Electronic Supplementary Material (ESI) for Soft Matter.

Fluorous 'Ponytails' Lead to Strong Gelators Showing Thermally Induced Structure Evolution

Supplementary Information

Harshita Kumari,[a*] Sarah E. Armitage,[b] Steven R. Kline,[c] Krishna K. Damodaran,[d] Stuart R. Kennedy,[b] Jerry L. Atwood,[e*] and Jonathan W. Steed [b*]

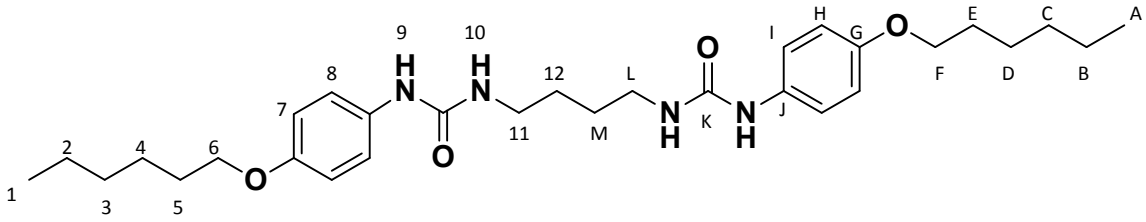
Syntheses

All starting materials and solvents were purchased from Sigma or VWR with no further purification or drying required, except the 4-(hexyloxy)aniline (section 6.1). The machines used to characterise the compounds are: NMR spectroscopy: Varian Inova 500 MHz; mass spectrometry: Xevo QToF mass spectrometer, Water UK Ltd.; infrared spectroscopy: Perkin Elmer Spectrum 100 FT-IR spectrometer; elemental analysis: Carlo Erba Flash 2000 Elemental analyser configured for CHN detection.

Purification of 4-(hexyloxy)aniline

The 4-(hexyloxy)aniline was purified by the following procedure: once dissolved in the minimum volume of chloroform, the aniline was passed through a column containing activated aluminium oxide which had been left in an oven at 100 °C for 24 h prior to use. Further chloroform was added to the column until the eluent emerged as a clear colourless solution. Solid blue impurities were retained by the column. The eluent was a deep red/brown colour and upon removal of solvent using rotary evaporator equipment followed by 24 h in a vacuum desiccator with phosphorus pentoxide, a terracotta colour crystalline solid was obtained at yields of 90 %. The purified 4-(hexyloxy)aniline solid was used in the synthesis of compounds **1b** and **1a**.

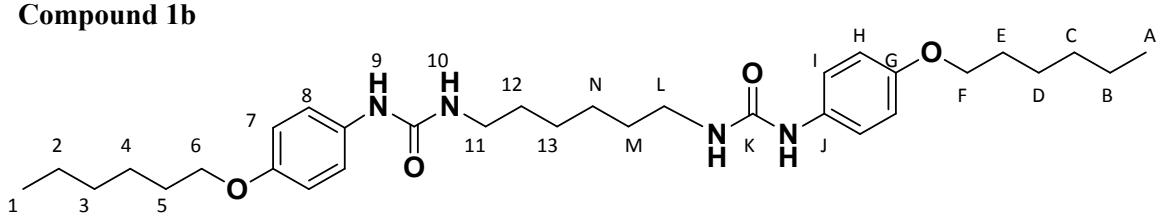
Compound 1a



An excess of purified 4-(hexyloxy) aniline (3.00 g, 15.52 mmol) was dissolved in anhydrous THF (300 ml) and purged under nitrogen for one hour. 1,4-diisocyanatobutane (0.72 g, 5.13 mmol) was added and the reaction mixture allowed to reflux for 24 hours with constant agitation and under constant nitrogen flow. The resulting mixture was filtered under reduced pressure, the solid product washed with 3 x 100 ml cold DCM and isolated as a white powder (2.49 g, 4.73 mmol, 92 % yield). Compound **1a** was dried in a heat pistol for 3 hours.

^{1}H NMR (DMSO-d_6, J/Hz, δ/ppm): 0.90 (H1, t, 6H,J=7.0); 1.25-1.55 (H2-4, H12, m, 16H); 1.69 (H5, quintet, 4H, J=7.0); 3.12 (H11, quartet, 4H, J=5.5); 3.91 (H6, t, 4H, J=6.5); 5.89 (H10, t, 2H, J=5.0); 6.79 (H7, d, 4H, J=8.5); 7.26 (H8, d, 4H, J=9.0); 7.95 (H9, s, 2H).^{13}C {^{1}H} NMR (DMSO-d_6, δ/ppm): 14.36 (A); 22.61 (B); 25.84 (D); 28.15 (M); 29.51 (E); 31.65 (C); 39.77 (L); 68.79 (F); 115.57 (H); 120.47 (I); 134.50 (J); 154.33 (K); 156.31 (G). IR (*v*/cm^{-1}): 3332 (NH stretch); 3298 (NH stretch); 2940 (CH_2 stretch); 2866 (CH_2 stretch); 1632 (CO stretch). Anal. Calc'd for $C_{30}H_{46}N_4O_4$: C, 68.41; H, 8.80; N, 10.64. Found: C, 68.35; H, 8.90; N, 10.55. Theoretical m/z: 526.35 g mol^{-1}. Found m/z (ASAP-MS): 526.36 g mol^{-1}.

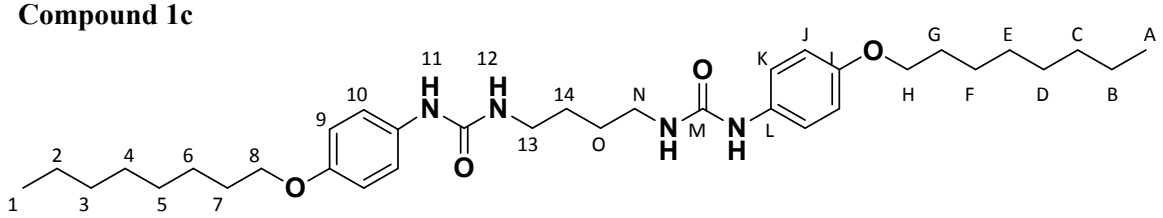
Compound 1b



An excess of purified 4-(hexyloxy) aniline (3.00 g, 15.52 mmol) was dissolved in anhydrous THF (300 ml) and purged under nitrogen for one hour. Hexamethylene diisocyanate (1.17 g, 7.00 mmol) was added and the reaction mixture refluxed for 24 hours with constant agitation and under constant nitrogen flow. The resulting mixture was filtered under reduced pressure and the solid product washed with 3 x 100 ml cold DCM and isolated as a white powder (3.09 g, 5.56 mmol, 79 % yield). Compound **1b** was dried in a heating pistol at 110^{o}C for 3 hours.

^{1}H NMR (DMSO-d_6, J/Hz, δ/ppm):0.89 (H1, t, 6H,J=5.0); 1.25-1.51 (H2-4, H12-13, m, 20H); 1.68 (H5, quintet, 4H, J=7.0); 3.11 (H11, quartet, 4H, J=5.0); 3.90 (H6, t, 4H, J=4.5); 5.86 (H10, t, 2H, J=5.0); 6.78 (H7, d, 4H, J=8.5); 7.25 (H8, d, 4H, J=8.5); 7.94 (H9, s, 2H). ^{13}C{^{1}H} NMR (DMSO-d_6, δ/ppm): 14.35 (A); 22.60 (B); 25.83 (D); 26.81 (N); 29.49 (E); 30.48 (M); 31.63 (C); 39.91 (L); 68.78 (F); 115.56 (H); 120.49 (I); 134.46 (J); 154.32 (K); 156.31 (G). IR (*v*/cm^{-1}): 3337 (NH stretch); 3297 (NH stretch); 2932 (CH_2 stretch); 2856 (CH_2 stretch); 1627 (CO stretch). Anal. Calc'd for $C_{36}H_{58}N_4O_4$: C, 69.28; H, 9.08; N, 10.10. Found: C, 69.19; H, 9.09; N, 10.23.Theoretical m/z: 554.38 g mol^{-1}. Found m/z (ASAP-MS): 554.39 g mol^{-1}.

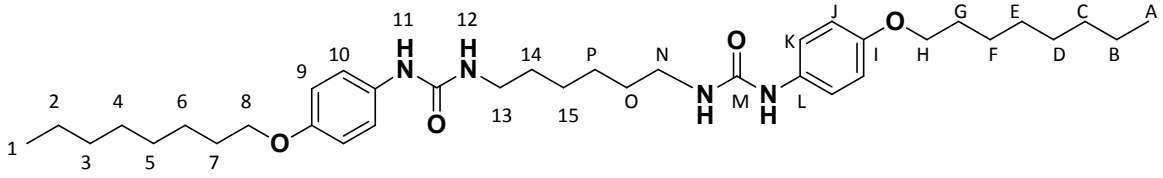
Compound 1c



An excess of 4-(octyloxy) aniline (3.00 g, 13.55 mmol) was dissolved in anhydrous THF (300 ml) and purged under nitrogen for one hour. 1,4-diisocyanatobutane (0.86 g, 6.14 mmol) was added and the reaction mixture allowed to reflux for 24 hours with constant agitation and under constant nitrogen flow. The resulting mixture was filtered under reduced pressure and the solid productwashed with 3 x 100 ml cold DCM and isolated as a white powder (2.93 g, 5.03 mmol, 82 % yield). Compound **1c** was dried in a heat pistol for 3 hours.

^{1}H NMR (DMSO-d_6, J/Hz, δ/ppm): 0.89 (H1, t, 6H,J=6); 1.23-1.52 (H2-6, H14, m, 24H); 1.69 (H7, quintet, 4H, J=7.0); 3.11 (H13, m, 4H); 3.91 (H8, t, 4H, J=6.5); 5.89 (H12, m, 2H); 6.79 (H9, d, 4H, J=9.0); 7.26 (H10, d, 4H, J=8.5); 7.95 (H11, s, 2H). ^{13}C{^{1}H} NMR (DMSO-d_6, δ/ppm): 14.42 (A); 22.63 (B); 26.20 (F); 28.15 (O); 29.22 (E); 29.36 (D); 29.54 (G); 31.84 (C); 39.77 (N); 68.78 (H); 115.57 (J); 120.46 (K); 134.51 (L); 154.32 (M); 156.30 (I). IR (*ν*/cm^{-1}): 3333(NH stretch); 3300 (NH stretch); 2923 (CH_2 stretch); 2854 (CH_2 stretch); 1632 (CO stretch). Anal. Calc'd for $C_{34}H_{54}N_4O_4$: C, 70.07; H, 9.34; N, 9.61. Found: C, 69.91; H, 9.27; N, 9.62.Theoretical m/z: 582.41 g mol^{-1}. Found m/z (ASAP-MS): 582.41 g mol^{-1}.

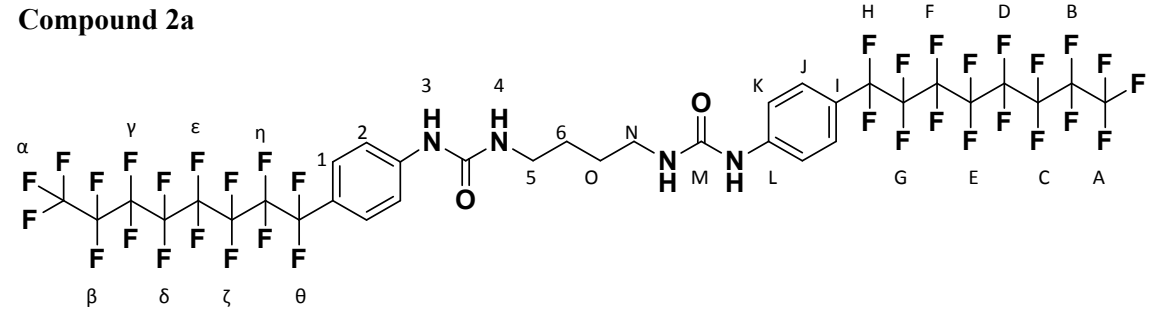
Compound 1d



An excess of 4-(octyloxy) aniline (3.00 g, 13.55 mmol) was dissolved in anhydrous THF (300 ml) and purged under nitrogen for one hour. Hexamethylene diisocyanate (1.04 g, 6.18 mmol) was added and the reaction mixture left to reflux for 24 hours with constant agitation and under constant nitrogen flow. The resulting mixture was filtered under reduced pressure and the solid product washed with 3 x 100 ml cold DCM and isolated as a white powder (3.02 g, 4.95 mmol, 80 % yield). Compound **1d** was dried in a heat pistol for 3 hours before weighing.

^{1}H NMR (DMSO-d_6, J/Hz, δ/ppm): 0.89 (H1, t, 6H, J=6.5); 1.24-1.51 (H2-6, H12, m, 28H); 1.69 (H7, quintet, 4H, J=6.5); 3.10 (H13, quartet, 4H, J=6.0); 3.91 (H8, t, 4H, J=6.5); 5.85 (H12, t, 2H, J=5.5); 6.79 (H9, d, 4H, J=8.5); 7.25 (H10, d, 4H, J=9.0) 7.94 (H11, s, 2H). ^{13}C{^{1}H} NMR (DMSO-d_6, δ/ppm): 14.48 (A); 22.63 (B); 26.20 (F); 26.84 (P); 29.22 (E); 29.36 (D); 29.54 (G); 30.51 (O); 31.84 (C); 39.91 (N); 68.79 (H); 115.34 (J); 120.41 (K); 134.52 (L); 154.31 (M); 156.29 (I).IR (*ν*/cm^{-1}): 3336 (NH stretch); 3298(NH stretch); 2925 (CH_2 stretch); 2857 (CH_2 stretch); 1632 (CO stretch). Anal. Calc'd for $C_{36}H_{58}N_4O_4$: C, 70.78; H, 9.57; N, 9.17. Found: C, 70.76; H, 9.52; N, 9.28. Theoretical m/z: 610.45 g mol^{-1}. Found m/z (ASAP-MS): 610.45 g mol^{-1}.

Compound 2a

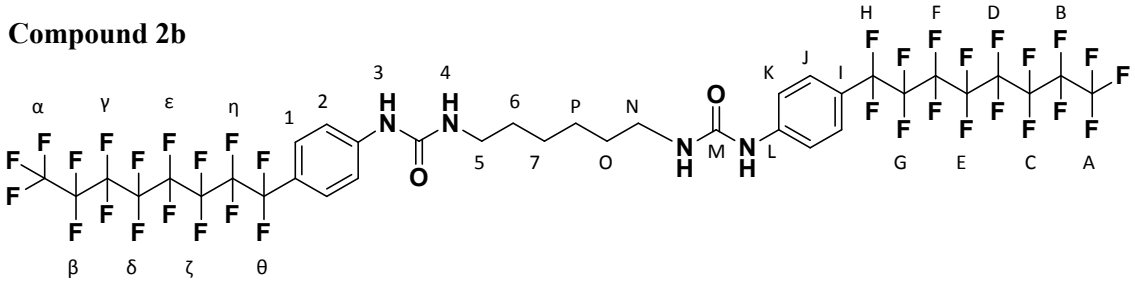


An excess of 4-(heptadecafluorooctyl) aniline (3.3 g, 6.46 mmol) was dissolved in anhydrous THF (300 ml) and purged under nitrogen for an hour. 1,4-diisocyanatobutane (0.41 g, 2.93 mmol) was added and

the reaction mixture allowed to reflux for 24 hours with constant agitation and under constant nitrogen flow. Compound **2a** is soluble in THF so the solvent was removed under reduced pressure to yield a solid white powder. The product was washed with 3 x 100 ml cold DCM, filtered under reduced pressure and isolated as a white powder (3.05 g, 2.63 mmol, 90 % yield). Compound **2a** was dried on a heating piston for 3 hours before weighing.

^{1}H NMR (DMSO-d_6, J/Hz, δ/ppm): 1.52 (H6, quintet, 4H, J=5.0); 3.16 (H5, quartet, 4H, J=5.0); 6.21 (H4, t, 2H, J=5.0); 7.47 (H1, d, 4H, J=9.0); 7.61 (H2, d, 4H, J=8.5); 8.68 (H3, s, 2H).^{13}C{^{1}H} NMR (DMSO-d_6, δ/ppm): 27.88 (O); 39.72 (N); 118.15 (A); 119.79 (K); 127.87 (J); 145.33 (L); 155.59 (M). NOTE: carbon signals B-I are suppressed by the highly electronegative fluorine atoms. ^{19}F NMR (DMSO-d_6, δ/ppm): -80.51 (Fα, m, 6H); -108.39 (Fθ, m, 4H); -120.81 (Fη, m, 4H); -120.46 (Fγ, Fδ, Fε,m, 12H); -122.28 (Fζ, m, 4H); -125.55 (Fβ, m, 4H). IR (ν/cm^{-1}): 3332 (NH stretch); 2943 (CH_2 stretch); 2869 (CH_2 stretch); 1653 (CO stretch). Anal. Calc'd for $C_{34}H_{20}N_4O_2F_{34}$: C, 35.13; H, 1.73; N, 4.82. Found: C, 35.03; H, 1.67; N, 4.92. Theoretical m/z: 1162.10 g mol^{-1}. Found m/z (ASAP-MS): 1162.11 g mol^{-1}.

Compound 2b



An excess of 4-(heptadecafluorooctyl) aniline (3.00 g, 5.87 mmol) was dissolved in anhydrous THF (300 ml) and purged under nitrogen for one hour. Hexamethylene diisocyanate (0.45 g, 2.68 mmol) was added and the reaction mixture left to reflux for 24 hours with constant agitation and under constant nitrogen flow. Compound **2b** is soluble in THF so the solvent was removed under reduced pressure to yield a solid white powder. The product was washed with 3 x 100 ml cold DCM, filtered under reduced pressure and isolated as a white powder (2.87 g, 2.41 mmol, 90 % yield). Compound **2b** was dried in a heating pistol for 3 hours.

^{1}H NMR (DMSO-d_6, J/Hz, δ/ppm): 1.15-1.54 (H6-7, m, 8H); 3.13 (H5, quartet, 4H, J=6.5); 6.17 (H4, t, 2H, J=5.0); 7.47 (H1, d, 4H, J=9.0); 7.61 (H2, d, 4H, J=8.5); 8.67 (H3, s, 2H). ^{13}C{^{1}H} NMR (DMSO-d_6, δ/ppm): 26.70 (P); 30.24 (O); 39.85 (N); 118.22 (K); 127.89 (J); 145.36 (L); 155.56 (M). NOTE: carbon signals A-I are suppressed by the highly electronegative fluorine atoms. ^{19}F NMR (DMSO-d_6, δ/ppm): -80.49 (Fα, m, 6H); -108.37 (Fθ, m, 4H); -120.80 (Fη, m, 4H); -121.44 (Fγ, Fδ, Fε, m, 12H); -122.26 (Fζ, m, 4H); -125.53 (Fβ, m, 4H). IR (ν/cm^{-1}): 3327 (NH stretch); 2935 (NH stretch); 2862 (CH_2 stretch); 1652 (CO stretch). Anal. Calc'd for $C_{36}H_{24}N_4O_2F_{34}$: C, 36.32; H, 2.03; N, 4.71. Found: C, 36.22; H, 1.92; N, 4.66. Theoretical m/z: 1190.14 g mol^{-1}. Found m/z (ASAP-MS): 1190.13 g mol^{-1}.

