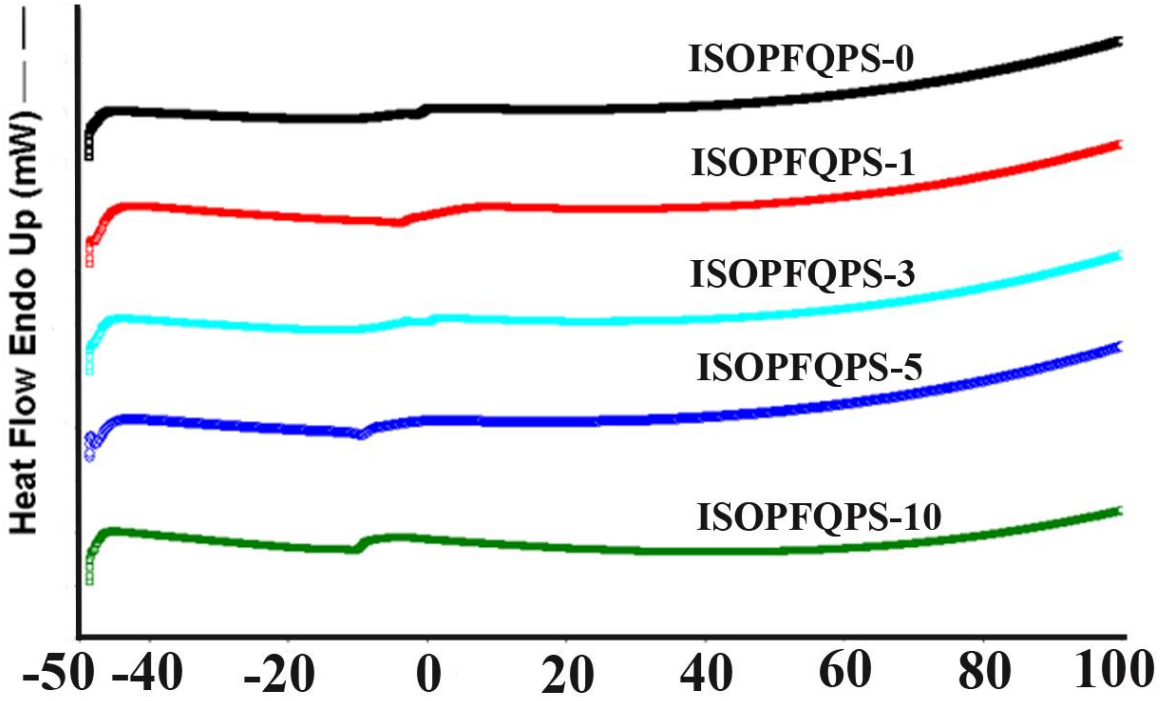
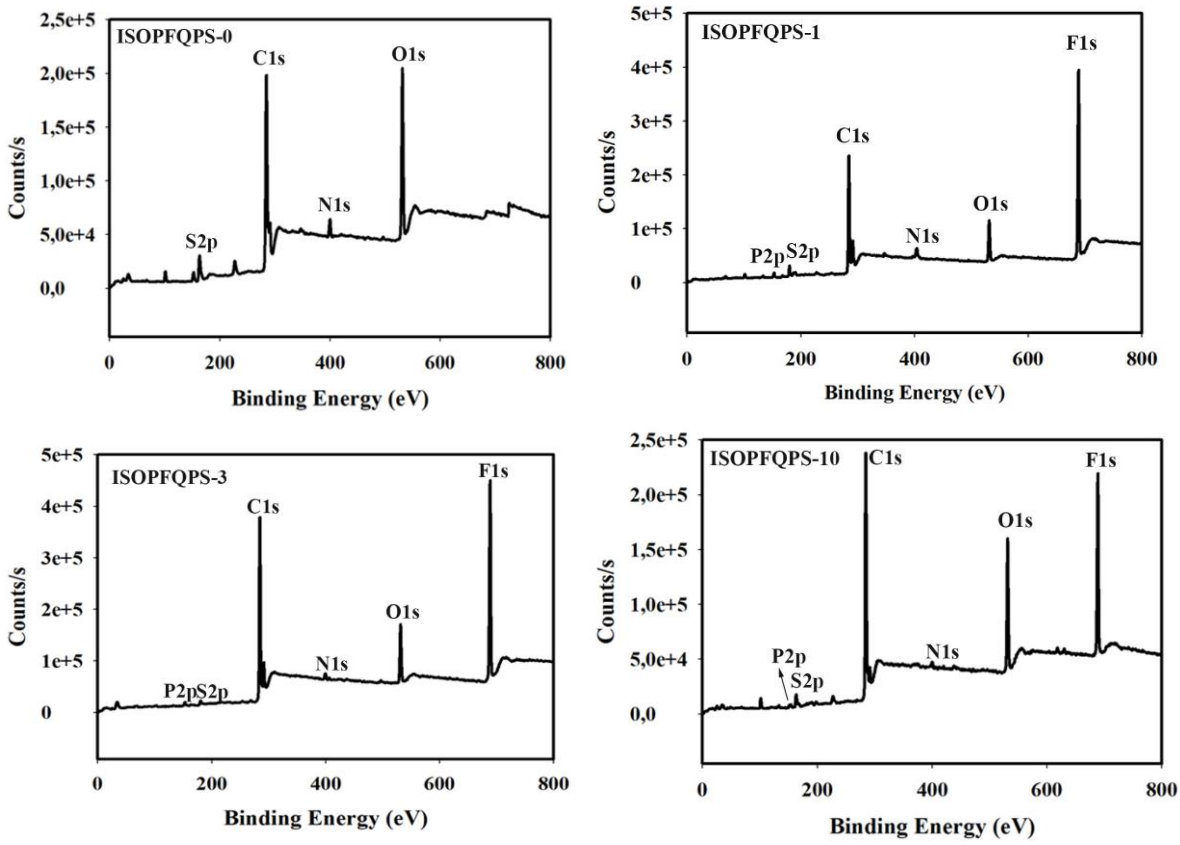
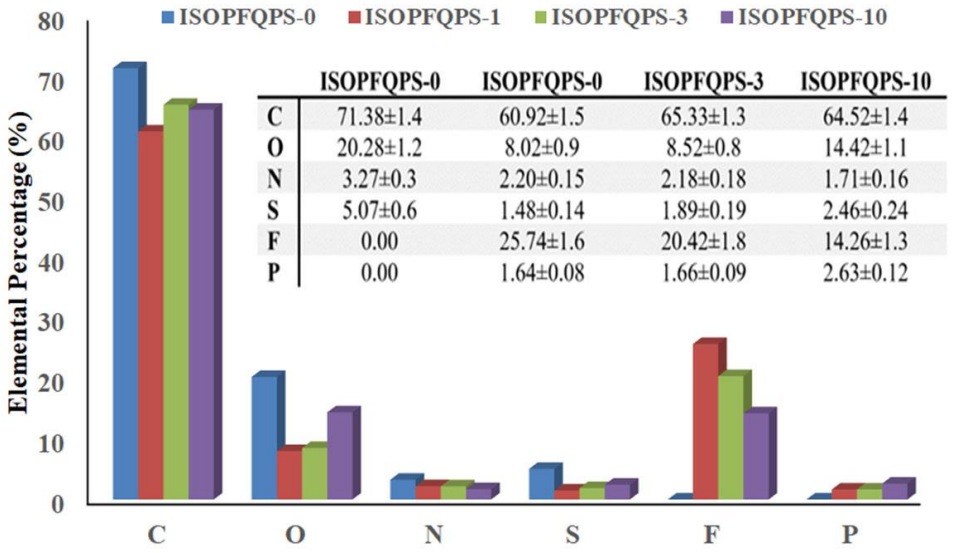



