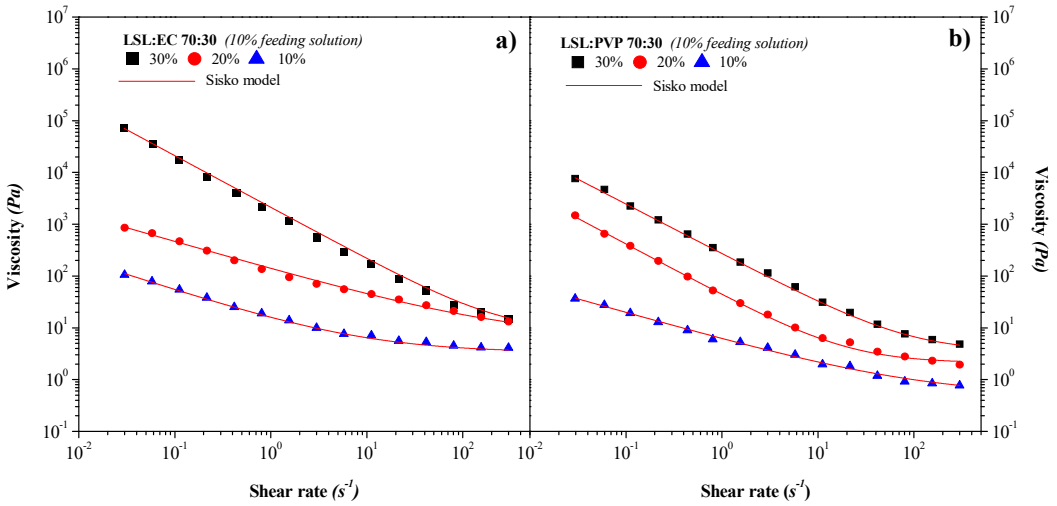

Figure S1. Viscosity vs. shear rate plots for lubricating greases thickened with a) 70:30 LSL/EC and b) 70:30 LSL/PVP electrospun nanostructures, at different concentrations (10%, 20% and 30% wt).

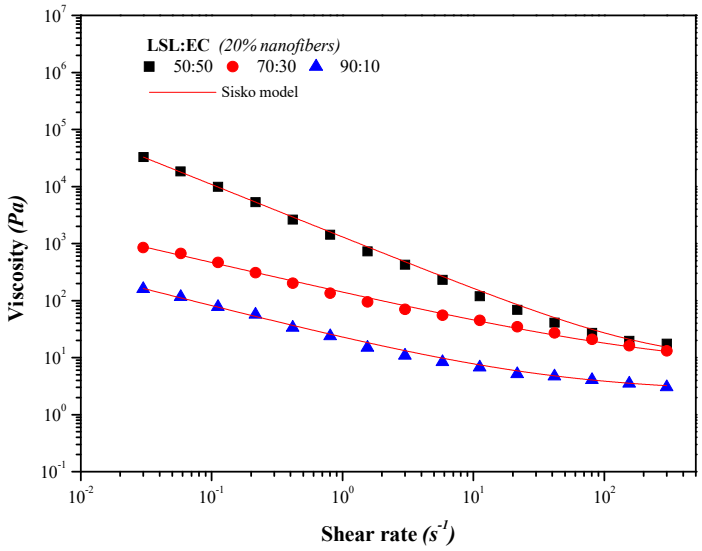

Figure S2. Viscosity vs. shear rate plots for lubricating greases thickened with LSL/EC electrospun nanostructures differing in the LSL:EC weight ratio (thickener concentration 20% wt).

Table S1. Values of the Sisko model parameters obtained from the fitting of the viscous flow curves of greases thickened with electrospun nanostructures to eq. (1).

LSL:co-spinning polymer ratio (w/w)	Thickener concentration (wt.%)	K (Pa s^n)	n (-)	η_∞ (Pa·s)
50:50 LSL:EC	10	119.1	0.31	4.7
	20	1297.4	0.08	8.5
70:30 LSL:EC	10	12.7	0.43	3.3
	20	134.5	0.49	6.4
	30	2111.7	0.001	8.4
90:10 LSL:EC	20	20.5	0.40	2.5
	30	59.1	0.59	3.9
50:50 LSL:PVP	10	9.4	0.32	1.2
70:30 LSL:PVP	10	5.75	0.47	0.5
	20	42.4	0.01	2.1
	30	268.5	0.04	3.5
90:10 LSL:PVP	30	5.69	0.47	3.9

Table S2. Friction coefficient values obtained using castor oil as lubricant.

Normal force (mN)	Friction coefficient (-)
400	0.061±0.004
700	0.055±0.002
900	0.063±0.001

Table S3. Oil separation after centrifugation for selected greases thickened with different electrospun LSL:EC nanostructures (obtained from 10% feeding solutions).

LSL:EC ratio (w/w)	Thickener concentration (wt.%)	Oil separation (wt. %)
50:50	10	4
	20	0
70:30	10	43
	20	5
	30	0
90:10	20	70
	30	24

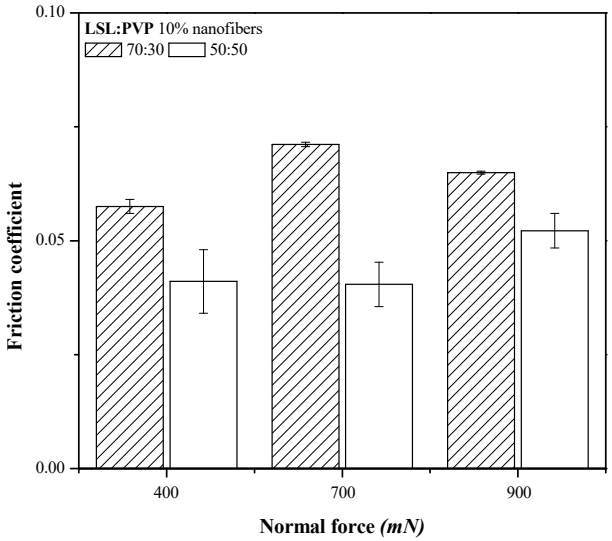

Figure S3. Values of the friction coefficient obtained with lubricating greases thickened with LSL/PVP electrospun nanostructures with different LSL:PVP ratios (10% nanofiber concentration).