

Supplementary Information

Fmoc-FF and hexapeptides-based multicomponent hydrogels as scaffold materials

Carlo Diaferia,^{a,b} Moumita Ghosh,^b Teresa Sibillano,^c Enrico Gallo,^a Mariano Stornaiuolo,^a Cinzia Giannini,^c Morelli Giancarlo,^a Lihi Adler-Abramovich,^{*b} Antonella Accardo^{*a}

^a Department of Pharmacy, Research Centre on Bioactive Peptides (CIRPeB), University of Naples “Federico II”, Via Mezzocannone 16, 80134 Naples (Italy) e-mail: antonella.accardo@unina.it

^b Department of Oral Biology, The Goldschleger School of Dental Medicine, Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv 69978, Tel Aviv (Israel) e-mail: LihiA@tauex.tau.ac.il

^c Institute of Crystallography (IC), CNR, Via Amendola 122, 70126 Bari (Italy)

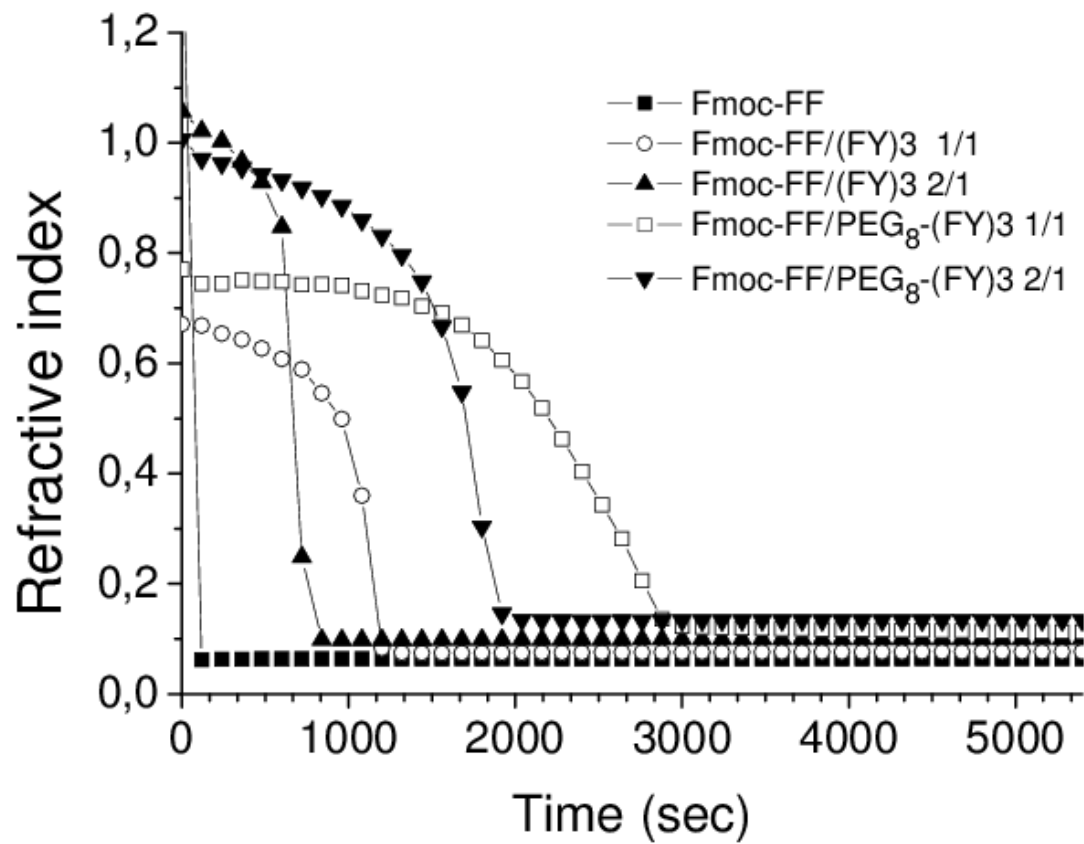


Figure S1: Refractive index of non-PEGylated (a) and PEGylated (b) mixed hydrogels in the Fmoc and Phe channels compared to pure Fmoc-FF. Data were collected by measuring the UV-Vis spectra as function of the time.