Analysis

Gel Screening Studies

Gel studies were conducted at gelator concentrations between 1.0 and 10.0 % weight for each gelator compound using 1 ml of solvent. The 1.0 % weight gels were made by addition of 10 mg of the gelator

compound to an S7 vial (18 mm diameter, 7 cm^3) containing 1 ml of solvent. The vials were sealed, sonicated for 30 seconds, heated to form a homogeneous sol, then left to cool for 24 h before observations were recorded. The solubility of each gelator compound upon heating was noted in addition to any precipitates or crystals that may have formed upon cooling (supplementary information).

X-ray Powder Diffraction

X-ray powder diffraction data were collected on a Bruker AXS D8 Advance diffractometer using Cu Kα radiation with a wavelength of 1.54 Å at *2θ* values between 2 - 60 °. The machine was run at a voltage of 40 kV and current of 40 mA. The xerogels were prepared in the following manner: 200 mg of each compound was dissolved by sonication then heating in a volume of solvent which corresponds to the DMSO MGC of that specific gelator. The solutions were left to cool and the gels formed over several days. The gels were filtered under pressure for 2 hours and left to air dry for 3-4 days before data collection.

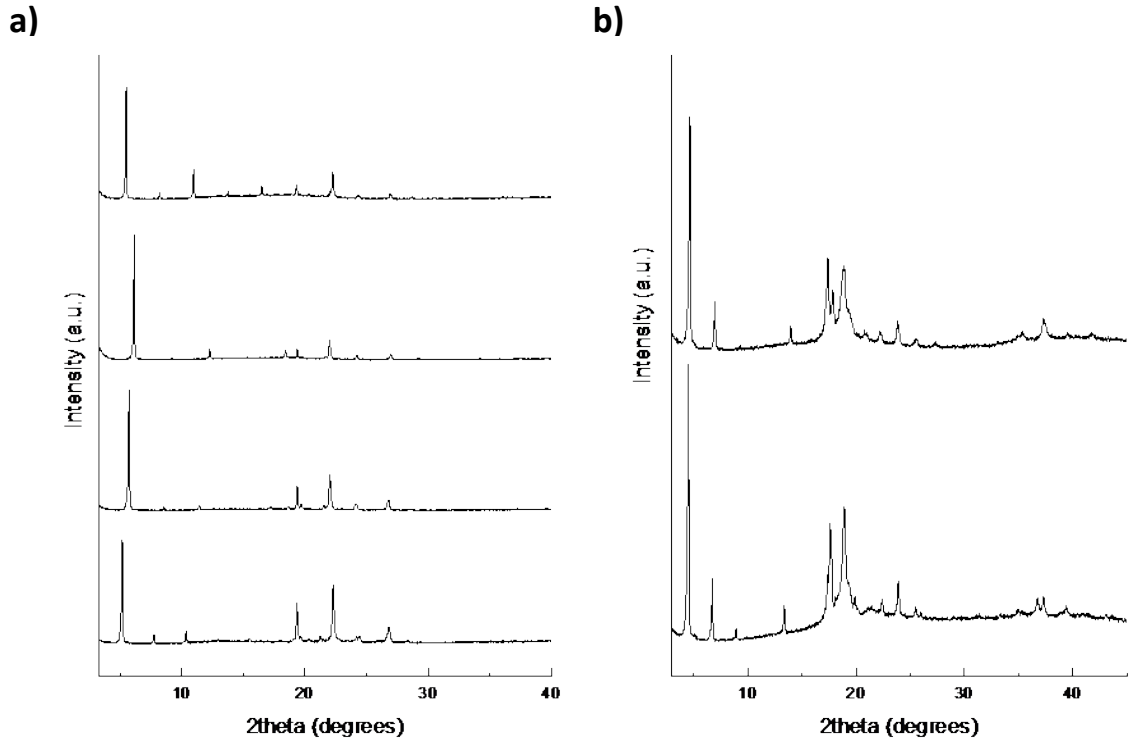


Figure S1: Comparison of bulk solid XRPD patterns: a) Hydrocarbon compounds. From top to bottom: compound 1a, 1c, 1b, 1d; b) Fluorocarbon compounds. From top to bottom: compound 2a, 2b.

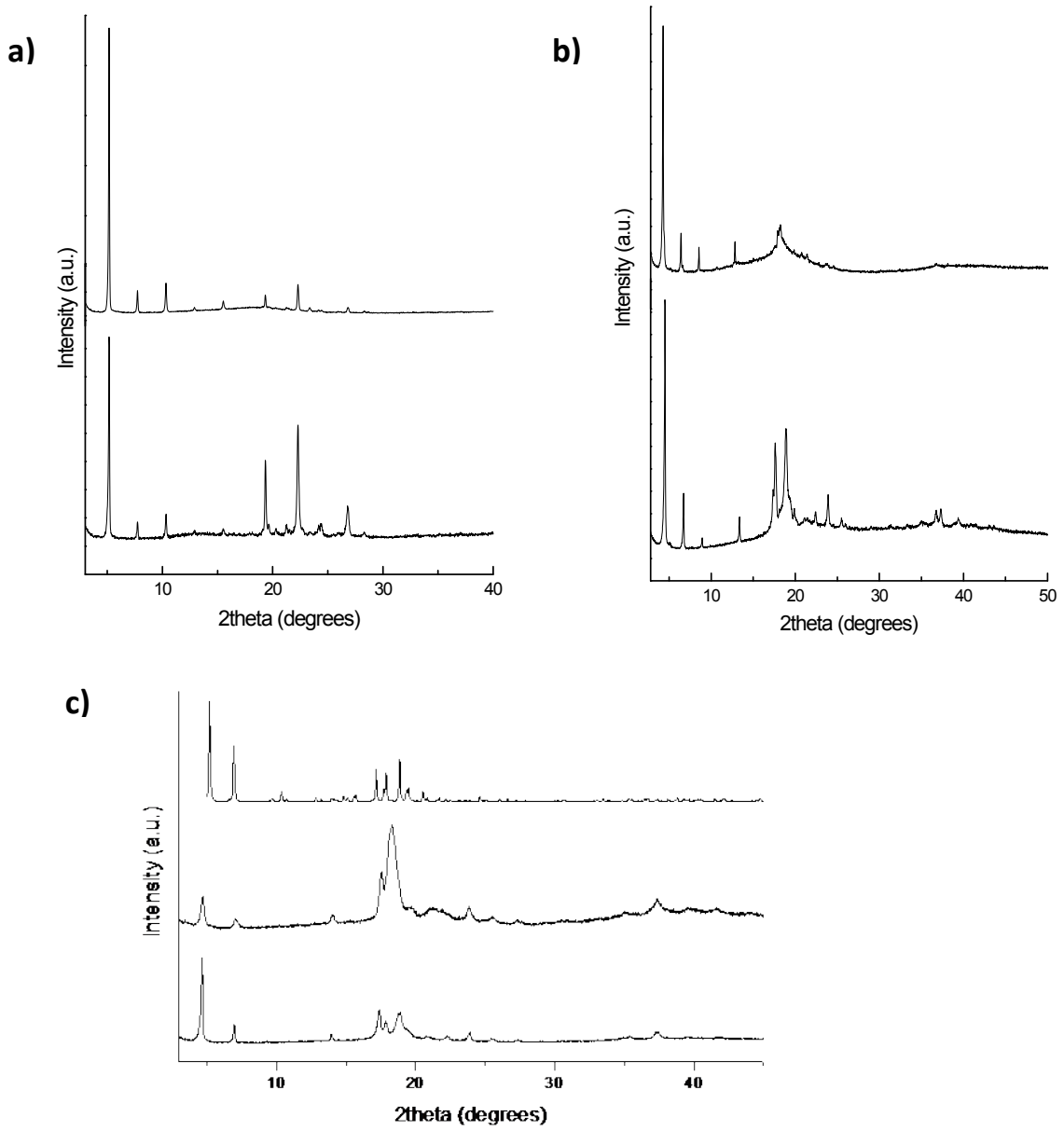


Figure S2: Comparison of DMSO xerogel and bulk solid XRPD patterns. a) compound 1d. Top: xerogel; bottom: bulk b) compound 2b. Top: xerogel; bottom: bulk; c) compound 2a. Top: simulated from crystal structure; middle: xerogel; bottom: bulk solid.

Rheology

Rheology experiments were performed using a TA Instrument AR Rheometer 2000 with parallel plate geometry with a gap of 2500 µm. Both upper and lower plates were rough to avoid gel slippage during data collection. All experiments were conducted at 20 °C. The 2 ml gel samples were loaded onto the lower plate in the following manner: the required mass of solid gelator was dissolved in 2 ml of DMSO by sonication then heating to form a sol. The sol was transferred to a vaseline-coated glass cylinder on the lower rough steel plate and the gel left to set for 25 minutes. Once the gel had set, the sample was compressed to a gap of 3000 µm, the glass cylinder removed and the gap narrowed to 2500 µm before data acquisition.

Two types of experiments were performed: stress-sweep and frequency sweep. The stress-sweep experiments were conducted at constant strain and at oscillatory stresses between 0.1 - 1000 Pa. The frequency experiments were conducted at a constant oscillatory stress of 1 Pa (as determined by initial stress-sweeps) and oscillatory frequencies between 0.1 and 100 Hz.

Compound	Concentration / % wt	*Plateau G'* / Pa (3sf)	Yield Stress / Pa
1d	3.0	1.32×10^3	7
2b	1.0	8.22×10^2	6
1b	7.0	2.00×10^4	81
1c	2.5	5.23×10^3	29
1a	3.0	7.5×10^3	32
2a	1.0	1.51×10^4	203

Table S1: Experimental yield stress and plateau *G'* values for DMSO gels of compounds of type 1d and 2.

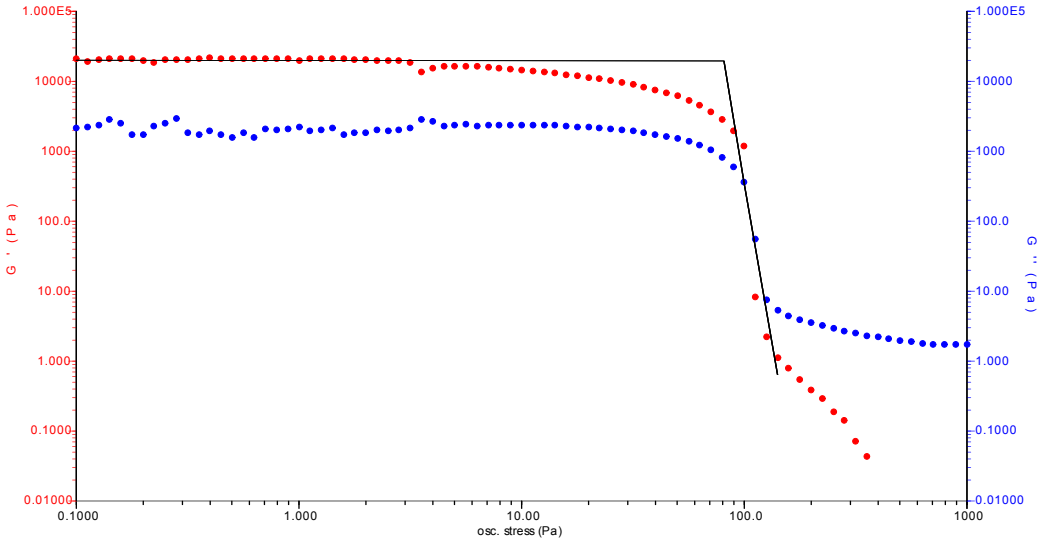


Figure S3: Stress sweep data for a 7.0 % weight gel of compound 1b in DMSO. Red circles: storage modulus (*G'*). Blue circles: Loss modulus (*G''*). Yield point: 81.0 Pa.

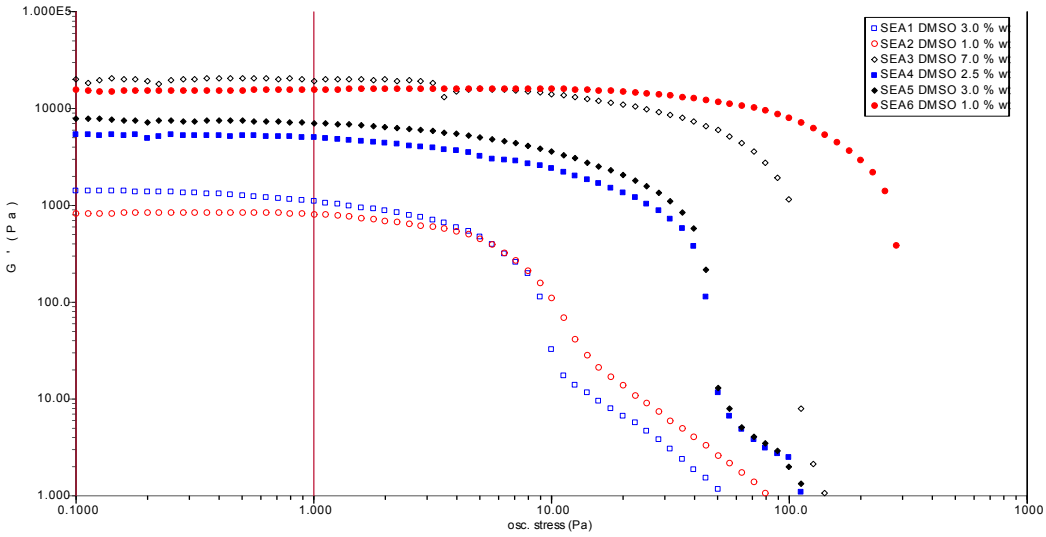


Figure S4: Stress-sweep plots for DMSO gels at different concentrations: Open squares: compound 1d (3.0 % wt); open circles: 2b (1.0 % wt); open diamonds: 1b (7.0 % wt); closed squares: 1c (2.5 % wt); closed diamonds: 1a (3.0 % wt); closed circles: 33 (1.0 % wt). Only *G'* is shown to simplify the plot. Vertical red line: oscillatory stress chosen for frequency-sweep experiments (1 Pa).

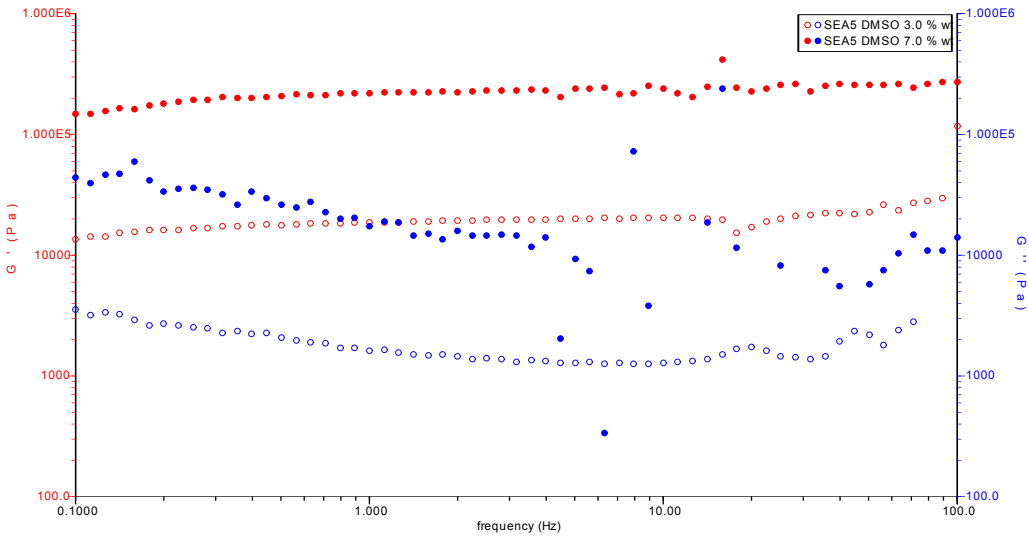


Figure S5: Frequency-swe
blue circles: *G''* of 3.0 % w

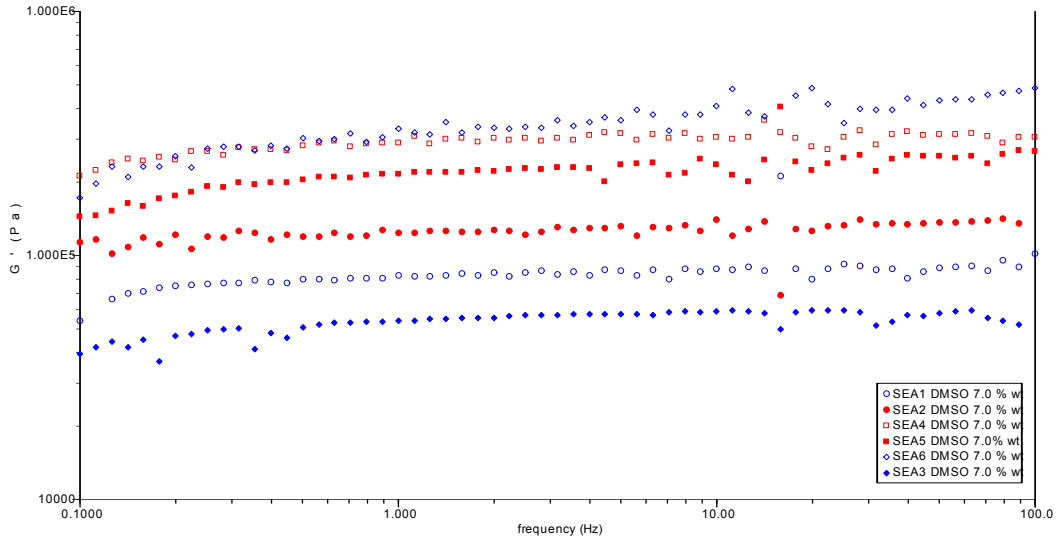


Figure S6: Frequency-sweep for the 7.0 % wt DMSO gels of compounds of types 1 and 2. Note only *G*' is shown to simplify the plot. Closed blue diamonds: compound 1b; open blue circles: 1d; closed red circles: 2b; closed red squares: 1a; open red squares: 1c; open blue diamonds: 2a.

