Electronic Supplementary Information for:

Edible Supramolecular Chiral Nanostructures by Self-Assembly of an Amphiphilic Phytosterol Conjugate

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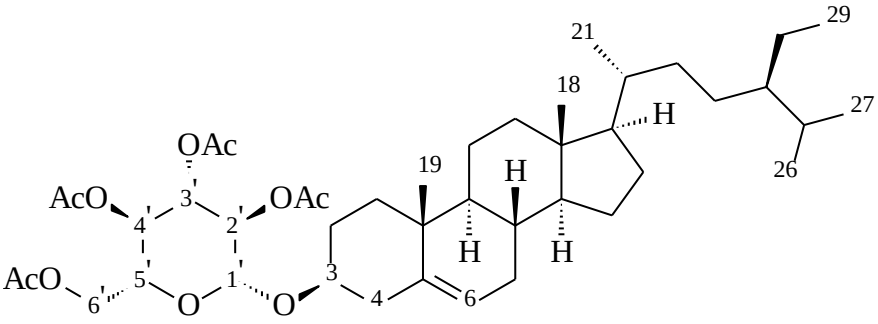

Chart SI-1. Chemical structure and numbering of the hydrogen containing carbons of the β-sitosterolin tetraacetate.

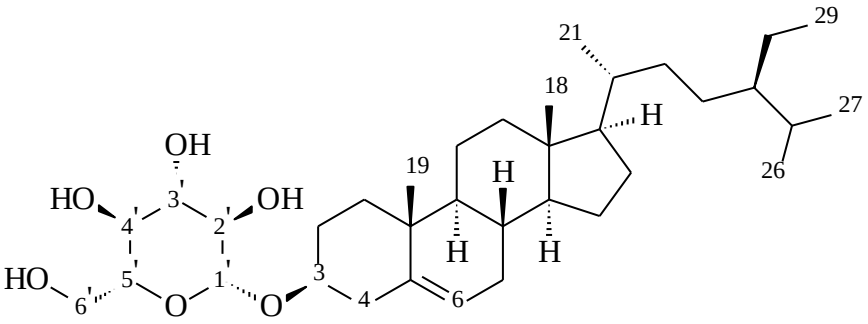

Chart SI-1. Chemical structure and numbering of the hydrogen containing carbons of the β-sitosterolin .

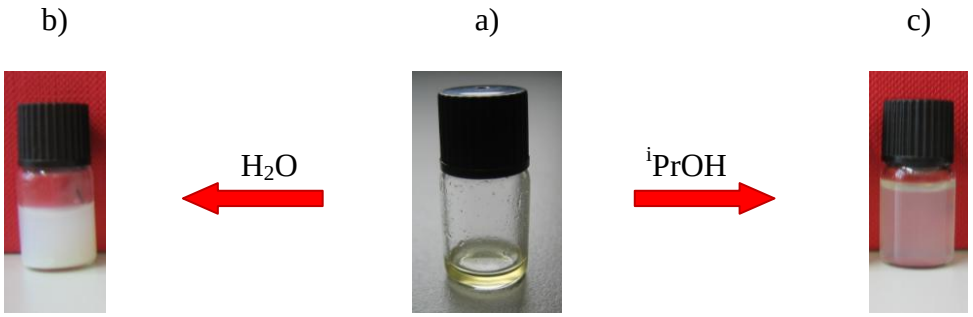

Figure SI-1. a) β-sitosterolin starting solution in DMSO, b) aggregation after adding water to the solution, and c) aggregation after adding ^{i}PrOH to the solution (a).