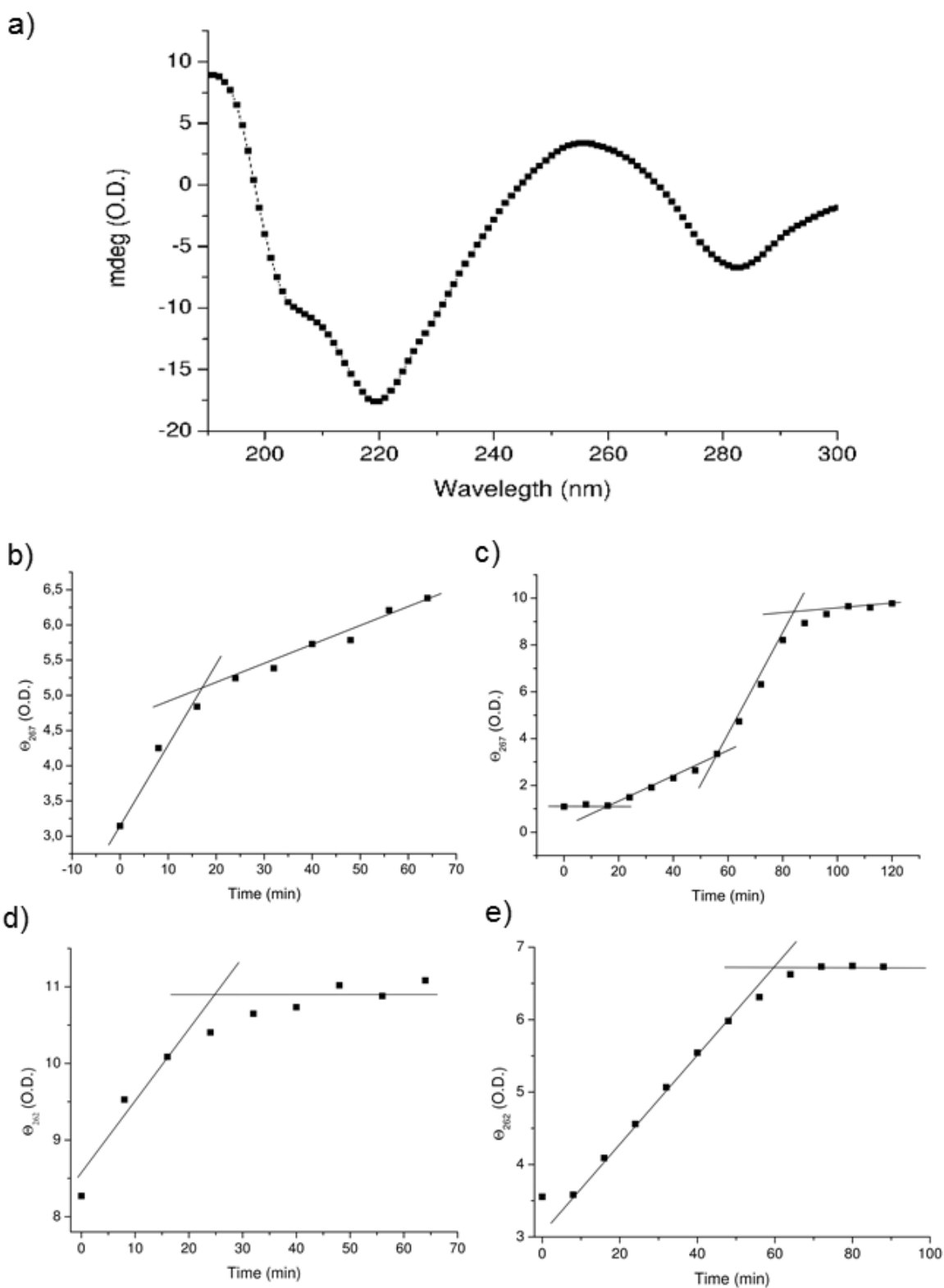


Figure S2: CD spectra of a) Fmoc-FF at 0.5 wt%. Optical density in the maximum (262 or 267 nm) as function of the time for Fmoc-FF/(FY)3 (2/1) (b) Fmoc-FF/(FY)3 (1/1) (c) Fmoc-FF/PEG₈-(FY)3 (2/1) (d) Fmoc-FF/PEG₈-(FY)3 (1/1) (e).