**Figure S7:** DSC spectra of the photocured resins




| | ISOPFQPS-0 | ISOPFQPS-0 | ISOPFQPS-3 | ISOPFQPS-10 |
|---|---|---|---|---|
| C | 71.38±1.4 | 60.92±1.5 | 65.33±1.3 | 64.52±1.4 |
| O | 20.28±1.2 | 8.02±0.9 | 8.52±0.8 | 14.42±1.1 |
| N | 3.27±0.3 | 2.20±0.15 | 2.18±0.18 | 1.71±0.16 |
| S | 5.07±0.6 | 1.48±0.14 | 1.89±0.19 | 2.46±0.24 |
| F | 0.00 | 25.74±1.6 | 20.42±1.8 | 14.26±1.3 |
| P | 0.00 | 1.64±0.08 | 1.66±0.09 | 2.63±0.12 |

**Figure S8:** XPS spectra of the selected photocured resins and the surface elemental percentages.

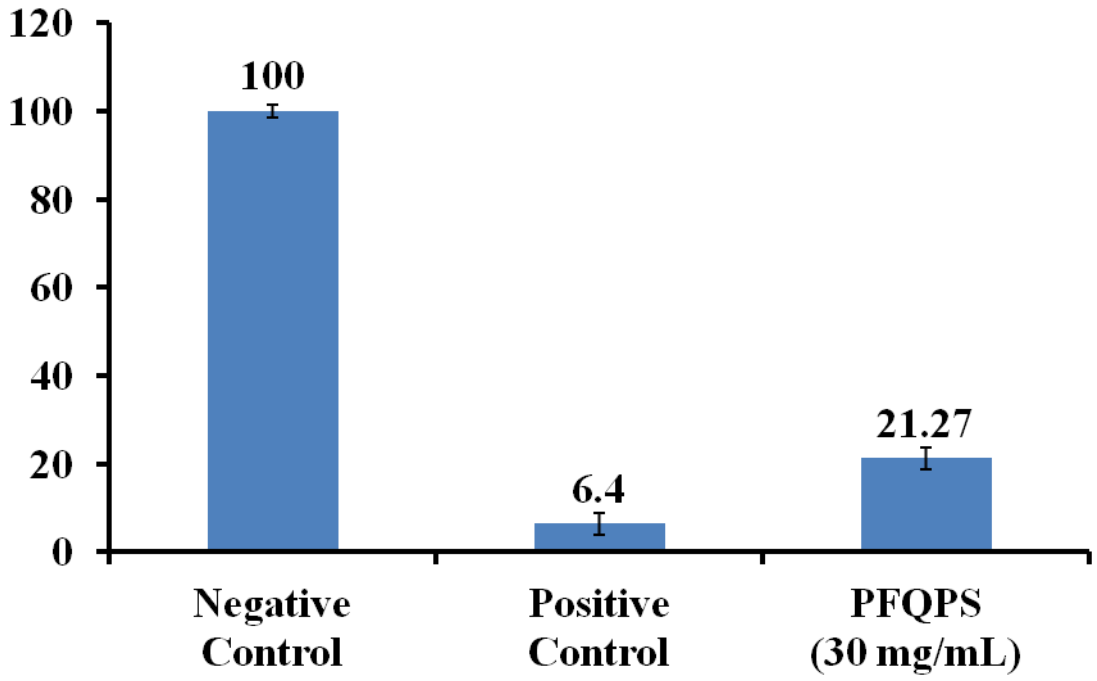



**Figure S9:** Viable L929 fibroblast cell fraction (%) in the presence of PFQPS. The cell viability was measured via MTT assay and the experiments were performed in quadruple.