## **Supporting information:**

## Figure S1

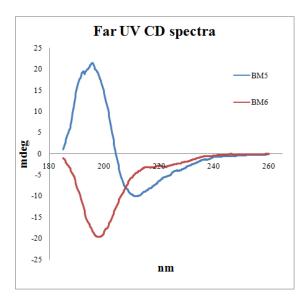


Figure S1: Comparison of Far UV CD spectra of BM5 and BM6 captured 20 minutes after dilution. BM5 displayed the spectral features of  $\beta$ -sheet structures while BM6 showed a pattern of mainly unordered aggregates.

Table S1

DAY 1					DAY 7				
SAP	FIBER TYPE	WIDTH (nm)	HEIGHT (nm)	PITCH (nm)	SAP	FIBER TYPE	WIDTH (nm)	HEIGHT (nm)	PITCH (nm)
BM1	A)	$17.72 \pm 0.74$	$2.50 \pm 0.10$		BM1	A)	$18.76 \pm 0.91$	$2.20 \pm 0.14$	
	B)	$30.27 \pm 0.98$	$2.46\pm0.14$			B)	$30.57 \pm 0.97$	$2.47\pm0.14$	
	C)	$39.40 \pm 1.19$	$2.63\pm0.23$			C)	$41.15 \pm 1.33$	$2.53\pm0.16$	
BM2	A)	$18.28 \pm 0.92$	$2.12 \pm 0.14$		BM2	A)	$18.15 \pm 0.75$	$2.14\pm0.10$	
	B)	$18.44 \pm 0.83$	$3.63\pm0.10$			C)	$29.31 \pm 0.91$	$2.58 \pm 0.12$	
	C)	$29.32 \pm 1.08$	$3.71\pm0.11$			D)	$30.23 \pm 0.57$	$4.67 \pm 0.11$	
ВМ3	A)	$8.06 \pm 0.73$	$2,53 \pm 0.43$		ВМ3	B)	$17.33 \pm 0.76$	$3,94 \pm 0.13$	
	B)	$16.84 \pm 0.79$	$3.75\pm0.40$			D) *	$28.51 \pm 1.24$	$4.12\pm0.23$	$123.37 \pm 10.98$
	C)	$28.47\pm1.10$	$4.11\pm0.36$				$29.75 \pm 1.13$	$6.31\pm0.31$	123.37 ± 10.98
BM4	A)	$8.81 \pm 0.43$	$1.97 \pm 0.15$		BM4	B)	$18,59 \pm 1.44$	$2.63 \pm 0.09$	
	B)	$16.60 \pm 0.57$	$2.81\pm0.30$			C)	$32.91 \pm 1.08$	$2.94 \pm 0.12$	
	C)	$30.17 \pm 1.10$	$3.21\pm0.27$			D)	$49.66 \pm 1.02$	$3.38 \pm 0.18$	
	D)	$46.08 \pm 1.54$	$3.69 \pm 0.26$			E)	$77.36 \pm 3.18$	$2.90 \pm 0.18$	
	E)	$76.25 \pm 1.59$	$3.14 \pm 0.19$						
BM5	A)	$16.62 \pm 1.09$	$2.46 \pm 0.23$		BM5	E) *	$16.88 \pm 0.59$	$6.70 \pm 0.15$	$114.54 \pm 10.61$
	B)	$16.31 \pm 0.59$	$4,42 \pm 0.20$				$17.33 \pm 0.68$	$4,30 \pm 0.17$	
	C)	$31.48 \pm 1.50$	$4.05 \pm 0.21$			B)	$18.52 \pm 1.19$	$4.64 \pm 0.25$	
	,					C)	$30.27 \pm 1.24$	$5.24 \pm 0.26$	
						D)	$48.62 \pm 1.86$	$5.07 \pm 0.25$	
	A)	$17.36 \pm 0.58$	$1.78 \pm 0.06$		BM6	C)	$16.05 \pm 0.73$	$5.30 \pm 0.32$	
	B)	$17.57 \pm 0.75$	$2.55 \pm 0.10$			F) *	$17.07 \pm 0.73$	$6.73 \pm 0.28$	222.25 ± 22.75
D3.56	C)	$19.71 \pm 1.00$	$5.45 \pm 0.31$			,	$17.75 \pm 0.85$	$11.13 \pm 0.28$	
BM6	D) *	$18.57 \pm 0.30$	$3.84 \pm 0.03$	112.20 + 6.20		E)	$29.07 \pm 0.41$	$6.29 \pm 0.17$	
		$18.87 \pm 0.48$	$5.74 \pm 0.19$	$112.20 \pm 6.39$		G) *	$29.48 \pm 0.85$	$7.24 \pm 0.15$	223.22 ± 21.61
	E)	$29.37 \pm 1.02$	$5,62 \pm 0,27$			,	$29.60 \pm 1.11$	$11.24 \pm 0.22$	
	A)	$17.38 \pm 0.62$	$3.06 \pm 0.15$		BM7	D)	$16.08 \pm 0.52$	$1.61 \pm 0.08$	
	B)	$17.86 \pm 0.78$	$7.12 \pm 0.34$			E)	$17.47 \pm 0.50$	$5.09 \pm 0.47$	
	C)	$29.66 \pm 0.86$	$6.22 \pm 0.69$			F) *	$15.41 \pm 0.29$	$3.35 \pm 0.12$	124 50 1 0 00
D3.65	,						$16.08 \pm 0.45$	$5.98 \pm 0.23$	$124.58 \pm 8.90$
BM7						C)	$27.71 \pm 0.71$	$6.39 \pm 0.40$	
						G)	$28.80 \pm 0.31$	$3.58 \pm 0.05$	
						H)	$40.24 \pm 4.44$	$14.85 \pm 1.49$	
						I)	$75.66 \pm 8.42$	$4.15 \pm 0.35$	
BM8	A)	$17.50 \pm 0.82$	$6.21 \pm 0.32$		BM8	E)	$16.95 \pm 0.61$	$7.92 \pm 0.43$	
	B)	$17.05 \pm 0.56$	$9.54 \pm 0.32$			F)	$29.75 \pm 1.19$	$12.77 \pm 1.35$	
	C)	$29.36 \pm 1.03$	$6.48 \pm 0.31$			D) *	$30.05 \pm 0.82$	$8.28 \pm 0.63$	254.71 ± 25.49
	D) *	$29.16 \pm 0.73$	$9.86 \pm 0.42$	262 20 1 62 62			$30.70 \pm 0.77$	$15.01 \pm 1.44$	
	ĺ	$32.35 \pm 1.64$	$15.43 \pm 0.83$	$262.30 \pm 62.63$		G) *	$29.28 \pm 1.14$	$7.02 \pm 0.37$	177.33 ± 34.00
						Í	$29,4 \pm 0.32$	$9.30 \pm 0.20$	
						H)	$41,69 \pm 2.25$	$12.05 \pm 1.66$	

**Table S1**: AFM measurements. Capital letters designate the fiber population and \* is reported for twisted fibers, underlined letters indicates the population of fiber preserved from day 1 to day 7. Reported values stand for mean  $\pm$  standard error of the mean (*SEM*) obtained at day 1 and day 7.