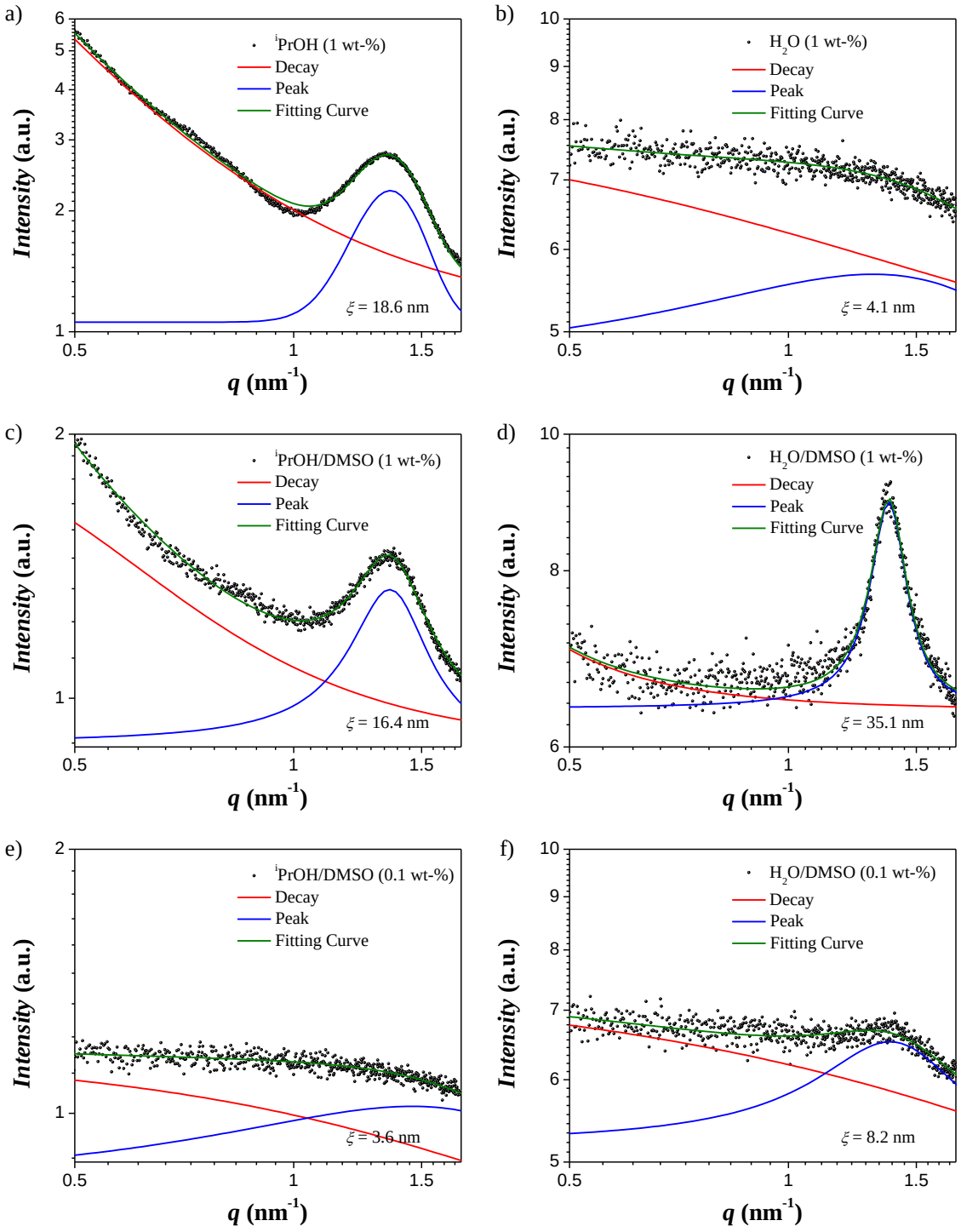

Figure SI-2. SAXS scattering curves and their corresponding fits showing the presence of the peak at q = 1.40 nm^{-1} and the correlation length for the dispersions of a) 1 w/w% β-sitosterolin in pure ^{i}PrOH, b) 1 w/w% β-sitosterolin in pure water, c) 1 w/w% in ^{i}PrOH/DMSO (9:1), d) 1 w/w% in water/DMSO (9:1), e) 0.1 w/w% in ^{i}PrOH/DMSO (9:1), and f) 0.1 w/w% in water/DMSO (9:1).

