

Figure 1S. Structure of generation 2 PAMAM dendrimer with 16 terminal hydroxyl groups (PAMAM-OH or PAMAM).

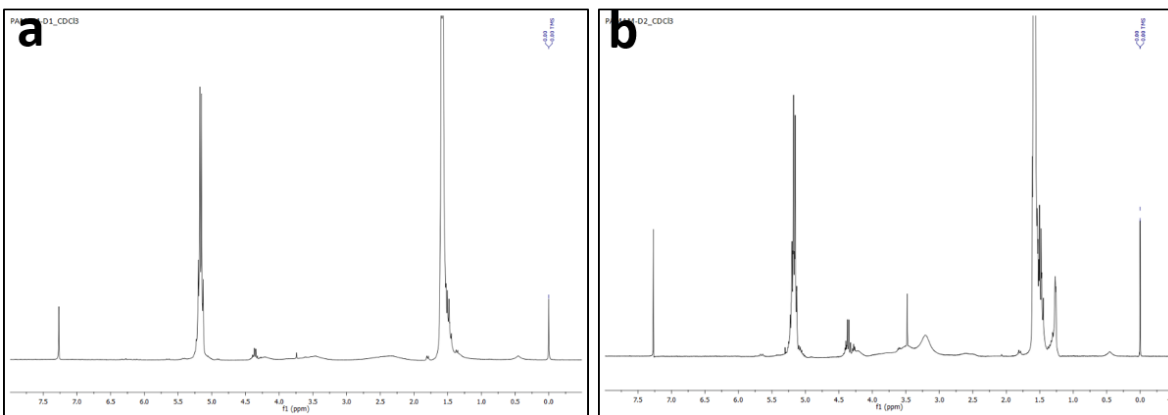


Figure 2S. ¹H NMR spectra (δ -0.5-8.0 ppm) of samples PAMAM-D1 (a) and PAMAM-D2 (b).

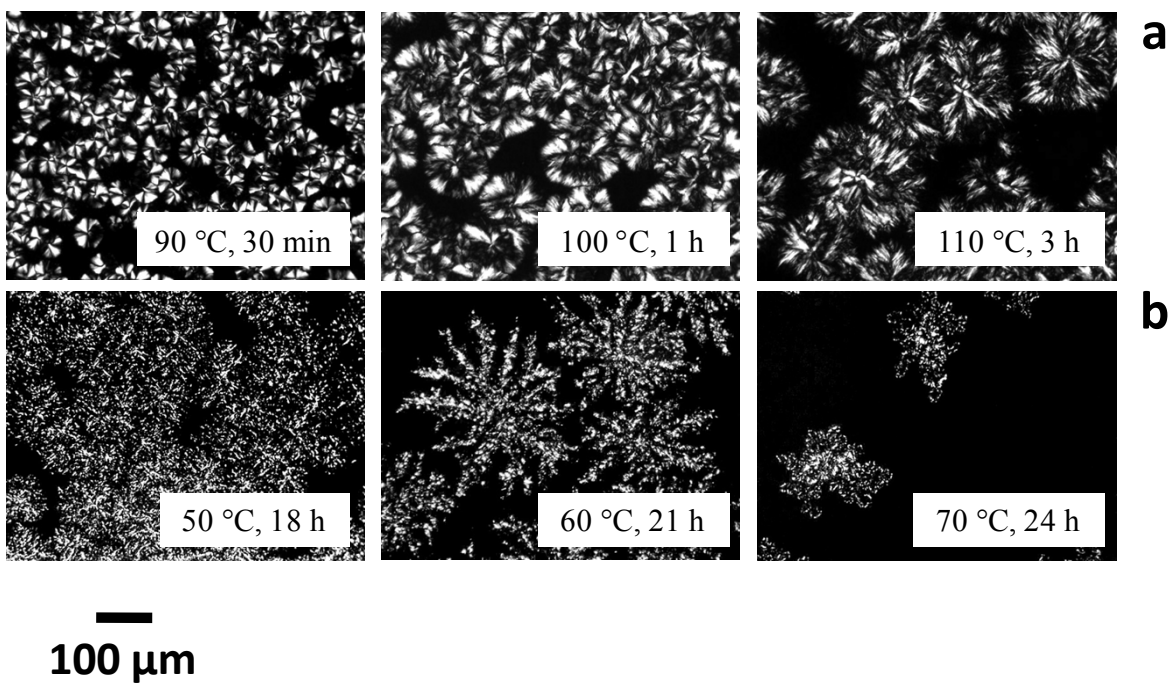


Figure 3S. Optical micrograph of the samples PAMAM-D1 (a) and PAMAM-D2 (b) isothermally crystallized from the melt at the indicated temperatures for the indicated times.

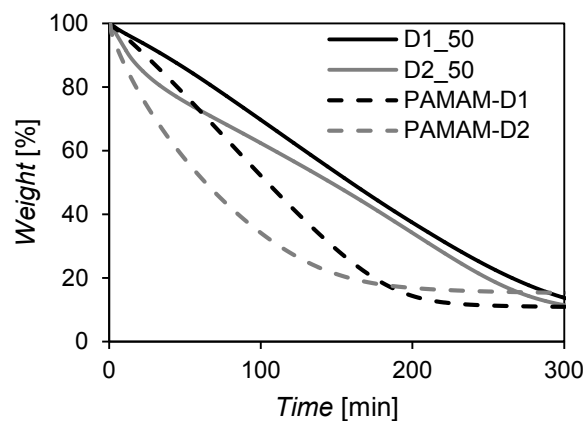


Figure 4S. TGA curves of the equimolar PAMAM-D/PLLA blend films (D1_50 and D2_50), compared to those of the neat PAMAM-D samples, recorded on isothermal holding at 200 °C.

Table 1S. Results of the water absorption test (after 48 h of immersion in water at room temperature) for (100 μm in thickness, 2.25 cm² in area) film specimens; the data are the average of four replicates.

Sample	PAMAM content [%]	Water absorption ^a [%; ±2]	Weight loss ^b [%; ±1]
L _{100K}	0	0	none
L _{100K} / D _{100K}	0	0	none
D1_5	0.55	0	none
D1_25	2.75	0	none
D1_50	5.5	18	none
D2_5	0.8	0	none
D2_50	8	21 ^c	9

^a Percentage of water absorbed during immersion, calculated according to equation (1). ^b Percentage of matter lost during immersion, calculated according to equation (2). ^c Water-absorption value calculated as the sum of the values from equations (1) and (2).