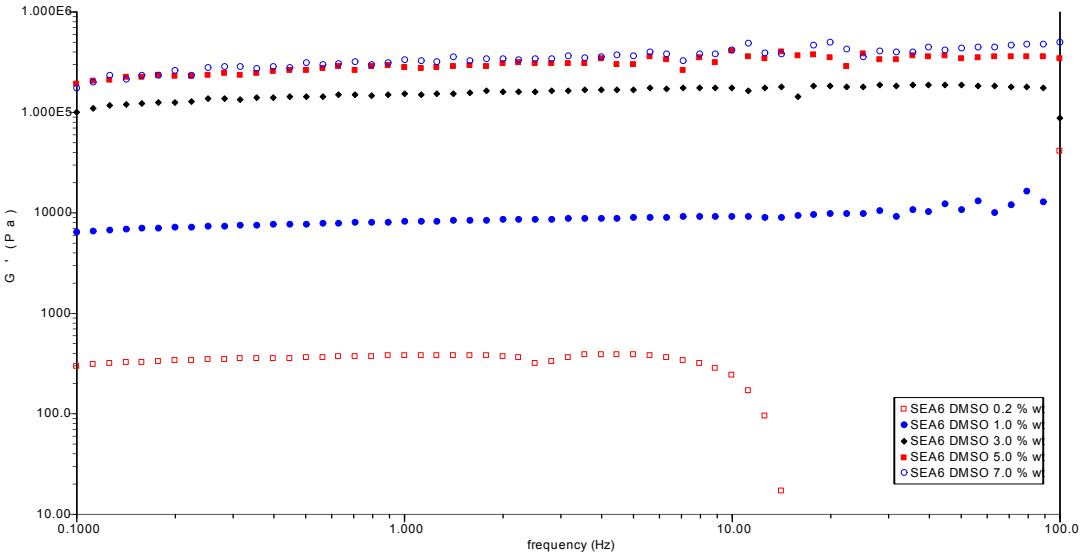


Figure S7: Frequency-sweep for DMSO gels of compound 2a. Note only *G*' is shown to simplify the plot. Open red squares: 0.2 % wt; closed blue circles: 1.0 % wt; closed black diamonds: 3.0 % wt; closed red squares: 5.0 % wt; open blue circles: 7.0 % wt.

Scanning Electron Microscopy

An FEI Helios nanolab mk2 scanning electron microscopy machine was used to image the DMSO and ethanol xerogels of compounds of types **1** and **2**. The xerogels were prepared in the following manner: gels of each compound in the respective solvents were prepared by dissolving the required mass of gelator in 1 ml of solvent by sonication then heating. The solutions were left to cool to room temperature then the gels were left to fully form over 24 hours. Small amounts of each sample were transferred to thin silica plates. The gels were left to dry in a fume hood for a week. The xerogel samples were then coated with 3-5 nm of chromium and the SEM images collected.

T_{gel} Experiments

Different concentrations of DMSO gels of the target compounds were prepared by sonicating then heating the corresponding mass of gelator in 2ml of solvent. The gels were left to fully form over a 3-4 hour period. Each experiment was conducted using the following procedure: a metal ball bearing was lightly placed on top of the gel; the gel was then placed in an oil bath at room temperature (25 °C) and heated to about 35 °C. The heating rate was kept as constant as possible and the temperature increased by 1 °C every 3 minutes. Temperature was monitored using a mercury thermometer with gradations of 2 °C, (error ± 2°C). The temperature at which the ball bearing touched the vial bottom was recorded as the T_{gel}.

Compound	Concentration / % wt	T_{gel} / °C
1d	3	73
	7	82
1b	7	66
	9	74
1c	2.5	74
	7	93
1a	3	64
	7	78
2b	0.5	40
	1	52
	3	59
	5	59
	7	61
2a	0.2	50
	0.5	67
	1	77
	3	80
	5	82
	7	82

Small Angle X-ray Scattering

Small angle X-ray scattering experiments were conducted using a Bruker Nanostar SAXS machine with cross-coupled Gobel mirrors and pin-hole collimation for point focus geometry, using a sealed tube X-ray source operated at 40 KV and 35 mA to produce Cu Kα radiation of wavelength 1.54 Å. The optics and sample chamber were under vacuum to minimise air scatter. The data were collected over 30 minutes in which 130,000 - 230,000 counts were collected. The sample distance from the detector was kept constant at 107 mm. 10.0 % weight DMSO gels of compounds **2b** and **2a** were prepared by dissolving 100 mg of each compound in 1 ml DMSO by sonication then heating. The hot solutions were pipetted onto tin foil, left to form the gel over 20 minutes and, then placed in the sample holder for data acquisition. The gels were dried over three days and xerogel data collected in the same manner.

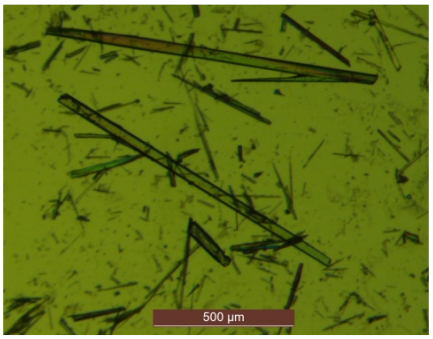
Wide Angle X-ray Scattering

Wide angle X-ray scattering experiments were conducted using a Bruker GADDS D8 WAXS machine with cross-coupled Gobel mirrors and pin-hole collimation for point focus geometry, using a sealed tube X-ray source operated at 30 kV and 10 mA to produce Cu Kα radiation of wavelength 1.54 Å. The data were collected over 30 minutes in which 160,000 - 250,000 counts were collected. The detector-sample distance was kept constant at 15.3 mm. 10 % weight DMSO gels of compounds **2b** and **2a** were prepared by dissolving 100 mg of each compound in 1 ml DMSO by sonication then heating. The hot solutions were pipette onto thick silica plates and left to cool for 20 minutes to form the gel. The xerogels were formed by drying the same gel samples for three days and the data collected in the same manner.

Synchrotron Crystal Structure Data

The single crystal structure of compound **2a** crystallised obtained from 2-butanone solvent were collected at 150 K on a Rigaku Saturn 724+ diffractometer at station I19 of the Diamond Light Source synchrotron (undulator, lambda = 0.6889 Å, omega-scan, 1.0°/frame) and processed using Bruker APEXII software. The structure was solved by direct method and refined by full-matrix least squares on F2 for all data using SHELX (G. M. Sheldrick, *Acta Crystallogr. Sect. A*, 2008, **64**, 112-122.) and OLEX2 (O. V. Dolomanov, L. J. Bourhis, R. J. Gildea, J. A. K. Howard and H. Puschmann, *J. Appl. Crystallogr.*, 2009, **42**, 339-341.) software. The crystal dimensions were 0.35 mm x 0.05 mm x 0.03 mm.

Crystal data: $C_{106}H_{68}N_{12}O_7F_{102}$; MW = 3559.58 g mol^{-1}; T = 120 K; λ = 0.68890Å; triclinic space group P-1; a = 13.287(3) Å; b = 14.229(3) Å; c = 18.870(4) Å; α = 70.476(2) °; β = 72.879(2) °; γ = 85.688(2) °; V = 3212.4(12) Å^3; Z = 3; $R1$ = 0.0543; wR_2 = 0.1567; S = 1.089. Anal. calc. for $C_{106}H_{68}N_{12}O_7F_{102}$: C, 35.77; H, 1.93; N, 4.72. Found: C, 35.85; H, 1.86; N, 4.83.



Thermogravimetric analysis

Compound **2a** crystals obtained from 2-butanone were analysed by thermogravimetric analysis using a Perkin Elmer Pyris 1 Thermogravimetric analyser with mass spectrometer analysis and helium carrier gas. The crystals were prepared by removal from the mother solution and dried on filter paper to remove excess solvent.

SANS Data and fits

SANS data for fluorinated and non-fluorinated bis-urea gelators were fitted to fractal and fractal flexible models. The SANS data fitting are divided into low q and high q region. The low q region is fitted to compare the correlation lengths at different at both non-fixed/held and fixed/held block radius of 5 and 10 Å. The high q data is overlapped in a given solvent to compare the differences at local dimensions. Fittings include full q length, low q length as well as global fittings of 2wt% and 5wt% data sets.

G4: BIS UREA IN DMF at 2 wt % concentration

Fit to SmearedFractal,
Data file: G4_25C_absb

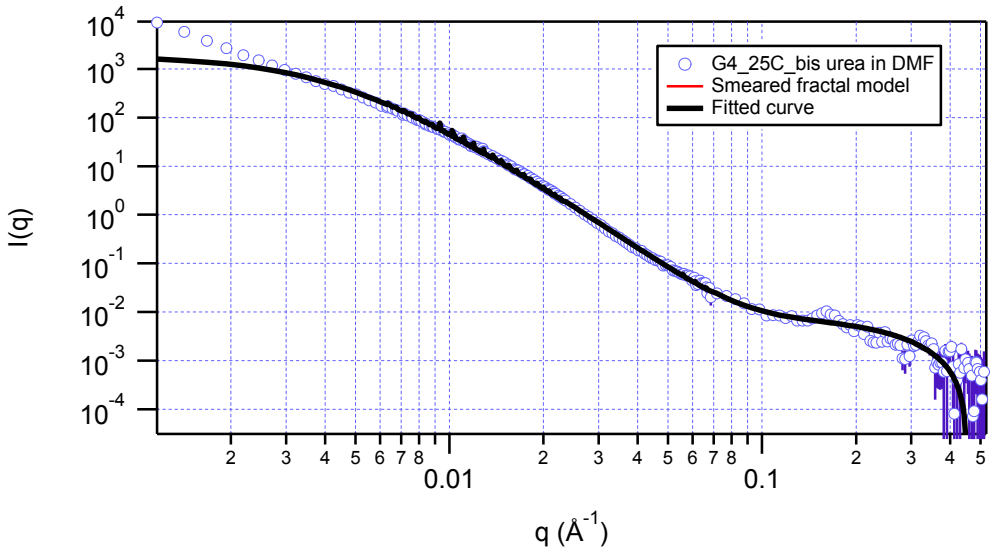


Figure 1. Bis-urea gelator in DMF at 2 wt% concentration at 25 degree C fitted to a Smeared fractal model (both low and high q data)

Volume Fraction (scale)	0.00345869	±	7.98538e-06
Block Radius (Å)	7.3183	±	0.0647025
fractal dimension	3.02342	±	0.000804501
correlation length (Å)	230.947	±	0.769826
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	6.33e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.000602962	±	7.73862e-05

chisq = 6674.65
Npnts = 255 Sqrt(χ^2/N) = 5.11616
Fitted range = [0,254] = 0.00116 < Q < 0.522

FitError = No Error FitQuitReason = No Error

NOTE: Bis-urea gealtor in DMF at 2wt% concentration and at 25 degree C is fitted to a fractal model. The block radius is representative of the thickness of the fibres and
Fit to SmearedFractal,
Data file: G4_25C_absb

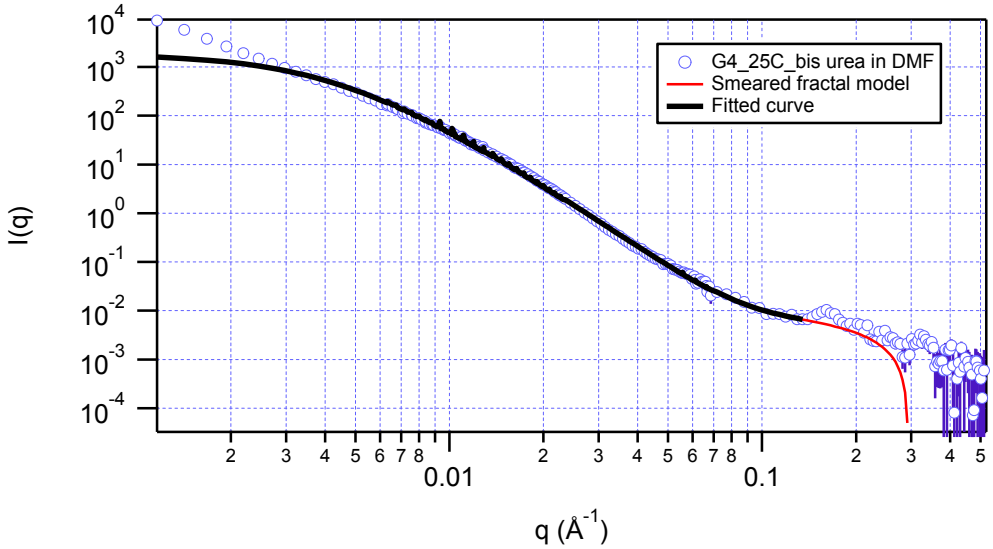


Figure 2. Bis-urea gelator in DMF at 2 wt% concentration at 25 degree C fitted to a Smeared fractal model (only low q data)

Volume Fraction (scale)	0.00347248	±	9.99031e-06
Block Radius (Å)	8.13037±	0.680586	
fractal dimension	3.02298±	0.000914016	
correlation length (Å)	231.209±	0.833263	
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	6.33e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.00345368	±	0.0022653

chisq = 6381.68
Npnts = 172 Sqrt(χ^2/N) = 6.09121
Fitted range = [0,171] = 0.00116 < Q < 0.1348
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: G4_cool_absb

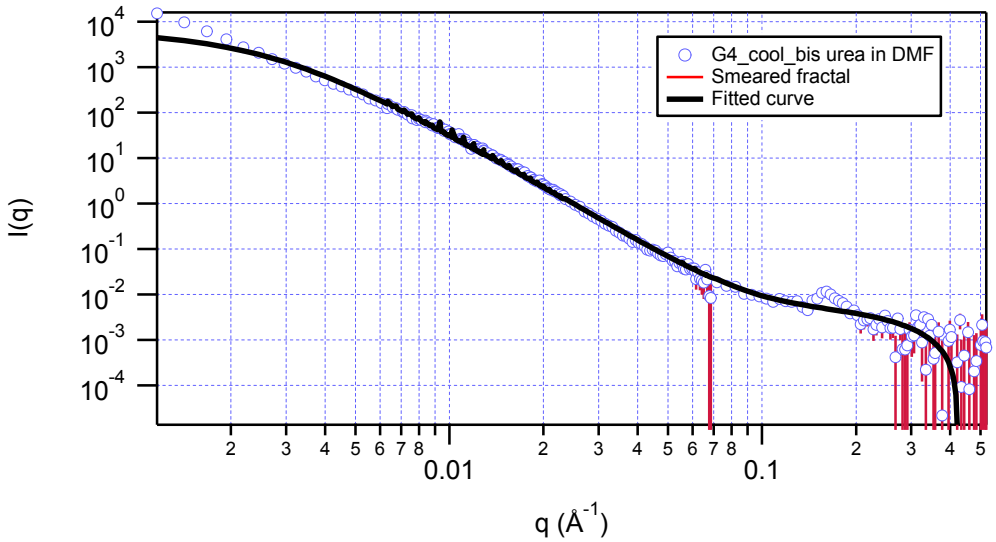


Figure 3. Bis-urea gelator in DMF at 2 wt% concentration at lower temperature /(checking gelation reversibility) fitted to a Smeared fractal model (both low and high q data)

Volume Fraction (scale)	0.00335296	±	1.54842e-05
Block Radius (Å)	6.75612±	0.115944	
fractal dimension	2.98904±	0.00112657	
correlation length (Å)	372.089±	2.52306	
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	6.33e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.00102317	±	0.000122786

chisq = 2955.52

Npnts = 255 Sqrt(χ ^2/N) = 3.40445
Fitted range = [0,254] = 0.00116 < Q < 0.522
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: G4_cool_absb

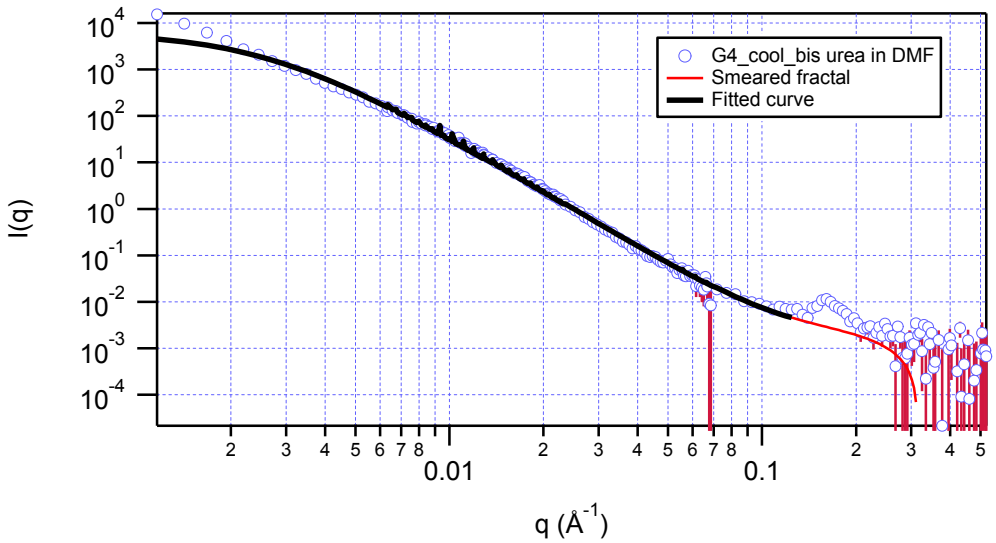


Figure 4. Bis-urea gelator in DMF at 2 wt% concentration at lower temperature /(checking gelation reversibility) fitted to a Smeared fractal model (low q data)

Volume Fraction (scale)	0.00338345	±	2.44264e-05
Block Radius (Å)	6.38885±	3.04495	
fractal dimension	2.98551±	0.00124268	
correlation length (Å)	376.773±	2.64612	
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	6.33e-06	±	0

bkgd (cm^{-1} sr^{-1})	-0.00242169	±	0.00670025

chisq = 2653.79
Npnts = 170 Sqrt(χ^2/N) = 3.95102
Fitted range = [0,169] = 0.00116 < Q < 0.1244
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: G4_25C_absb

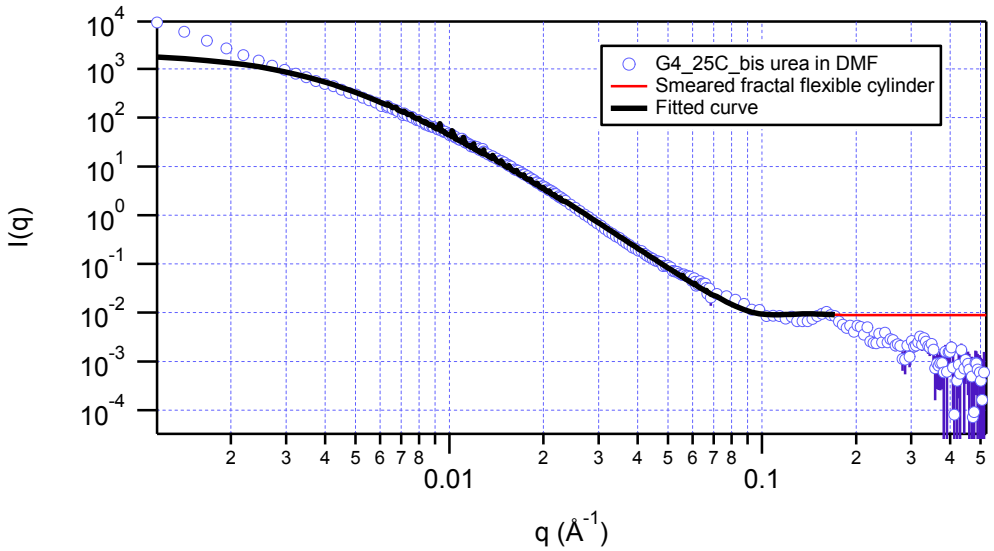


Figure 5 Bis-urea gelator in DMF at 2 wt% concentration at 25 C fitted to a Smeared fractal flexible cylinder model (low q data)