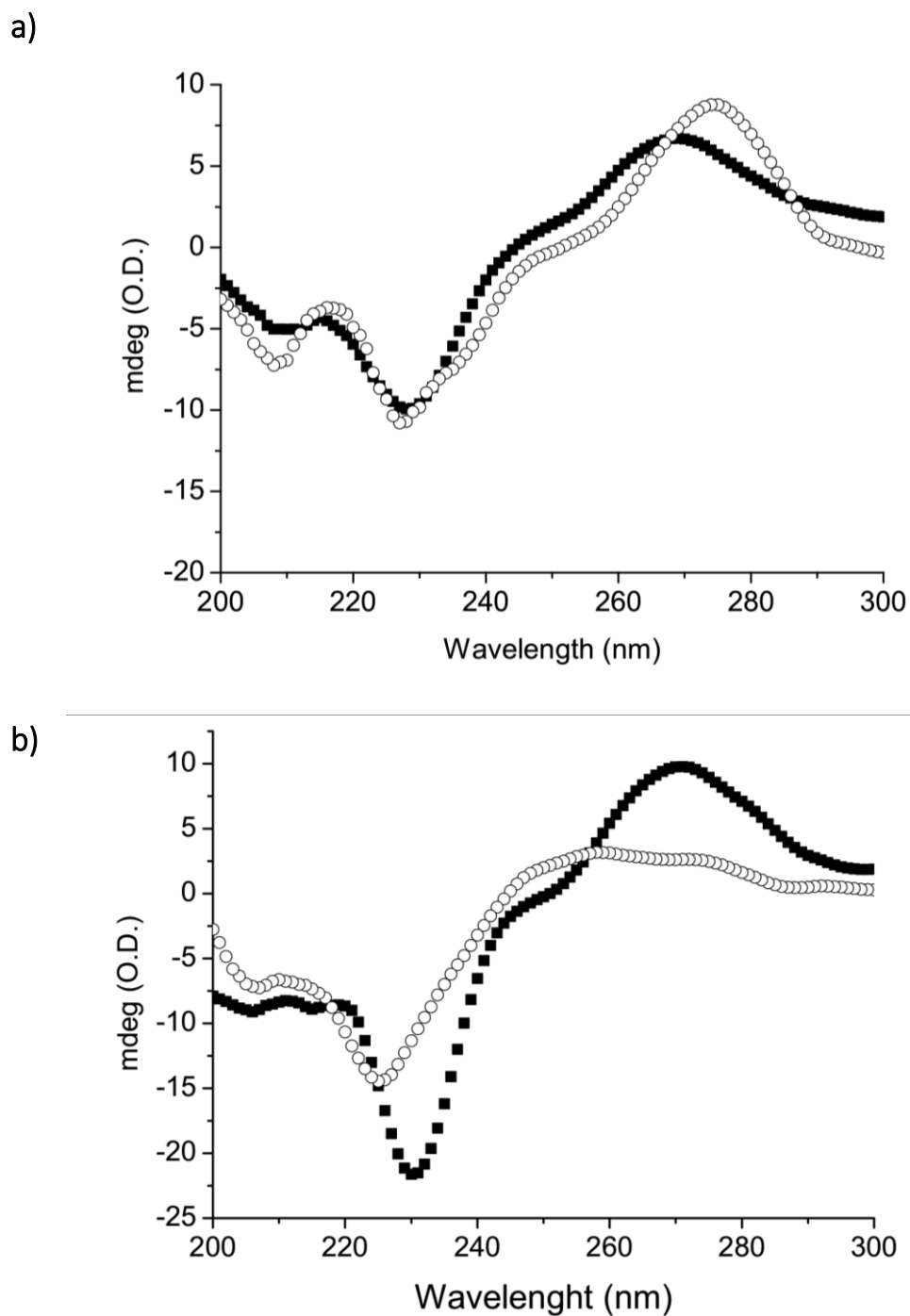


Figure S3: Comparison between acquired spectrum (black squares) and calculated sum spectrum (white circles) for a) Fmoc-FF/(FY)3 (2/1) and b) Fmoc-FF/(FY)3 (1/1).