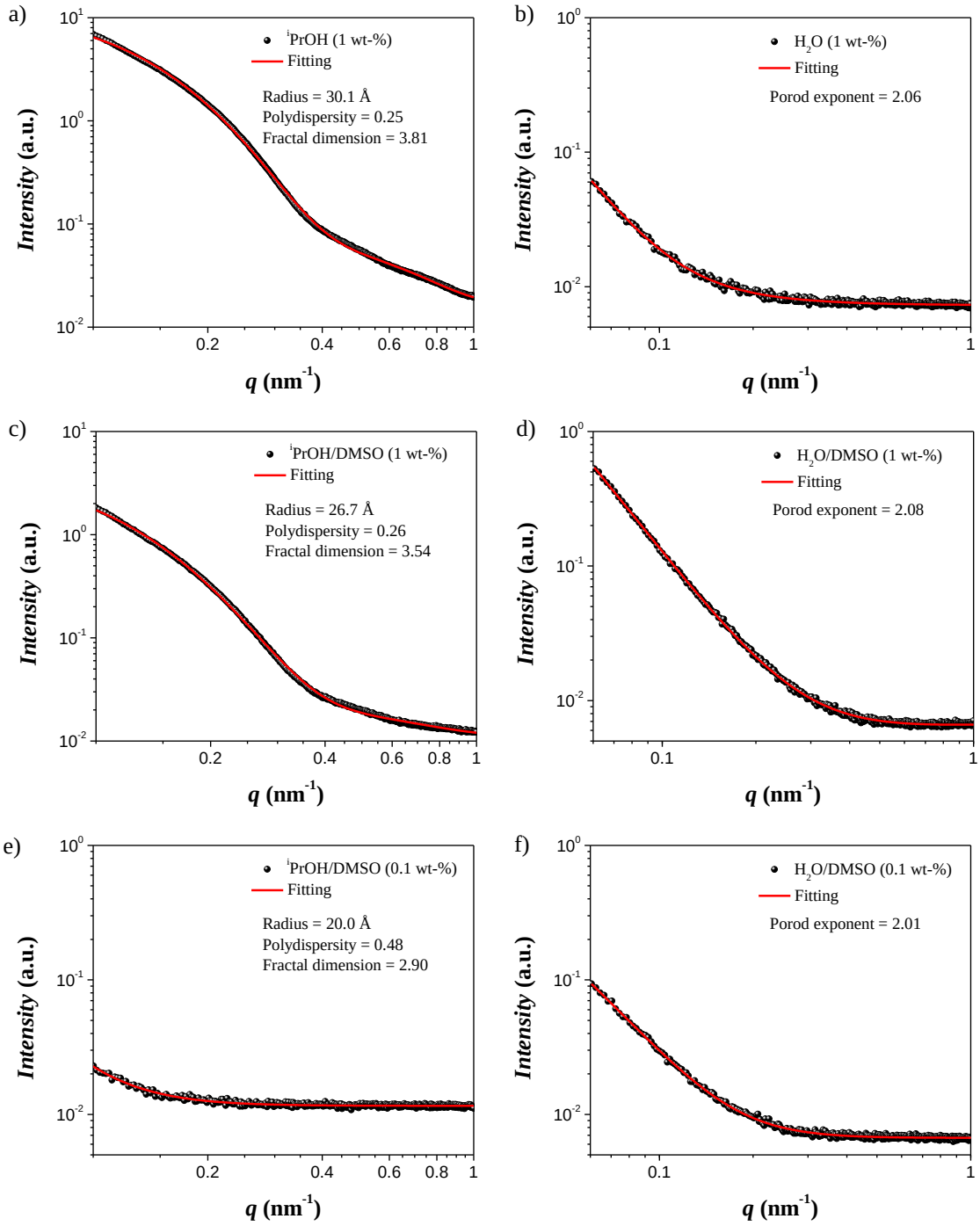

Figure SI-3. SAXS scattering curves and their corresponding fitting curves and parameters for the dispersions of a) 1 w/w% β-sitosterolin in pure ^{i}PrOH, b) 1 w/w% β-sitosterolin in pure water, c) 1 w/w% in ^{i}PrOH/DMSO (9:1), d) 1 w/w% in water/DMSO (9:1), e) 0.1 w/w% in ^{i}PrOH/DMSO (9:1), and f) 0.1 w/w% in water/DMSO (9:1). Note: $\rho(^{i}\text{PrOH}) = 2.694\cdot10^{-4}$ nm^{-2}, $\rho(H_2O) = 9.510\cdot10^{-4}$ nm^{-2}, $\rho(^{i}\text{PrOH/DMSO (9:1)}) = 2.664\cdot10^{-4}$ nm^{-2}, $\rho(H_2O/\text{DMSO (9:1)}) = 9.315\cdot10^{-4}$ nm^{-2}, ρ(β-sitosterol) = $3.483\cdot10^{-4}$ nm^{-2}, ρ(D-glucose) = $3.521\cdot10^{-4}$ nm^{-2}, ρ(β-sitosterolin) = $3.391\cdot10^{-4}$ nm^{-2}.

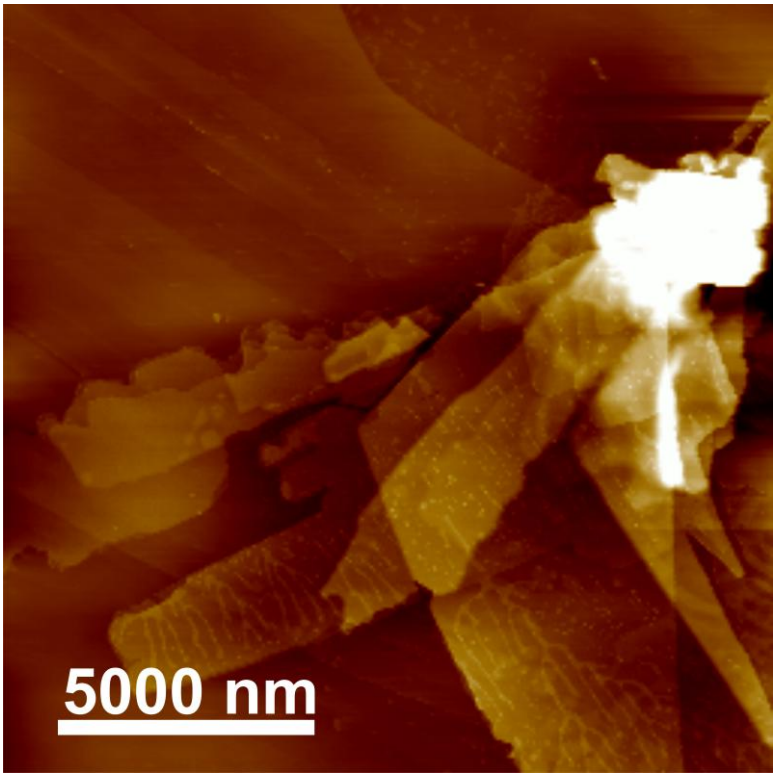

Figure SI-4. 3D AFM images for the platelet-like structures of 1 wt-% β-sitosterolin in H_2O/DMSO (9:1).