Volume Fraction (scale)	0.000223668	±	2.88287e-06
fractal dimension	2.96578±		0.00196161
correlation length (Å)	248.356±		1.23519

SLD block ($Å^{-2}$)	2.41e-06	±	0
SLD solvent ($Å^{-2}$)	6.33e-06	±	0
Contour Length (Å)	39.6765±	0.137862	
Kuhn Length, b (Å)	24.5881±	0.0990766	
Cylinder Radius (Å)	35.6998±	0.275828	
bkgd (cm^{-1} sr^{-1})	0.00886752	±	0.000163685

chisq = 5918.03
Npnts = 179 Sqrt(χ^2/N) = 5.74992
Fitted range = [0,178] = 0.00116 < Q < 0.1712
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: G4_25C_absb

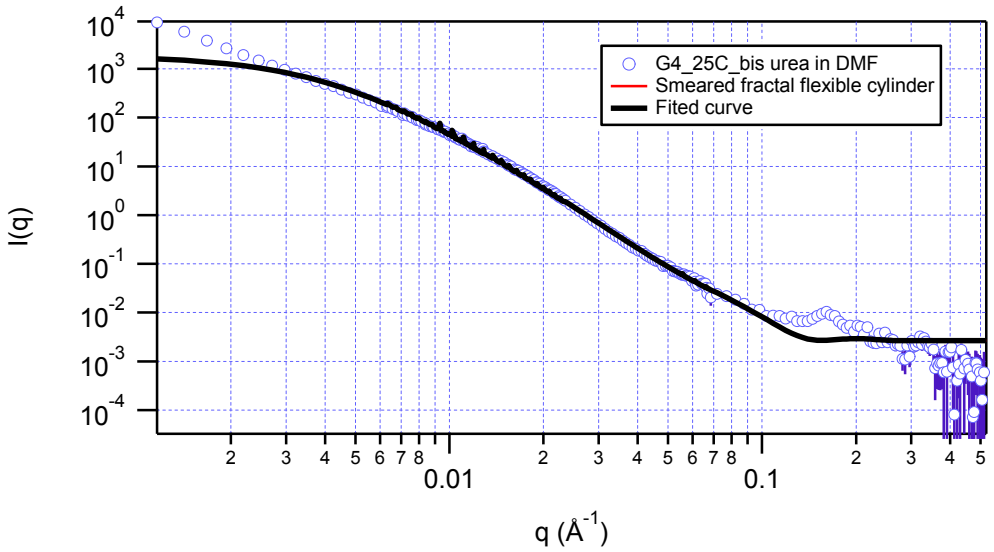


Figure 6 Bis-urea gelator in DMF at 2 wt% concentration at 25 degree C fitted to a Smeared fractal flexible cylinder model (low and high q data)

Volume Fraction (scale)	0.000324338	±	5.33606e-06
fractal dimension	3.00492±	0.00134368	
correlation length (Å)	233.544±	0.924591	
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	6.33e-06	±	0
Contour Length (Å)	37.6413±	0.0448999	
Kuhn Length, b (Å)	21.2433±	0.0374721	
Cylinder Radius (Å)	25.2056±	0.231106	
bkgd (cm^{-1} sr^{-1})	0.00263909	±	6.62204e-05

chisq = 7615.82
Npnts = 255 Sqrt(χ^2/N) = 5.46498
Fitted range = [0,254] = 0.00116 < Q < 0.522
FitError = No Error FitQuitReason = No decrease in chi-squared

Fit to SmearedFractalFlexCyl,
Data file: G4_cool_absb

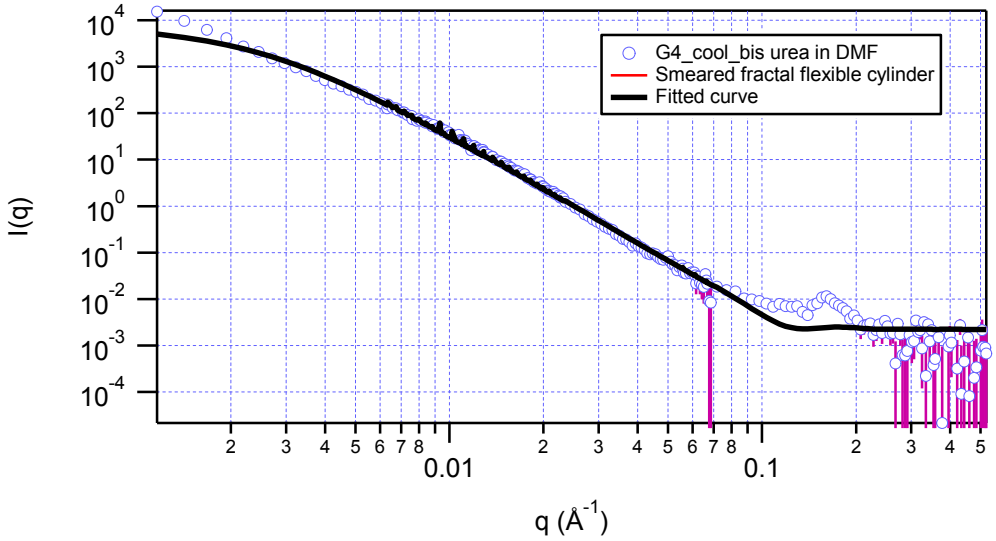


Figure 7 Bis-urea gelator in DMF at 2 wt% concentration at lower temperature /(checking gelation reversibility) fitted to a Smeared fractal flexible cylinder model (both low and high q data)

Volume Fraction (scale)	0.000216002	±	5.67851e-06
fractal dimension	2.95629±	0.00200001	
correlation length (Å)	405.043±	3.81385	
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	6.33e-06	±	0
Contour Length (Å)	30.5311±	0.0257219	
Kuhn Length, b (Å)	21.0536±	0.0188174	
Cylinder Radius (Å)	28.7189±	0.423931	
bkgd (cm^{-1} sr^{-1})	0.0022241	±	9.80641e-05

chisq = 3210.79
Npnts = 255 Sqrt(χ^2/N) = 3.54843
Fitted range = [0,254] = 0.00116 < Q < 0.522
FitError = No Error FitQuitReason = No decrease in chi-squared

Fit to SmearedFractalFlexCyl,
Data file: G4_cool_absb

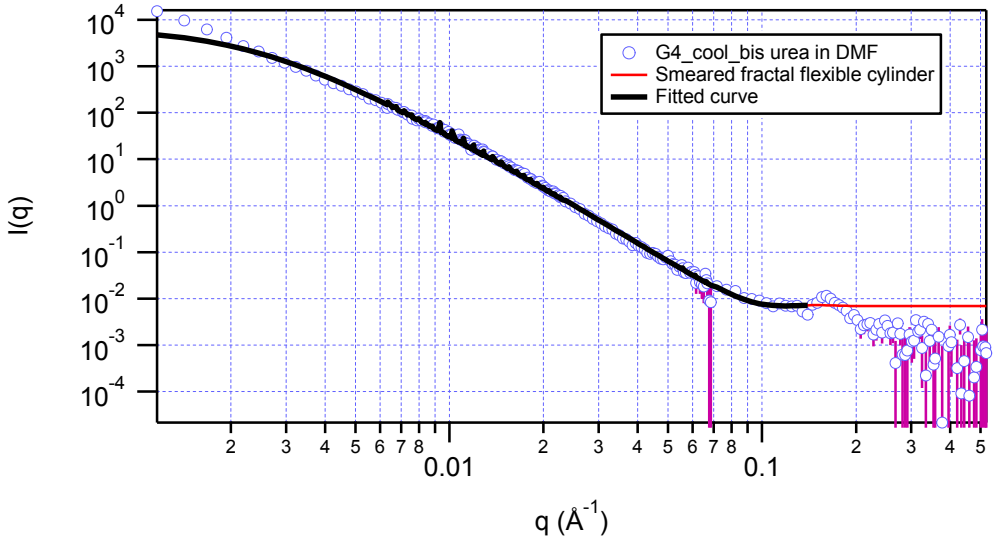


Figure 8 Bis-urea gelator in DMF at 2 wt% concentration at lower temperature /(checking gelation reversibility) fitted to a Smeared fractal flexible model (both low and high q data)

Volume Fraction (scale)	0.00015973	±	4.6737e-06
fractal dimension	2.94658±	0.00245268	
correlation length (Å)	401.826±	3.79531	
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	6.33e-06	±	0
Contour Length (Å)	30.5202±	0.0174386	
Kuhn Length, b (Å)	20.7846±	0.0112459	
Cylinder Radius (Å)	33.3175±	0.55965	
bkgd (cm^{-1} sr^{-1})	0.00690614	±	0.000327497

chisq = 2284.89
Npnts = 173 Sqrt(χ^2/N) = 3.6342

Fitted range = [0,172] = 0.00116 < Q < 0.14
FitError = No Error FitQuitReason = No Error

G1: BIS UREA IN DMSO
LOW Q DATA FITTINGS: FRACTAL MODELS

Fit to SmearedFractal,
Data file: G1_25C_absb

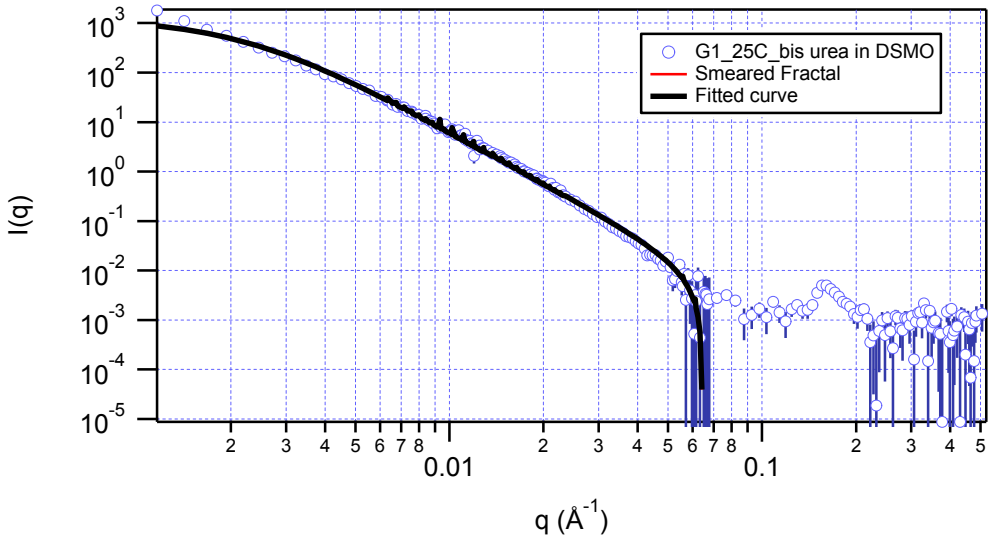


Figure 9. Bis-urea gelator in DMSO at 2 wt% concentration at 25 degree C fitted to a Smeared fractal model (only low q data). Block radius held at 5.

Volume Fraction (scale)	0.00154501	±	8.8003e-06
Block Radius (Å)	5	±	0
fractal dimension	2.8937	±	0.00211684
correlation length (Å)	424.943	±	3.85877

SLD block ($Å^{-2}$)	2.41e-06	±	0
SLD solvent ($Å^{-2}$)	5.278e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.0122004	±	0.00038391

chisq = 1579.27
Npnts = 160 Sqrt(χ^2/N) = 3.14173
Fitted range = [0,159] = 0.00116 < Q < 0.07169
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: G1_25C_absb

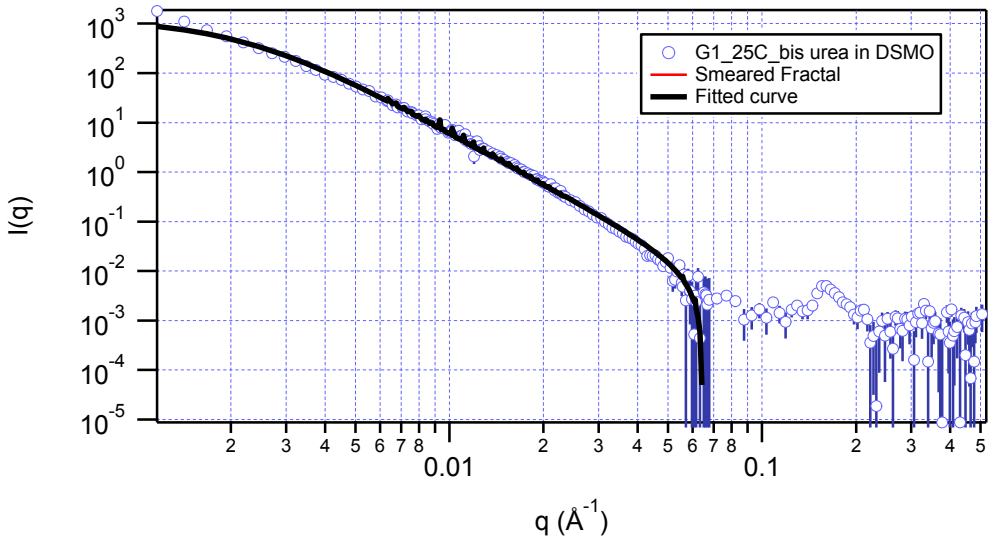


Figure 10. Bis-urea gelator in DMSO at 2 wt% concentration at 25 degree C fitted to a Smeared fractal model (only low q data). Block radius held at 10.

Volume Fraction (scale)	0.00144082	±	6.69827e-06
Block Radius (Å)	10	±	0
fractal dimension	2.89229	±	0.00212011
correlation length (Å)	425.884	±	3.87672

SLD block ($Å^{-2}$)	2.41e-06	±	0
SLD solvent ($Å^{-2}$)	5.278e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.0155331	±	0.000387706

chisq = 1573.37
Npnts = 160 Sqrt(χ^2/N) = 3.13585
Fitted range = [0,159] = 0.00116 < Q < 0.07169
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: G1_80C_absb

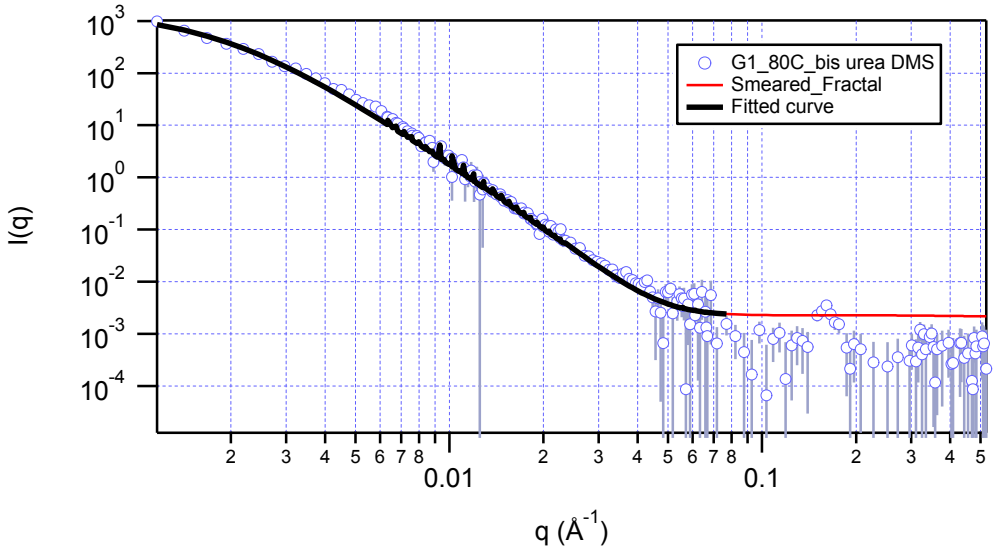


Figure 11. Bis-urea gelator in DMSO at 2 wt% concentration at 80 degree C (checking gelation reversibility) fitted to a Smeared fractal model (only low q data). Block radius held at 5.

Volume Fraction (scale)	0.000461345	±	4.08769e-06

Block Radius (Å)	5	±	0
fractal dimension	3.0275	±	0.00240579
correlation length (Å)	526.453	±	5.8449
SLD block ($Å^{-2}$)	2.41e-06	±	0
SLD solvent ($Å^{-2}$)	5.278e-06	±	0
bkgd (cm^{-1} sr^{-1})	0.00213251	±	0.000284563

chisq = 714.508
Npnts = 161 Sqrt(χ^2/N) = 2.10664
Fitted range = [0,160] = 0.00116 < Q < 0.07698
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: G1_80C_absb

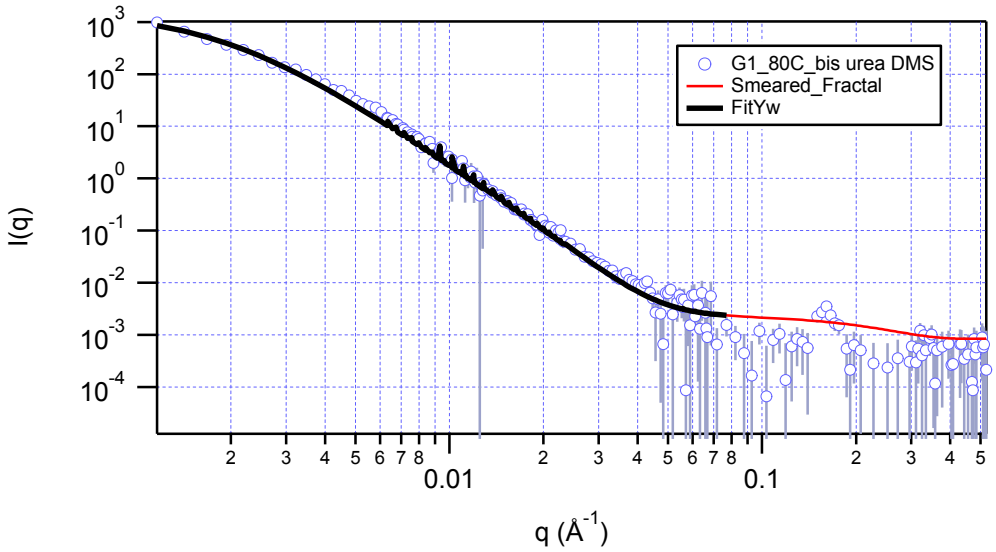


Figure 12. Bis-urea gelator in DMSO at 2 wt% concentration at 80 degree C (checking gelation reversibility) fitted to a Smeared fractal model (only low q data). Block radius held at 10.