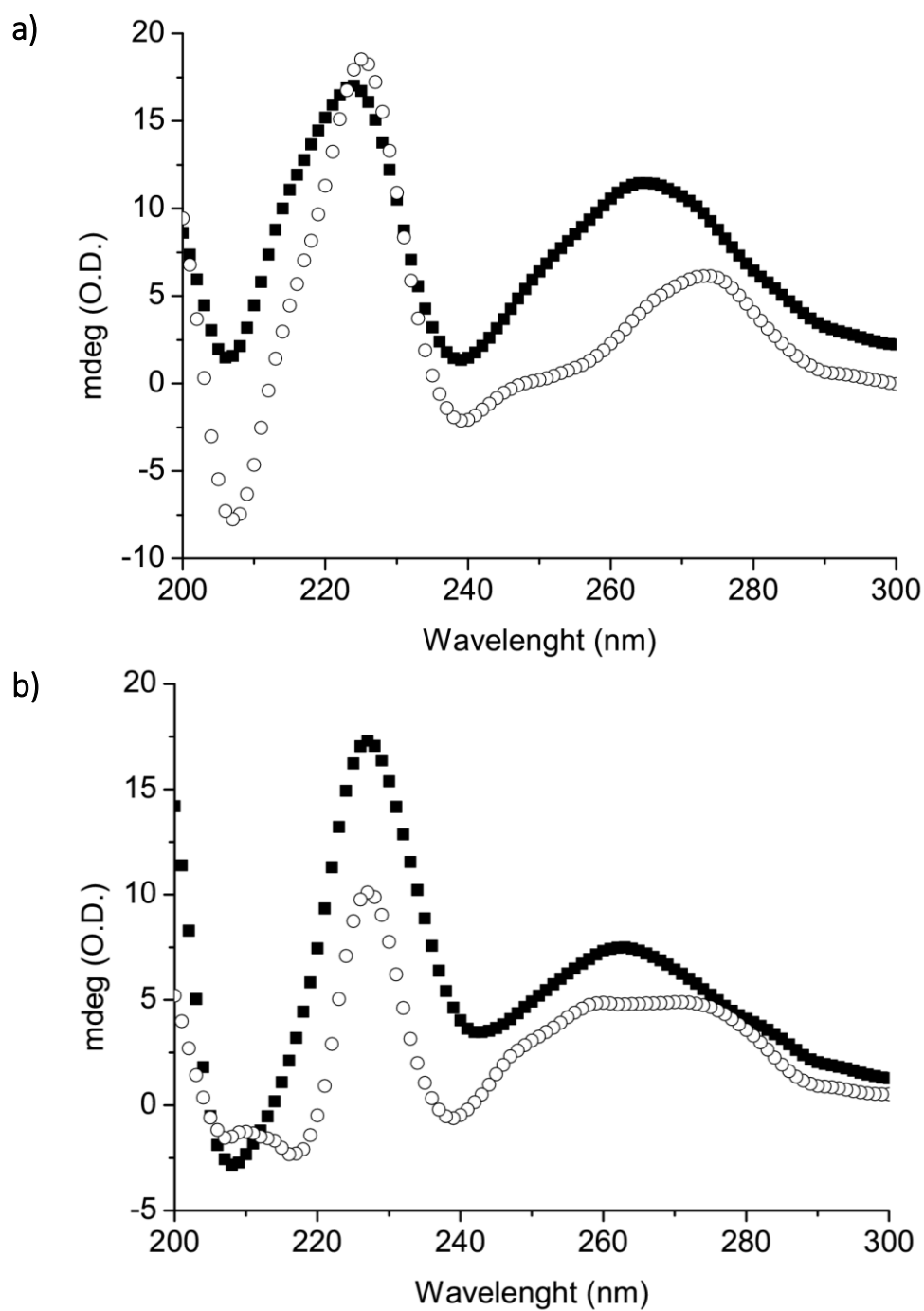


Figure S4: Comparison between acquired spectrum (black squares) and calculated sum spectrum (white circles) for a) Fmoc-FF/PEG₈(FY)₃ (2/1) and b) Fmoc-FF/ PEG₈(FY)₃ (1/1).