Volume Fraction (scale)	0.00047092	±	3.70854e-06
Block Radius (Å)	10	±	0
fractal dimension	3.02713±		0.00241053
correlation length (Å)	526.556±		5.85086
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	5.278e-06	±	0
bkgd (cm^{-1} sr^{-1})	0.000846714	±	0.000285457

chisq = 713.716
Npnts = 161 Sqrt(χ^2/N) = 2.10547
Fitted range = [0,160] = 0.00116 < Q < 0.07698
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: G1_cool_absb

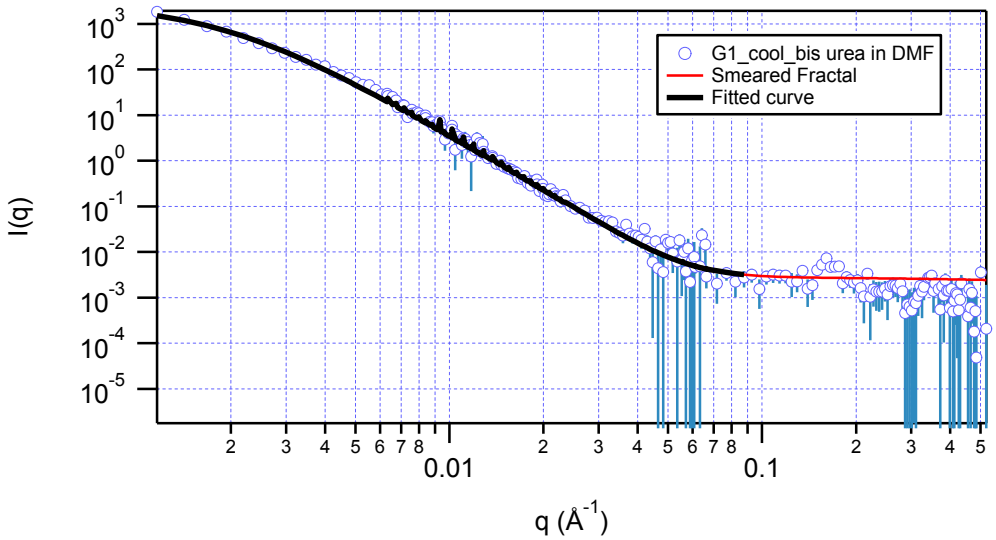


Figure 13. Bis-urea gelator in DMSO at 2 wt% concentration at lower temperature /(checking gelation reversibility) fitted to a Smeared fractal model (only low q data). Block radius held at 5.

Volume Fraction (scale)	0.000910757	±	1.06534e-05
Block Radius (Å)	5	±	0
fractal dimension	3.00764±		0.00324221
correlation length (Å)	526.745±		7.88729
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	5.278e-06	±	0
bkgd (cm^{-1} sr^{-1})	0.00235492	±	0.000481011

chisq = 342.211
Npnts = 163 Sqrt(χ ^2/N) = 1.44895
Fitted range = [0,162] = 0.00116 < Q < 0.08755
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: G1_cool_absb

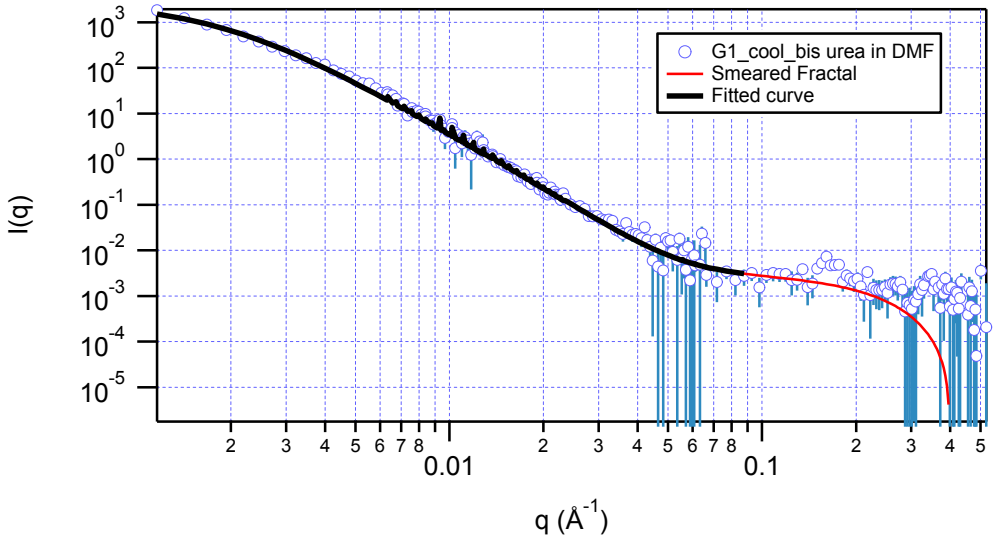


Figure 14. Bis-urea gelator in DMSO at 2 wt% concentration at lower temperature /(checking gelation reversibility) fitted to a Smeared fractal model (only low q data). Block radius held at 10.

Volume Fraction (scale)	0.000916951	±	9.4821e-06
Block Radius (Å)	10	±	0
fractal dimension	3.0073	±	0.00325126
correlation length (Å)	526.796	±	7.89513
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	5.278e-06	±	0
bkgd (cm^{-1} sr^{-1})	-3.24721e-05	±	0.00048418

chisq = 341.55
Npnts = 163 Sqrt(χ^2/N) = 1.44755
Fitted range = [0,162] = 0.00116 < Q < 0.08755
FitError = No Error FitQuitReason = No Error

FULL DATA SET: FRACTAL FLEXIBLE CYLINDER MODEL
Fit to SmearedFractalFlexCyl,
Data file: G1_cool_absb

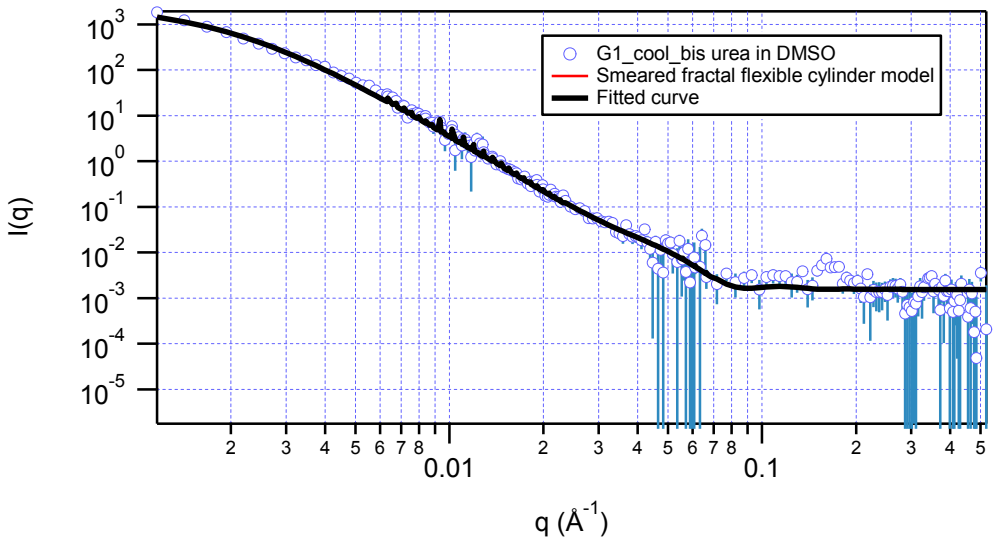


Figure 15 Bis-urea gelator in DMSO at 2 wt% concentration at lower temperature /(checking gelation reversibility) fitted to a Smeared fractal flexible cylinder model (both low and high q data)

Volume Fraction (scale)	0.000114888	±	6.95797e-06
fractal dimension	3.01034±	0.00466439	
correlation length (Å)	506.203±	9.28038	
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	5.278e-06	±	0
Contour Length (Å)	64.075 ±	1.42996	

Kuhn Length, b (Å)	47.5284±	1.14886	
Cylinder Radius (Å)	44.4198±	1.35268	
bkgd (cm^{-1} sr^{-1})	0.00155055	±	9.75898e-05

chisq = 511.695
Npnts = 255 Sqrt(χ^2/N) = 1.41656
Fitted range = [0,254] = 0.00116 < Q < 0.522
FitError = No Error FitQuitReason = No Error

NOTE: For this data set, Kuhn length is shorter than the contour length. For the flexible cylinder fractal model, the Kuhn length is the length over which the long, flexible cylinder can be considered "rigid". This is shorter than the total length of the cylinder, and depends on the system. Some are more rigid, some more floppy. The contour length is the total length of the flexible cylinder, if one stretched it out straight and measured it.

For flexible models, if the Kuhn length is similar to the contour length, then its rigid over its entire length and could equally well be described as a plain old cylinder. This is not true for this system

Fit to SmearedFractalFlexCyl
Data file: G1_cool_absb

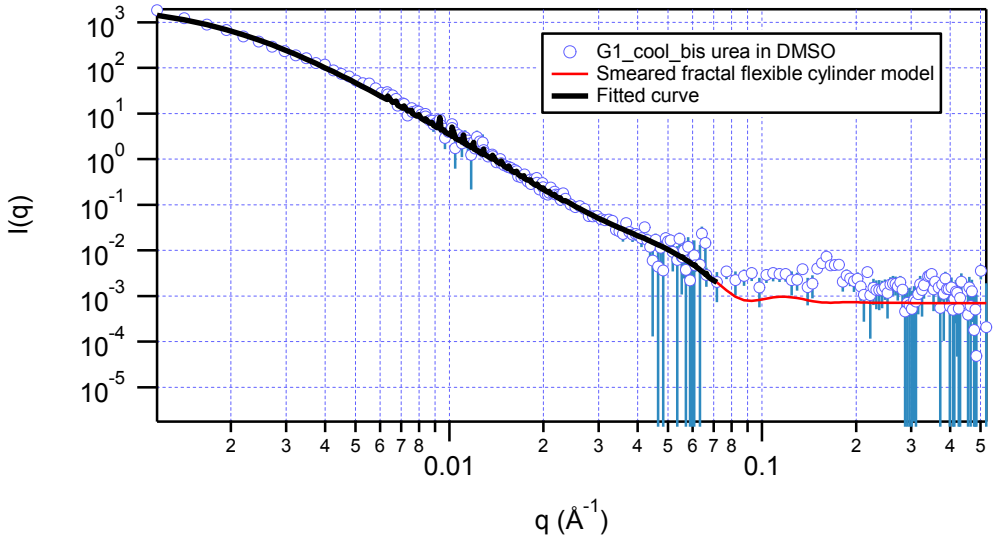


Figure 16 Bis-urea gelator in DMSO at 2 wt% concentration at lower temperature /(checking gelation reversibility) fitted to a Smeared fractal flexible cylinder model (low q data)

Volume Fraction (scale)	0.000128695	±	2.19132e-05
fractal dimension	3.01237±	0.00604269	

correlation length (Å)	504.722±	9.27308	
SLD block ($Å^{-2}$)	2.41e-06	±	0
SLD solvent ($Å^{-2}$)	5.278e-06	±	0
Contour Length (Å)	59.7336±	0.703732	
Kuhn Length, b (Å)	51.1636±	0.675807	
Cylinder Radius (Å)	43.4084±	3.90341	
bkgd (cm^{-1} sr^{-1})	0.000701717	±	0.00177458

chisq = 306.241
Npnts = 160 Sqrt(χ ^2/N) = 1.38348
Fitted range = [0,159] = 0.00116 < Q < 0.07169
FitError = No Error FitQuitReason = No decrease in chi-squared

Fit to SmearedFractalFlexCyl,
Data file: G1_80C_absb

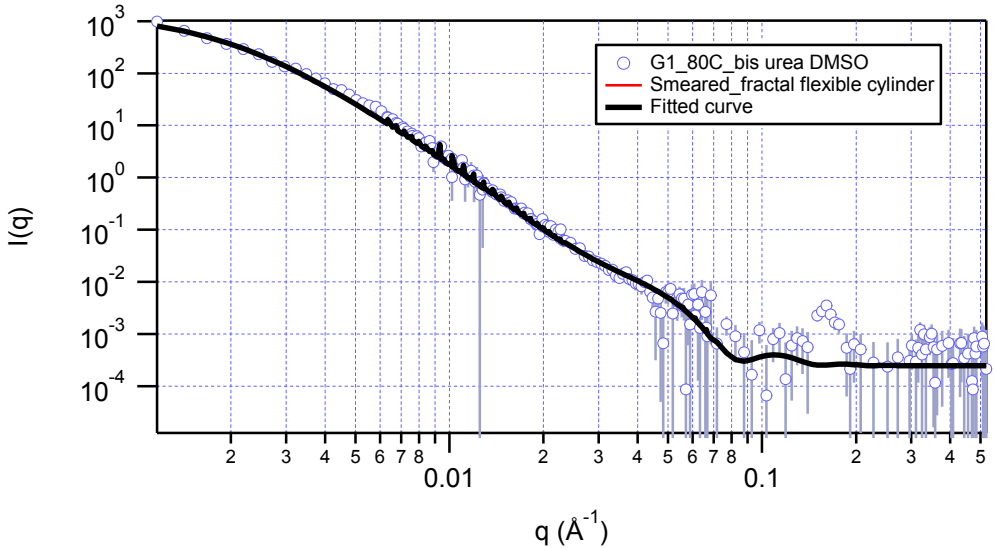


Figure 17 Bis-urea gelator in DMSO at 2 wt% concentration at 80 degree C (checking gelation reversibility) fitted to a Smeared fractal flexible cylinder model (both low and high q data)

Volume Fraction (scale)	6.54049e-05	±	3.35091e-06
fractal dimension	3.03262±	0.00329423	
correlation length (A)	506.418±	6.90624	
SLD block (A-2)	2.41e-06	±	0
SLD solvent (A-2)	5.278e-06	±	0
Contour Length (A)	63.1647±	0.266676	
Kuhn Length, b (A)	48.547 ±	0.159747	
Cylinder Radius (A)	43.0193±	1.18137	
bkgd (cm^-1 sr^-1)	0.000242761	±	5.32351e-05

chisq = 856.34
Npnts = 255 Sqrt(χ^2/N) = 1.83254
Fitted range = [0,254] = 0.00116 < Q < 0.522
FitError = No Error FitQuitReason = No decrease in chi-squared

NOTE: For this data set, Kuhn length is shorter than the contour length. For the flexible cylinder fractal model, the Kuhn length is the length over which the long, flexible cylinder can be considered “rigid”. This is shorter than the total length of the cylinder, and depends on the system. Some are more rigid, some more floppy. The contour length is the total length of the flexible cylinder, if one stretched it out straight and measured it.

For flexible models, if the Kuhn length is similar to the contour length, then its rigid over its entire length and could equally well be described as a plain old cylinder. This is not true for this system

Fit to SmearedFractalFlexCyl,
Data file: G1_80C_absb

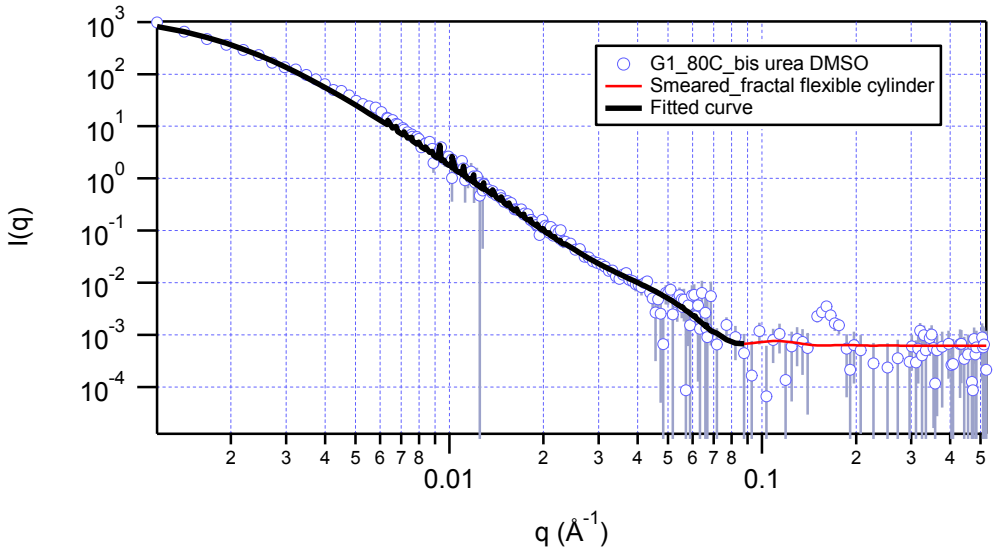


Figure 18 Bis-urea gelator in DMSO at 2 wt% concentration at 80 degree C /(checking gelation reversibility) fitted to a Smeared fractal flexible cylinder model (low q data)

Volume Fraction (scale)	6.00115e-05	±	4.85895e-06
fractal dimension	3.03286±	0.00363251	
correlation length (Å)	505.25 ±	6.73951	
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	5.278e-06	±	0
Contour Length (Å)	67.6354±	2.52133	
Kuhn Length, b (Å)	48.3672±	1.04382	
Cylinder Radius (Å)	45.6986±	1.87691	
bkgd (cm^{-1} sr^{-1})	0.000623124	±	0.000336511

chisq = 638.023
Npnts = 163 Sqrt(χ^2/N) = 1.97845
Fitted range = [0,162] = 0.00116 < Q < 0.08755
FitError = No Error FitQuitReason = No Error

NOTE: For this data set, Kuhn length is shorter than the contour length. For the flexible cylinder fractal model, the Kuhn length is the length over which the long, flexible cylinder can be considered “rigid”. This is shorter than the total length of the cylinder, and depends on the system. Some are more rigid, some more floppy. The contour length is the total length of the flexible cylinder, if one stretched it out straight and measured it.