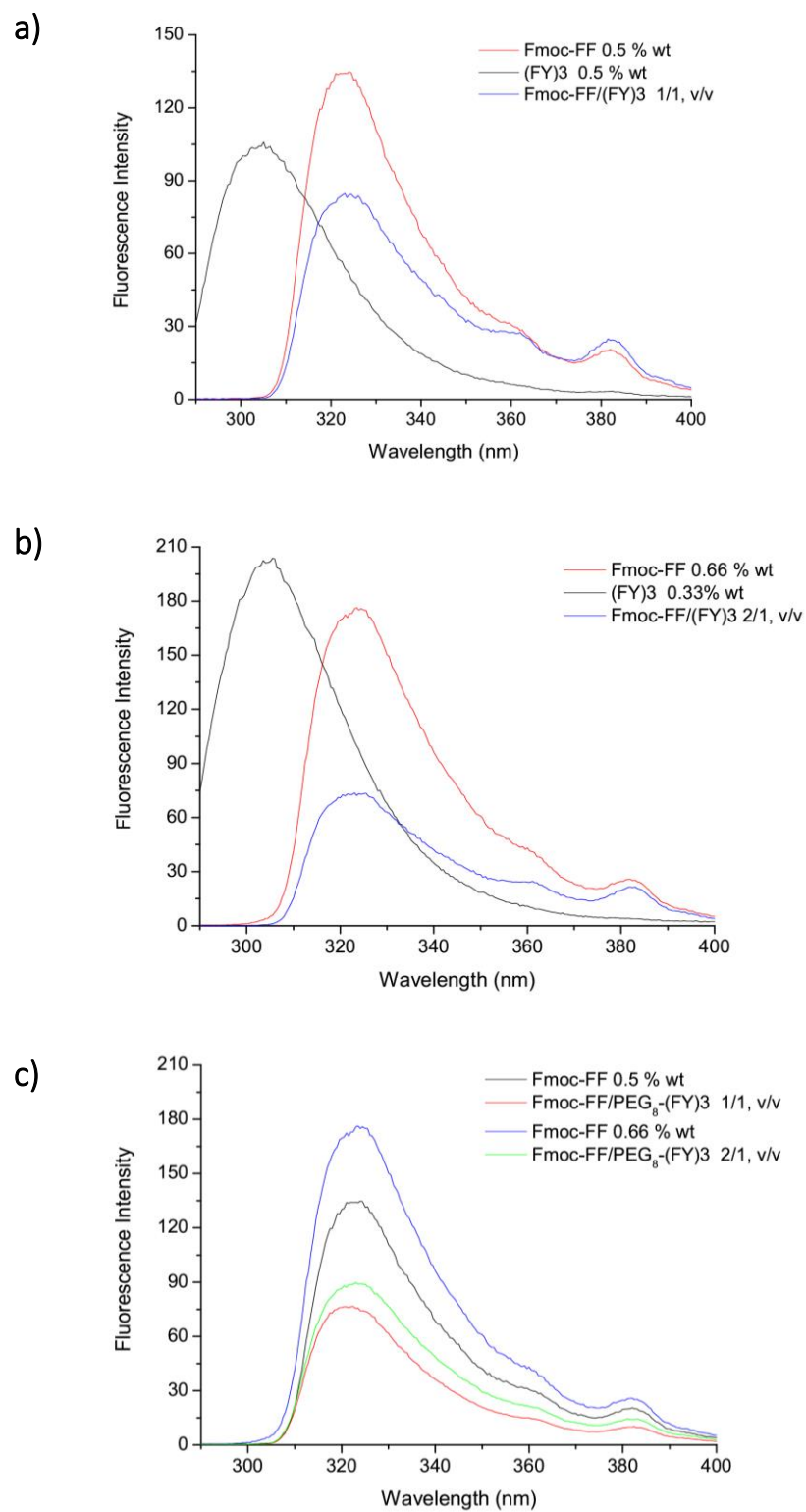


Figure S5: Fluorescence spectra of pure and multicomponent hydrogels recorded exciting peptide solutions at 280 nm.