For flexible models, if the Kuhn length is similar to the contour length, then its rigid over its entire length and could equally well be described as a plain old cylinder. This is not true for this system

Fit to SmearedFractalFlexCyl,
Data file: G1_25C_absb

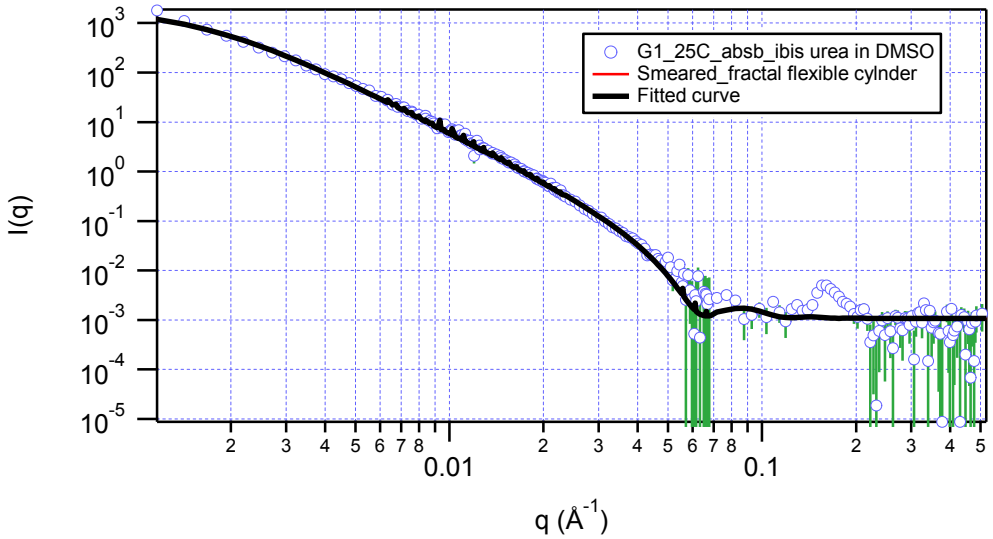


Figure 19 Bis-urea gelator in DMSO at 2 wt% concentration at 25 degree C fitted to a Smeared fractal flexible cylinder model (both low and high q data)

Volume Fraction (scale)	0.000124777	±	1.40452e-06
fractal dimension	2.76453±	0.00421029	
correlation length (Å)	575.059±	9.1415	
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	5.278e-06	±	0
Contour Length (Å)	56.1255±	0.157436	
Kuhn Length, b (Å)	52.3816±	0.213735	
Cylinder Radius (Å)	58.7316±	0.436039	
bkgd (cm^{-1} sr^{-1})	0.00106986	±	5.33172e-05

chisq = 1224.1
Npnts = 255 Sqrt(χ^2/N) = 2.19098
Fitted range = [0,254] = 0.00116 < Q < 0.522
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: G1_25C_absb

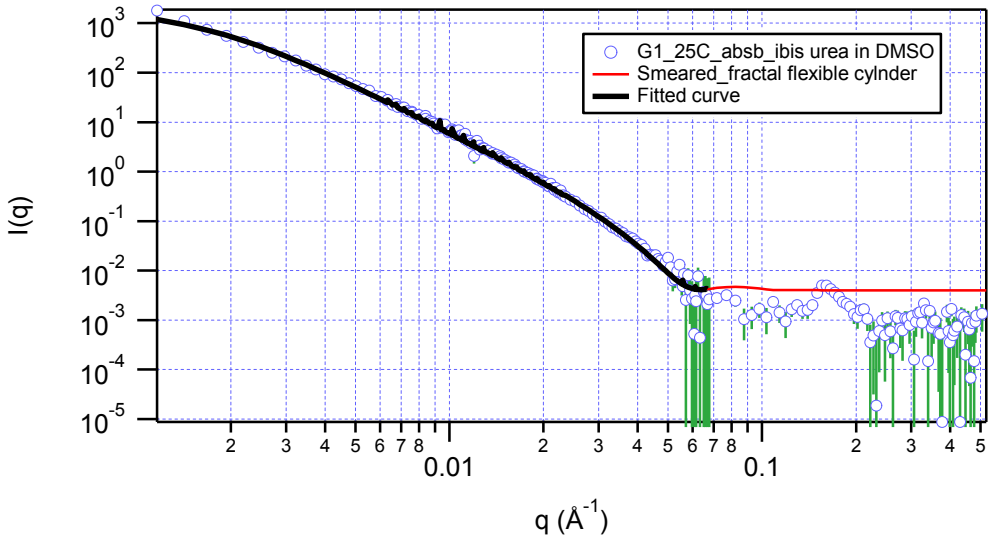


Figure 20 Bis-urea gelator in DMSO at 2 wt% concentration at lower temperature /(checking gelation reversibility) fitted to a Smeared fractal flexible cylinder model (both low and high q data)

Volume Fraction (scale)	0.0001172	±	1.56704e-06
fractal dimension	2.75486±	0.00486896	
correlation length (Å)	580.313±	11.9564	
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	5.278e-06	±	0
Contour Length (Å)	58.3193±	0.450883	
Kuhn Length, b (Å)	52.07	±	0.278125

Cylinder Radius (Å)	61.3212±	0.563845	
bkgd (cm^{-1} sr^{-1})	0.0039734	±	0.000402304

chisq = 802.404
Npnts = 157 Sqrt(χ^2/N) = 2.26072
Fitted range = [0,156] = 0.00116 < Q < 0.06684
FitError = No Error FitQuitReason = No decrease in chi-squared

FULL DATA SET FITTINGS:

Fit to SmearedFractal,
Data file: G1_25C_absb

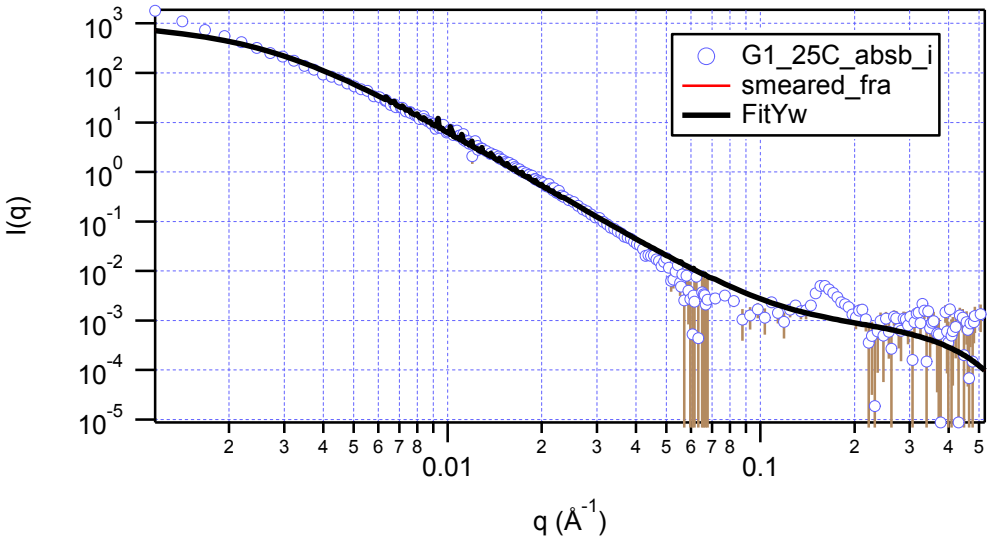


Figure 21 Bis-urea gelator in DMSO at 2 wt% concentration at 25 degree C fitted to a Smeared fractal model (both low and high q data)

Volume Fraction (scale)	0.00145479	±	0.949301
Block Radius (A)	6	±	0
fractal dimension	2.94105±		0.00159395

correlation length (A)	365.193±	2.69549	
SLD block (A-2)	2.52062e-06	±	0.000899645
SLD solvent (A-2)	5.278e-06	±	0
bkgd (cm^-1 sr^-1)	0	±	0

chisq = 2995.04
Npnts = 255 Sqrt(χ^2/N) = 3.42713
Fitted range = [0,254] = 0.00116 < Q < 0.522
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: G1_80C_absb

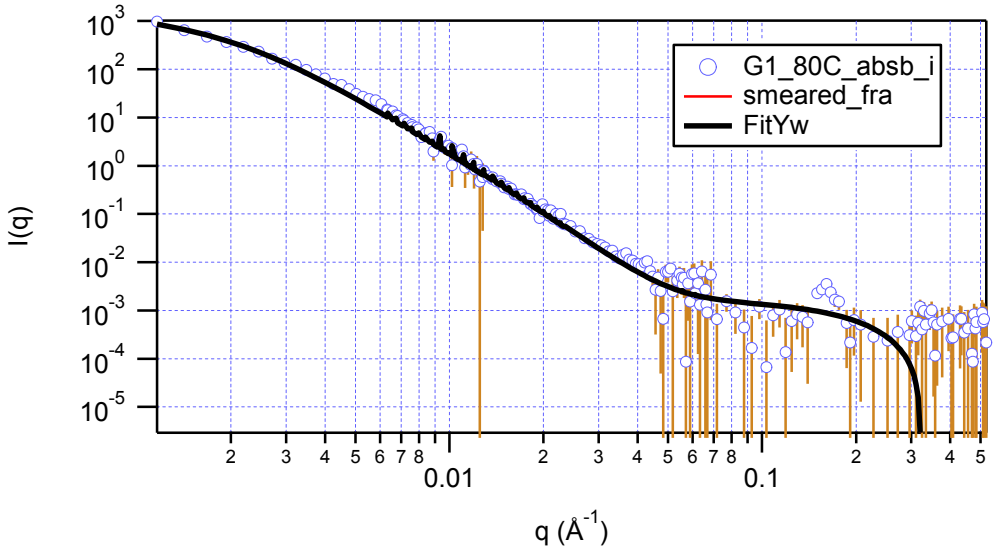


Figure 22 Bis-urea gelator in DMSO at 2 wt% concentration at 25 degree C fitted to a Smeared fractal model (both low and high q data)

Volume Fraction (scale)	0.000473488	±	3.55174e-06
Block Radius (Å)	10.3561	±	0.39297
fractal dimension	3.02439	±	0.0022475
correlation length (Å)	530.544	±	5.78219
SLD block ($Å^{-2}$)	2.41e-06	±	0
SLD solvent ($Å^{-2}$)	5.278e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.000117499	±	5.68083e-05

chisq = 909.186
Npnts = 255 Sqrt(χ^2/N) = 1.88824
Fitted range = [0,254] = 0.00116 < Q < 0.522
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: G1_cool_absb

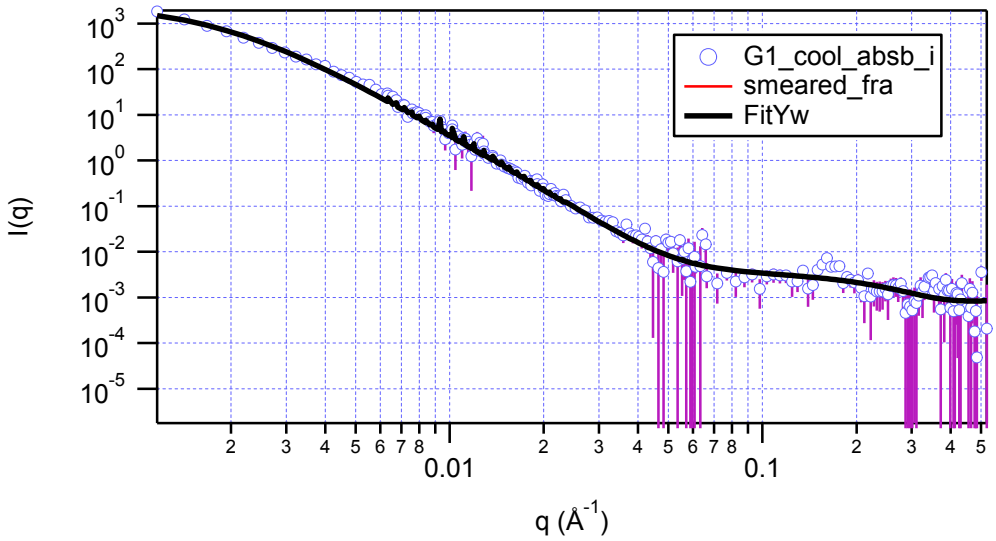


Figure 23. Bis-urea gelator in DMSO at 2 wt% concentration at lower temperature /(checking gelation reversibility) fitted to a Smeared fractal model (both low and high q data)

Volume Fraction (scale)	0.000913742	±	9.22167e-06
Block Radius (Å)	9.68956	±	0.426641
fractal dimension	3.00927	±	0.00306599
correlation length (Å)	523.894	±	7.62412
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	5.278e-06	±	0
bkgd (cm^{-1} sr^{-1})	0.00083537	±	0.000105655

chisq = 469.845
Npnts = 255 Sqrt(χ^2/N) = 1.3574
Fitted range = [0,254] = 0.00116 < Q < 0.522
FitError = No Error FitQuitReason = No Error

Global Fits

Global Fit Completed

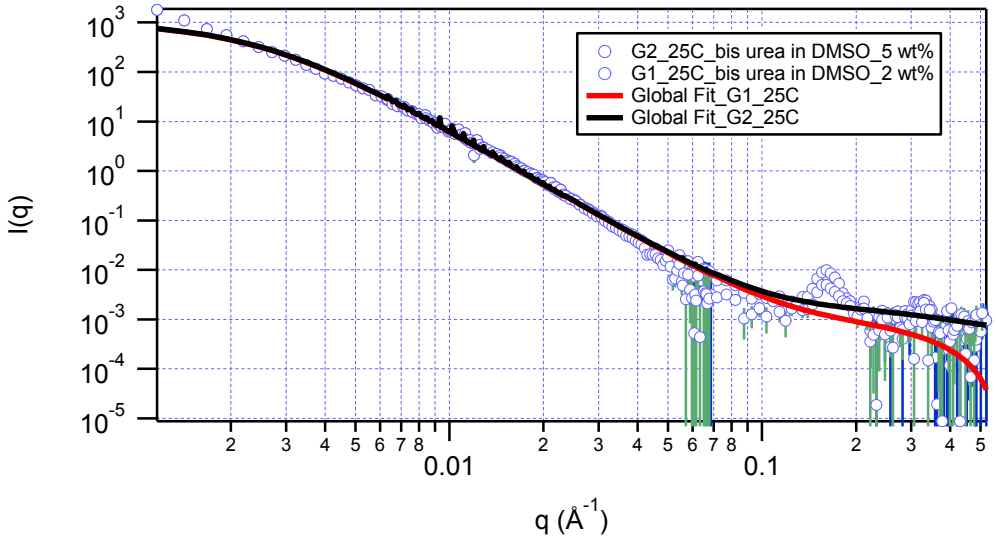


Figure 24. Global fitting; Bis-urea gelator in DMSO at 2 and 5 wt% concentrations at 25 degree C fitted to a Smeared fractal model (both low and high q data)

Global fit results

Fit converged normally

V_chisq = 5868.51 V_npnts= 510 V_numNaNs= 0 V_numINFs= 0

Number of iterations: 4

Data Set: G1_25C_absb_i ; Function: SmearedFractal

Coef_0 0.000735913 +- 3.87646e-06

Coef_1 6.07612 +- 0.256229

Coef_2 2.92905 +- 0.00118944

Coef_3 379.469 +- 2.08029

Coef_4 2.41e-06 +- 0 *HELD

Coef_5 6.33e-06 +- 0 *HELD

Coef_6 -5.85108e-05 +- 6.52705e-05

Data Set: G2_25C_absb_i ; Function: SmearedFractal

Coef_0 0.000747876 +- 3.92416e-06

Coef_1 6.07612 +- 0.256229 *LINKED to G1_25C_absb_i; Coef_1

Coef_2 2.92905 +- 0.00118944 *LINKED to G1_25C_absb_i; Coef_2

Coef_3 379.469 +- 2.08029 *LINKED to G1_25C_absb_i; Coef_3

Coef_4 2.41e-06 +- 0 *HELD*LINKED to G1_25C_absb_i; Coef_4

Coef_5 6.33e-06 +- 0 *HELD*LINKED to G1_25C_absb_i; Coef_5

Coef_6 0.000670785 +- 6.66042e-05

Global Fit Completed

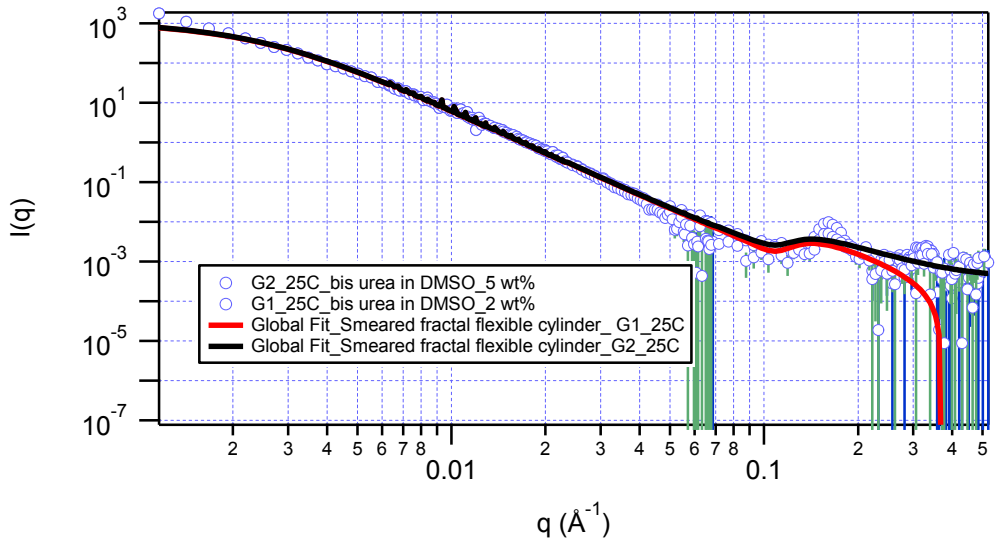


Figure 25. Global fitting; Bis-urea gelator in DMSO at 2 and 5 wt% concentrations at 25 degree C fitted to a Smeared fractal flexible model (both low and high q data)

Global fit results

Fit converged normally

V_chisq = 5165.18 V_npnts= 510 V_numNaNs= 0 V_numINFs= 0

Number of iterations: 9

Data Set: G1_25C_absb_i ; Function: SmearedFractalFlexCyl

Coef_0 0.00102252 +- 0.000307869

Coef_1 2.92224 +- 0.00117542

Coef_2 388.474 +- 2.19833

Coef_3 2.41e-06 +- 0 *HELD

Coef_4 5.278e-06 +- 0 *HELD

Coef_5 2.15834 +- 0.0360284

Coef_6 28.7583 +- 0.419132

Coef_7 5.43593 +- 0.829629

Coef_8 -0.000272269 +- 0.000120752

Data Set: G2_25C_absb_i ; Function: SmearedFractalFlexCyl

Coef_0 0.00103979 +- 0.000313066

Coef_1 2.92224 +- 0.00117542 *LINKED to G1_25C_absb_i; Coef_1

Coef_2 388.474 +- 2.19833 *LINKED to G1_25C_absb_i; Coef_2

Coef_3 2.41e-06 +- 0 *HELD*LINKED to G1_25C_absb_i; Coef_3

Coef_4 5.278e-06 +- 0 *HELD*LINKED to G1_25C_absb_i; Coef_4

Coef_5 2.15834 +- 0.0360284 *LINKED to G1_25C_absb_i; Coef_5

Coef_6 28.7583 +- 0.419132 *LINKED to G1_25C_absb_i; Coef_6

Coef_7 5.43593 +- 0.829629 *LINKED to G1_25C_absb_i; Coef_7

Coef_8 0.000458424 +- 0.000122783

Global Fit Completed

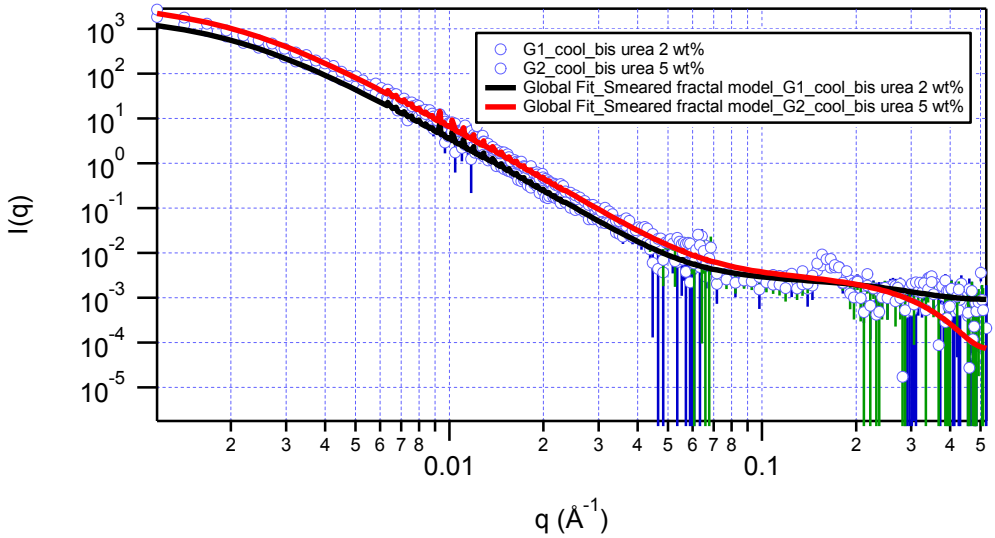


Figure 26. Global fitting; Bis-urea gelator in DMSO at 2 and 5 wt% concentrations at lower temperature (checking reversibility) fitted to a Smeared fractal model (both low and high q data)