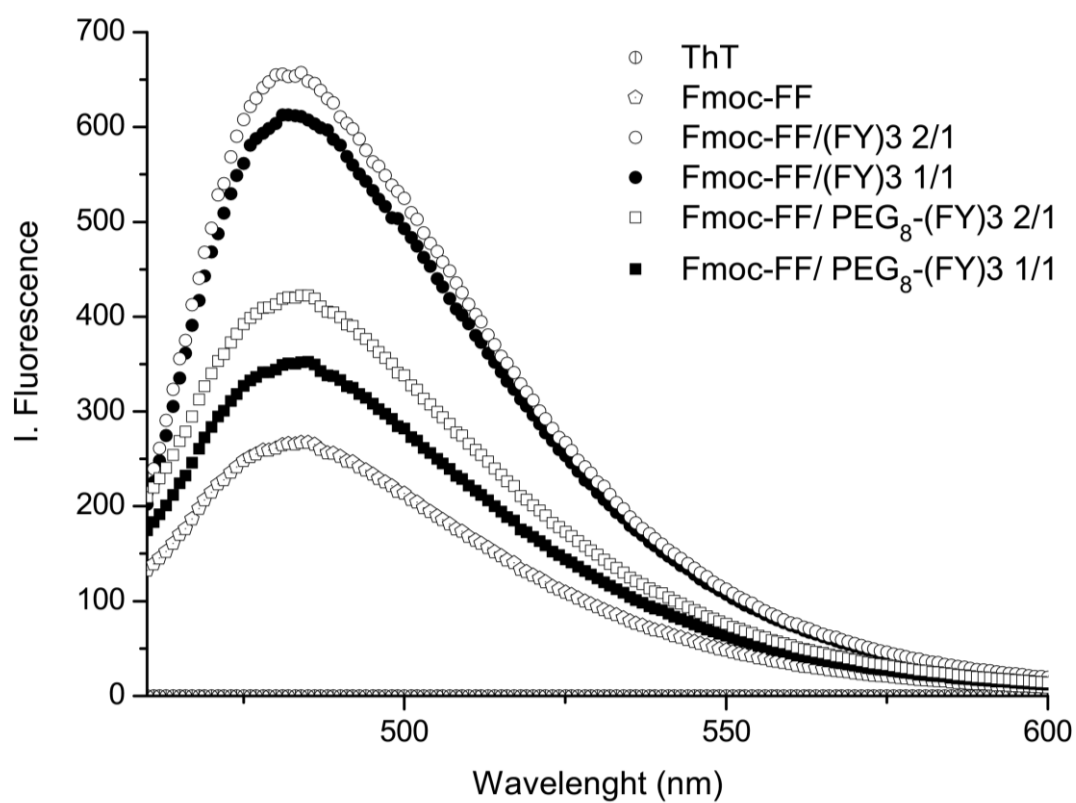


Figure S6: Fluorescence spectra of pure Fmoc-FF and multicomponent hydrogels incubated with Thioflavin T (ThT 50 μ M) exciting samples at 450 nm. ThT spectra is reported as blank.

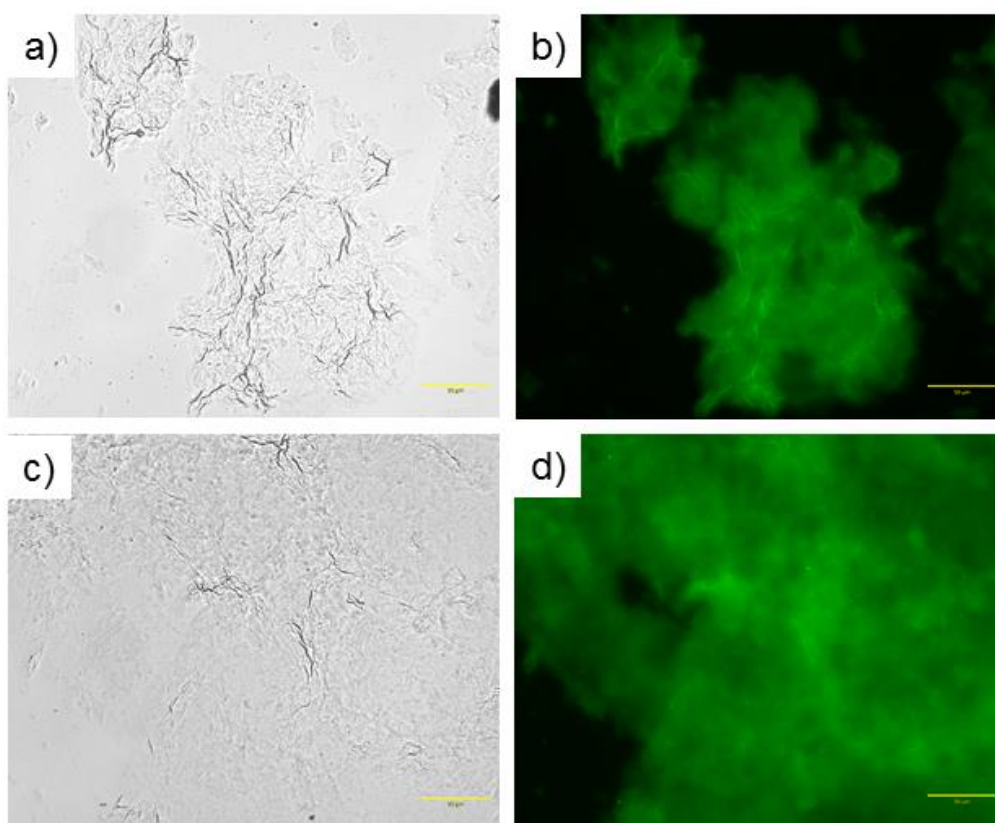


Figure S7: Fluorescence microscopy images of solutions containing Fmoc-FF/(FY)3 1/1 v/v (a,b) and Fmoc-FF/PEG₈-(FY)3 1/1 v/v (c,d) mixed hydrogels 0.5%wt and 20 μ M ThT. Samples are imaged in the bright field (b,d) and in the spectral regions of the GFP (Green Fluorescent Protein λ_{exc} = 488 nm, λ_{em} = 507 nm) (a,c). The scale bar = 50 μ m.