Global fit results

Fit converged normally

V_chisq = 1509.61 V_npnts= 510 V_numNaNs= 0 V_numINFs= 0

Number of iterations: 2

Data Set: G1_cool_absb_i ; Function: SmearedFractal

Coef_0 0.000466584 +- 3.71544e-06

Coef_1 8.52665 +- 0.216065

Coef_2 2.99628 +- 0.00176065

Coef_3 490.846 +- 4.16486

Coef_4 2.41e-06 +- 0 *HELD

Coef_5 6.33e-06 +- 0 *HELD

Coef_6 0.000920885 +- 9.84458e-05

Data Set: G2_cool_absb_i ; Function: SmearedFractal

Coef_0 0.000862711 +- 5.40222e-06

Coef_1 8.52665 +- 0.216065 *LINKED to G1_cool_absb_i; Coef_1

Coef_2 2.99628 +- 0.00176065 *LINKED to G1_cool_absb_i; Coef_2

Coef_3 490.846 +- 4.16486 *LINKED to G1_cool_absb_i; Coef_3

Coef_4 2.41e-06 +- 0 *HELD*LINKED to G1_cool_absb_i; Coef_4

Coef_5 6.33e-06 +- 0 *HELD*LINKED to G1_cool_absb_i; Coef_5

Coef_6 7.11707e-05 +- 8.53838e-05

Global Fit Completed

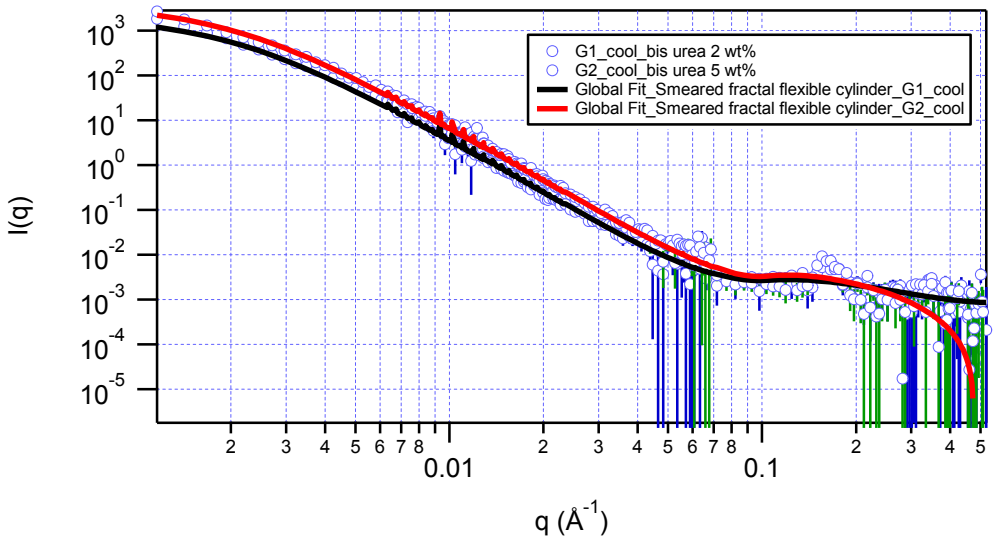


Figure 27 Global fitting; Bis-urea gelator in DMSO at 2 and 5 wt% concentrations at lower temperature (checking reversibility) fitted to a Smeared fractal flexible cylinder model (both low and high q data)

Global fit results

Fit converged normally

V_chisq = 1446.74 V_npnts= 510 V_numNaNs= 0 V_numINFs= 0

Number of iterations: 16

Data Set: G1_cool_absb_i ; Function: SmearedFractalFlexCyl

Coef_0 0.000659112 +- 0.000182266
Coef_1 2.99318 +- 0.00190673
Coef_2 495.723 +- 4.37439
Coef_3 2.41e-06 +- 0 *HELD
Coef_4 6.33e-06 +- 0 *HELD
Coef_5 9.87194 +- 1.65571
Coef_6 33.729 +- 1.54086
Coef_7 6.31325 +- 0.846381
Coef_8 0.000837785 +- 0.000151015

Data Set: G2_cool_absb_i ; Function: SmearedFractalFlexCyl

Coef_0 0.00121856 +- 0.000336839
Coef_1 2.99318 +- 0.00190673 *LINKED to G1_cool_absb_i; Coef_1
Coef_2 495.723 +- 4.37439 *LINKED to G1_cool_absb_i; Coef_2
Coef_3 2.41e-06 +- 0 *HELD*LINKED to G1_cool_absb_i; Coef_3
Coef_4 6.33e-06 +- 0 *HELD*LINKED to G1_cool_absb_i; Coef_4
Coef_5 9.87194 +- 1.65571 *LINKED to G1_cool_absb_i; Coef_5
Coef_6 33.729 +- 1.54086 *LINKED to G1_cool_absb_i; Coef_6
Coef_7 6.31325 +- 0.846381 *LINKED to G1_cool_absb_i; Coef_7
Coef_8 -8.19094e-05 +- 0.000227892

Global Fit Completed:

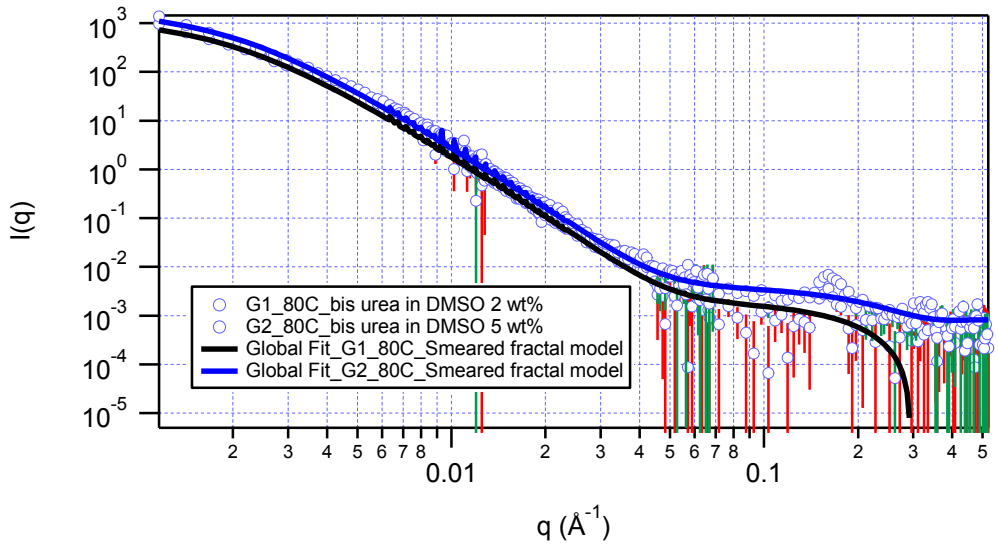


Figure 28 Global fitting; Bis-urea gelator in DMSO at 2 and 5 wt% concentrations at 80 degree C (checking reversibility) fitted to a Smeared fractal model (both low and high q data)

Global fit results

Fit converged normally

V_chisq = 2449.71 V_npnts= 510 V_numNaNs= 0 V_numINFs= 0

Number of iterations: 6

Data Set: G1_80C_absb_i ; Function: SmearedFractal

Coef_0 0.000453464 +- 2.79455e-06

Coef_1 11.1802 +- 0.203776

Coef_2 3.02482 +- 0.00145601

Coef_3 498.888 +- 3.55165

Coef_4 2.41e-06 +- 0 *HELD

Coef_5 5.278e-06 +- 0 *HELD

Coef_6 -0.000155971 +- 5.32966e-05

Data Set: G2_80C_absb_i ; Function: SmearedFractal

Coef_0 0.000688199 +- 3.67604e-06

Coef_1 11.1802 +- 0.203776 *LINKED to G1_80C_absb_i; Coef_1

Coef_2 3.02482 +- 0.00145601 *LINKED to G1_80C_absb_i; Coef_2

Coef_3 498.888 +- 3.55165 *LINKED to G1_80C_absb_i; Coef_3

Coef_4 2.41e-06 +- 0 *HELD*LINKED to G1_80C_absb_i; Coef_4

Coef_5 5.278e-06 +- 0 *HELD*LINKED to G1_80C_absb_i; Coef_5

Coef_6 0.000799316 +- 5.28811e-05

Global Fit Completed

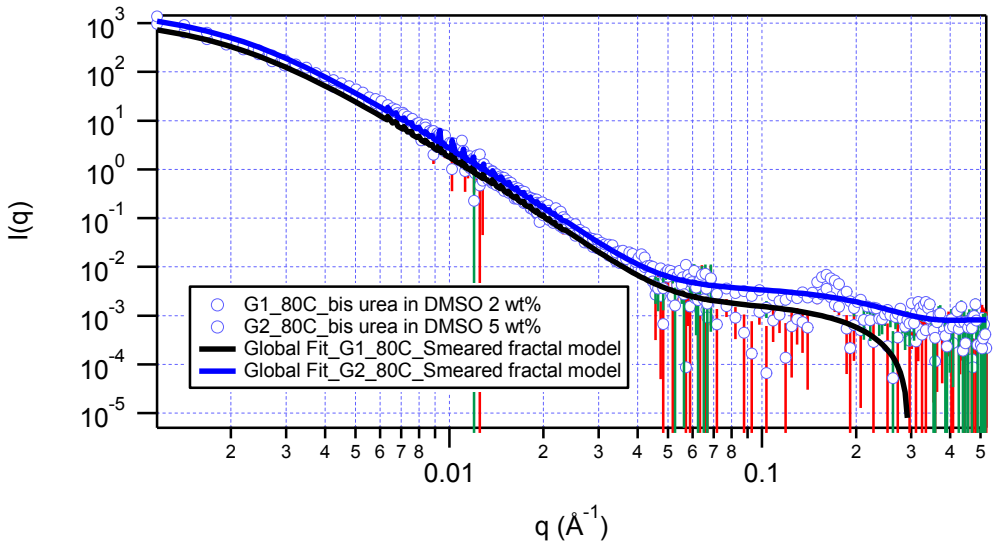


Figure 29 Global fitting; Bis-urea gelator in DMSO at 2 and 5 wt% concentrations at 80 degree C (checking reversibility) fitted to a Smeared fractal model (both low and high q data)

Global fit results

Fit converged normally

V_chisq = 2433.83 V_npnts= 510 V_numNaNs= 0 V_numINFs= 0

Number of iterations: 3

Data Set: G1_80C_absb_i ; Function: SmearedFractalFlexCyl

Coef_0 0.000619264 +- 0.00022591
Coef_1 3.02375 +- 0.0015233
Coef_2 500.738 +- 3.64027
Coef_3 2.41e-06 +- 0 *HELD
Coef_4 6.33e-06 +- 0 *HELD
Coef_5 20.9003 +- 2.44532
Coef_6 35.081 +- 2.32707
Coef_7 5.8241 +- 1.08855
Coef_8 -0.000399335 +- 0.000133901

Data Set: G2_80C_absb_i ; Function: SmearedFractalFlexCyl

Coef_0 0.000939831 +- 0.000342826
Coef_1 3.02375 +- 0.0015233 *LINKED to G1_80C_absb_i; Coef_1
Coef_2 500.738 +- 3.64027 *LINKED to G1_80C_absb_i; Coef_2
Coef_3 2.41e-06 +- 0 *HELD*LINKED to G1_80C_absb_i; Coef_3
Coef_4 6.33e-06 +- 0 *HELD*LINKED to G1_80C_absb_i; Coef_4
Coef_5 20.9003 +- 2.44532 *LINKED to G1_80C_absb_i; Coef_5
Coef_6 35.081 +- 2.32707 *LINKED to G1_80C_absb_i; Coef_6
Coef_7 5.8241 +- 1.08855 *LINKED to G1_80C_absb_i; Coef_7
Coef_8 0.000433575 +- 0.000192866

Global Fit Completed

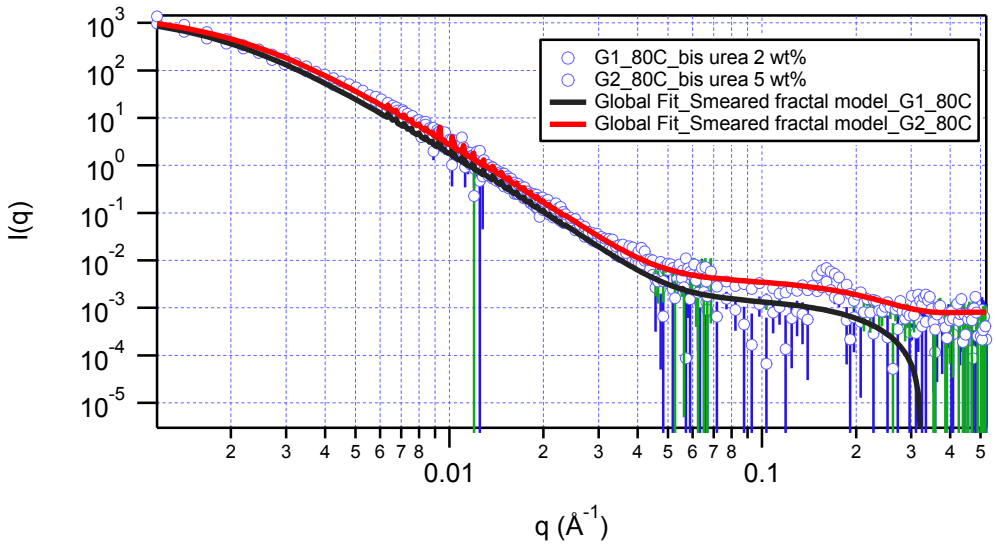


Figure 30 Global fitting; Bis-urea gelator in DMSO at 2 and 5 wt% concentrations at 80 degree C (checking reversibility) fitted to a Smeared fractal model (both low and high q data) ONLY SLD FIXED AND GLOBAL

Global fit results

Fit converged normally

V_chisq = 2318.41 V_npnts= 510 V_numNaNs= 0 V_numINFs= 0

Number of iterations: 2

Data Set: G1_80C_absb_i ; Function: SmearedFractal

Coef_0 0.000253451 +- 1.90195e-06

Coef_1 10.3557 +- 0.393378

Coef_2 3.02439 +- 0.00224786

Coef_3 530.541 +- 5.79074

Coef_4 2.41e-06 +- 0 *HELD

Coef_5 6.33e-06 +- 0 *HELD

Coef_6 -0.000117445 +- 5.68063e-05

Data Set: G2_80C_absb_i ; Function: SmearedFractal

Coef_0 0.000357058 +- 2.23506e-06

Coef_1 11.5267 +- 0.242409

Coef_2 3.02736 +- 0.00191832

Coef_3 474.303 +- 4.40785

Coef_4 2.41e-06 +- 0 *HELD*LINKED to G1_80C_absb_i; Coef_4

Coef_5 6.33e-06 +- 0 *HELD*LINKED to G1_80C_absb_i; Coef_5

Coef_6 0.000791261 +- 5.36426e-05

Global Fit Completed

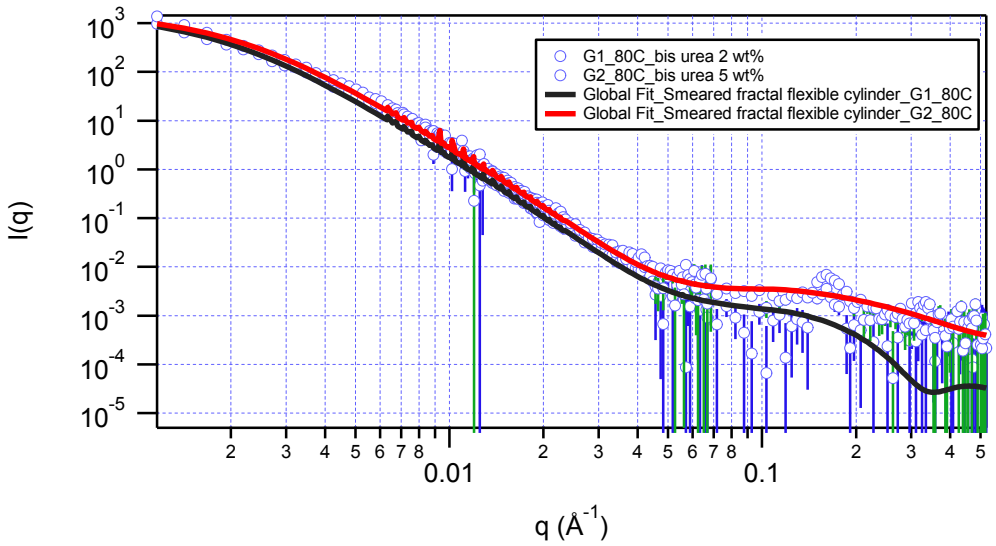


Figure 31 Global fitting; Bis-urea gelator in DMSO at 2 and 5 wt% concentrations at 80 degree C (checking reversibility) fitted to a Smeared fractal flexible cylinder model (both low and high q data)