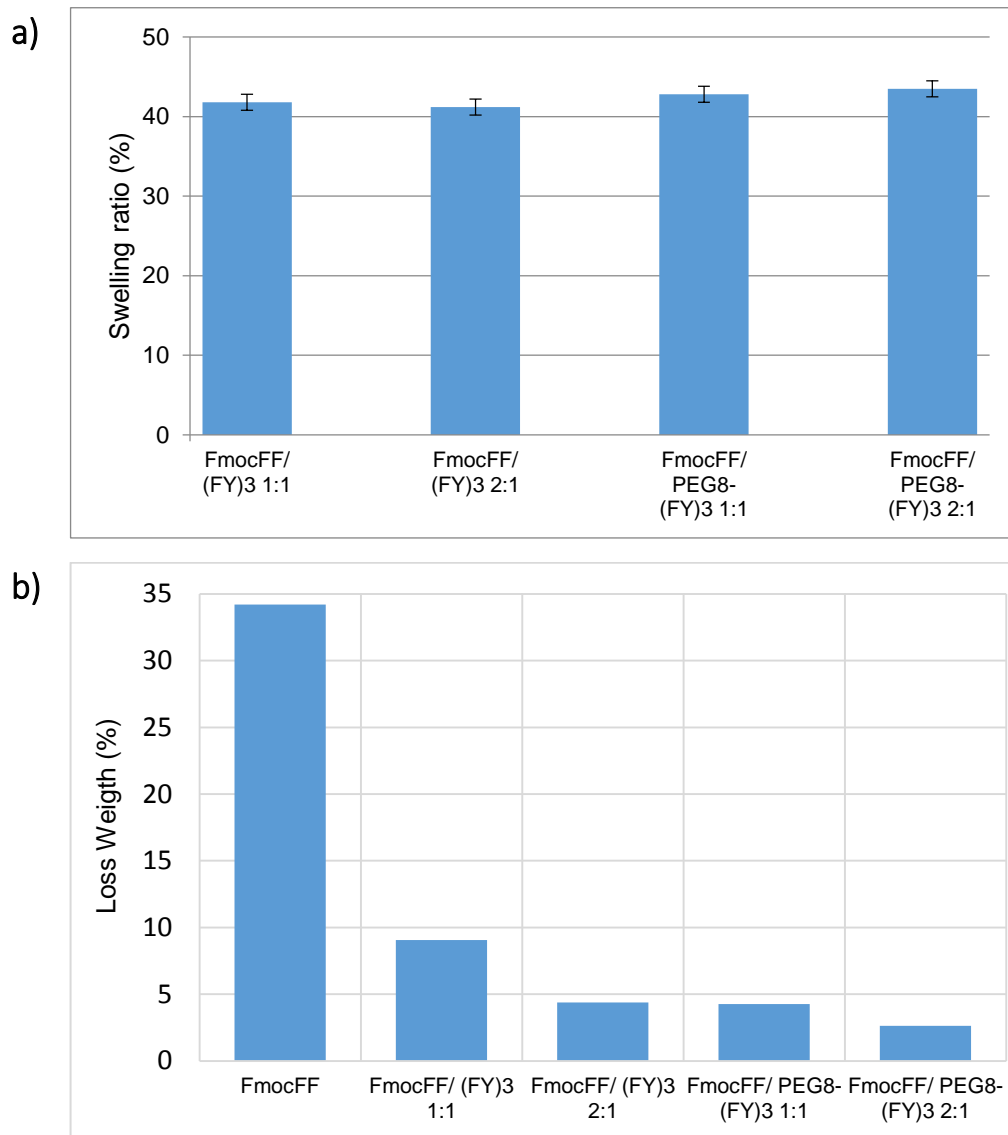


Figure S8: a) Swelling ratio and b) loss weight percentage for hydrogels