Global fit results

Fit converged normally

V_chisq = 2285.58 V_npnts= 510 V_numNaNs= 0 V_numINFs= 0

Number of iterations: 3

Data Set: G1_80C_absb_i ; Function: SmearedFractalFlexCyl

Coef_0 0.000163611 +- 3.66867e-05

Coef_1 3.02446 +- 0.00238192

Coef_2 530.021 +- 5.9046

Coef_3 2.41e-06 +- 0 *HELD

Coef_4 6.33e-06 +- 0 *HELD

Coef_5 20.83 +- 7.2836

Coef_6 32.6161 +- 9.95336

Coef_7 10.9611 +- 2.09376

Coef_8 2.54262e-05 +- 7.49713e-05

Data Set: G2_80C_absb_i ; Function: SmearedFractalFlexCyl

Coef_0 0.000985647 +- 0.000371382

Coef_1 3.02611 +- 0.00203408

Coef_2 476.224 +- 4.54785

Coef_3 2.41e-06 +- 0 *HELD*LINKED to G1_80C_absb_i; Coef_3

Coef_4 6.33e-06 +- 0 *HELD*LINKED to G1_80C_absb_i; Coef_4

Coef_5 20.7313 +- 2.61683

Coef_6 37.6213 +- 2.47625

Coef_7 5.88557 +- 1.12145

Coef_8 0.000352788 +- 0.000213598

Fit to SmearedFractal

Data file: G2_80C_absb

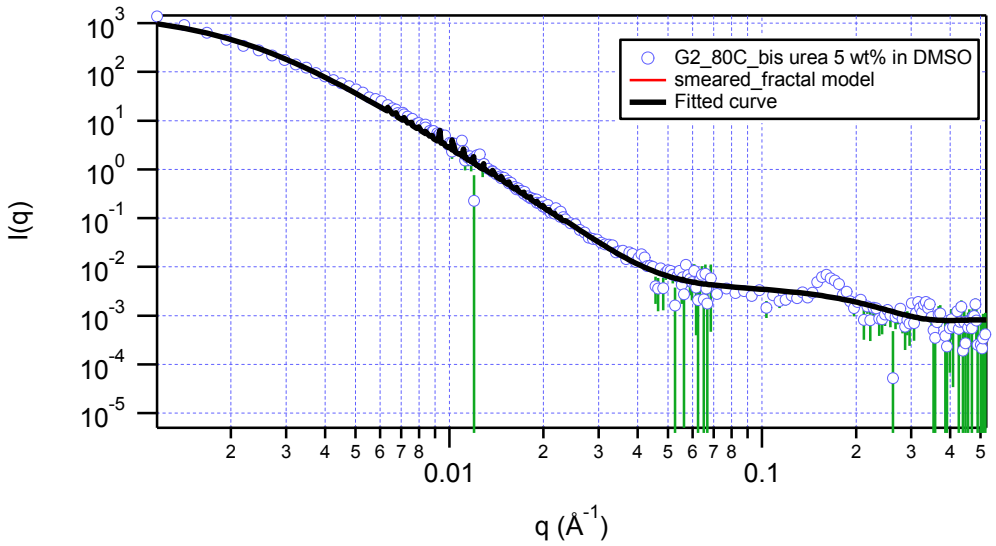


Figure 32 Bis-urea gelator in DMSO at 5 wt% concentration at 80 degree C fitted to a Smeared fractal model (low and high q data)

Volume Fraction (scale)	0.00066703	±	4.17134e-06
Block Radius (Å)	11.529	±	0.242084
fractal dimension	3.02735	±	0.00191763
correlation length (Å)	474.299	±	4.39944
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	5.278e-06	±	0
bkgd (cm^{-1} sr^{-1})	0.000791468	±	5.36455e-05

chisq = 1409.22
Npnts = 255 Sqrt(χ ^2/N) = 2.35082
Fitted range = [0,254] = 0.00116 < Q < 0.522
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: G2_cool_absb

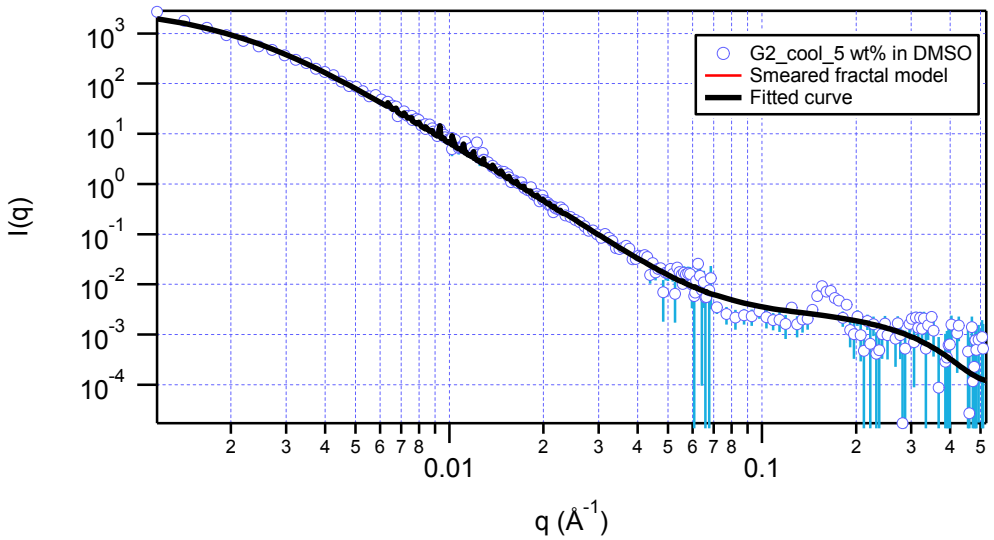


Figure 33 Bis-urea gelator in DMSO at 5 wt% concentration cooled down to 25 degree C fitted to a Smeared fractal model (low and high q data)

Volume Fraction (scale)	0.00157852	±	1.12744e-05
Block Radius (Å)	8.23741±	0.255121	
fractal dimension	2.9924 ±	0.00215198	
correlation length (Å)	473.305±	4.92204	
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	5.278e-06	±	0
bkgd (cm^{-1} sr^{-1})	0.000114393	±	8.80235e-05

chisq = 862.58
Npnts = 255 Sqrt(χ ^2/N) = 1.8392
Fitted range = [0,254] = 0.00116 < Q < 0.522
FitError = No Error FitQuitReason = No decrease in chi-squared

Fit to SmearedFractal,
Data file: G2_25C_absb

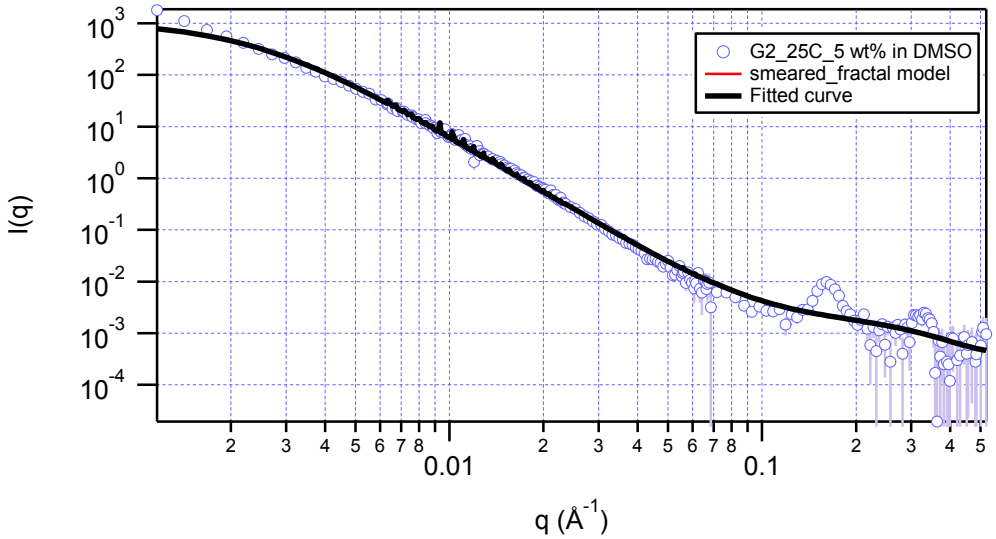


Figure 34 Bis-urea gelator in DMSO at 5 wt% concentration at 25 degree C fitted to a Smeared fractal model (low and high q data)

Volume Fraction (scale)	0.00140455	±	8.48669e-06
Block Radius (Å)	7.17927±	0.265237	
fractal dimension	2.91878±	0.00170856	
correlation length (Å)	391.845±	3.10515	
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	5.278e-06	±	0
bkgd (cm^{-1} sr^{-1})	0.0004209	±	6.64465e-05

chisq = 2741.61
Npnts = 255 Sqrt(χ ^2/N) = 3.27893
Fitted range = [0,254] = 0.00116 < Q < 0.522
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: G2_cool_absb

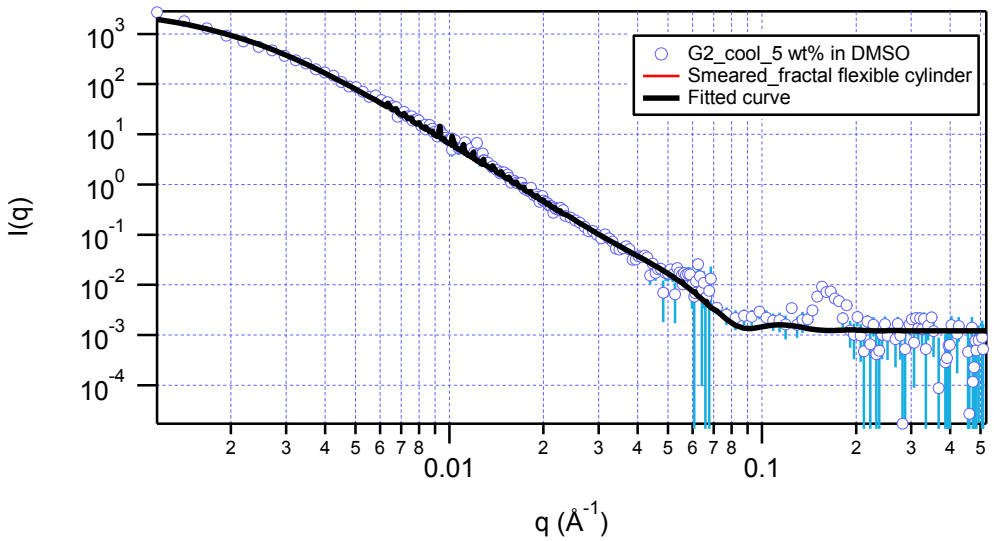


Figure 35 Bis-urea gelator in DMSO at 5 wt% concentration at lower temperature /(checking gelation reversibility) fitted to a Smeared fractal flexible cylinder model (both low and high q data)

Volume Fraction (scale)	0.000174113	±	5.10126e-06
fractal dimension	2.97681±	0.00352097	
correlation length (Å)	477.531±	5.94962	
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	5.278e-06	±	0
Contour Length (Å)	61.6077±	0.260108	

Kuhn Length, b (Å)	43.2419±	0.155746	
Cylinder Radius (Å)	44.0413±	0.715548	
bkgd (cm^{-1} sr^{-1})	0.00121237	±	7.75622e-05

chisq = 1009.44
Npnts = 255 Sqrt(χ ^2/N) = 1.98962
Fitted range = [0,254] = 0.00116 < Q < 0.522
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: G2_cool_absb

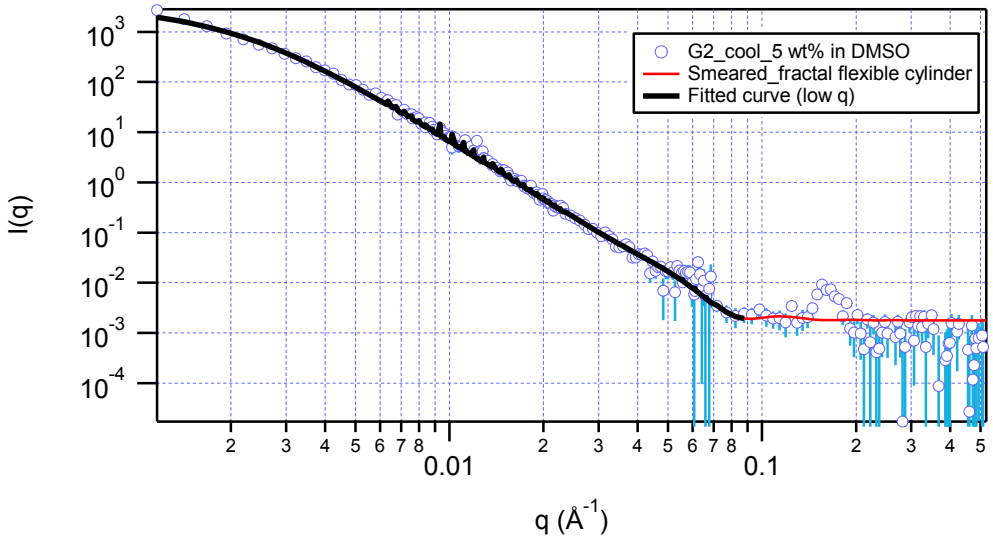


Figure 36 Bis-urea gelator in DMSO at 5 wt% concentration at lower temperature /(checking gelation reversibility) fitted to a Smeared fractal model (low q data)

Volume Fraction (scale)	0.000161764	±	7.67877e-06
fractal dimension	2.97439±	0.00391004	

correlation length (Å)	479.286±	6.08716	
SLD block ($Å^{-2}$)	2.41e-06	±	0
SLD solvent ($Å^{-2}$)	5.278e-06	±	0
Contour Length (Å)	61.9873±	0.738945	
Kuhn Length, b (Å)	40.7336±	0.609362	
Cylinder Radius (Å)	43.8945±	1.21825	
bkgd (cm^{-1} sr^{-1})	0.00178134	±	0.000549833

chisq = 486.981
Npnts = 163 Sqrt(χ ^2/N) = 1.72847
Fitted range = [0,162] = 0.00116 < Q < 0.08755
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: G2_80C_absb

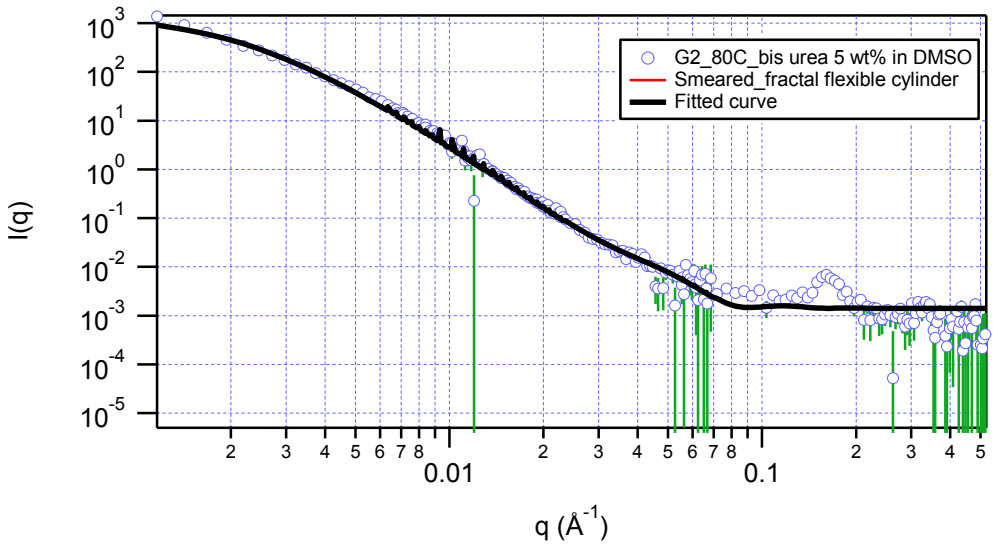


Figure 37 Bis-urea gelator in DMSO at 5 wt% concentration at 80 degree C (checking gelation reversibility) fitted to a Smeared fractal flexible cylinder model (both low and high q data)

Volume Fraction (scale)	8.70351e-05	±	3.2462e-06
fractal dimension	3.03009±	0.00299227	
correlation length (Å)	453.313±	6.15	
SLD block ($Å^{-2}$)	2.41e-06	±	0
SLD solvent ($Å^{-2}$)	5.278e-06	±	0
Contour Length (Å)	59.6636±	0.838064	
Kuhn Length, b (Å)	48.6347±	0.399632	
Cylinder Radius (Å)	43.6925±	0.938615	
bkgd (cm^{-1} sr^{-1})	0.0014086	±	5.12832e-05

chisq = 1691.87
Npnts = 255 Sqrt(χ ^2/N) = 2.5758
Fitted range = [0,254] = 0.00116 < Q < 0.522
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: G2_80C_absb

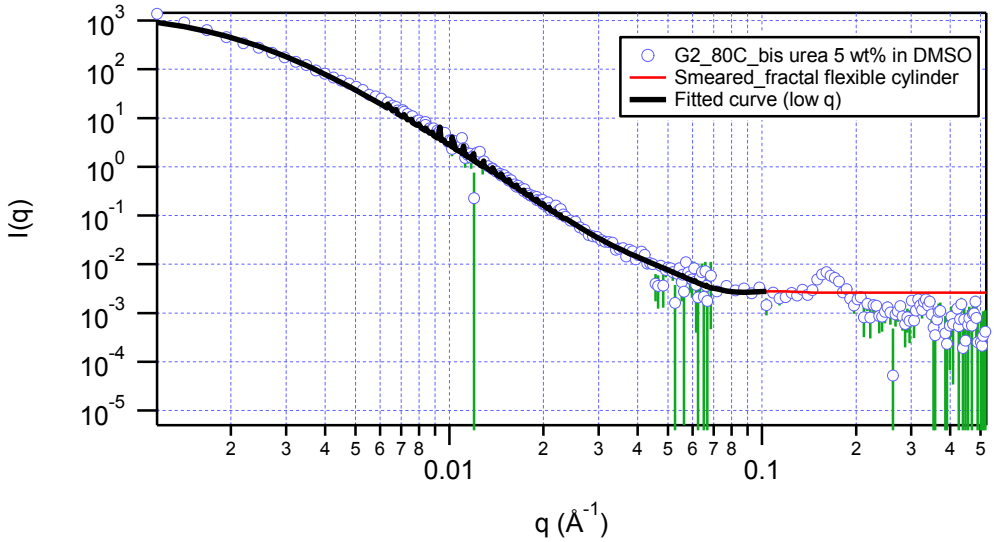


Figure 38 Bis-urea gelator in DMSO at 5 wt% concentration at 80 degree C (checking gelation reversibility) fitted to a Smeared fractal flexible cylinder model (low q data)

Volume Fraction (scale)	7.71161e-05	±	4.1408e-06
fractal dimension	3.02584±	0.00333986	
correlation length (Å)	456.359±	5.41252	
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	5.278e-06	±	0
Contour Length (Å)	51.9515±	0.170574	
Kuhn Length, b (Å)	49.4843±	0.0762624	
Cylinder Radius (Å)	45.4618±	1.32419	
bkgd (cm^{-1} sr^{-1})	0.00260916	±	0.000222777

chisq = 995.822
Npnts = 166 Sqrt(χ ^2/N) = 2.44927
Fitted range = [0,165] = 0.00116 < Q < 0.1034
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: G2_25C_absb

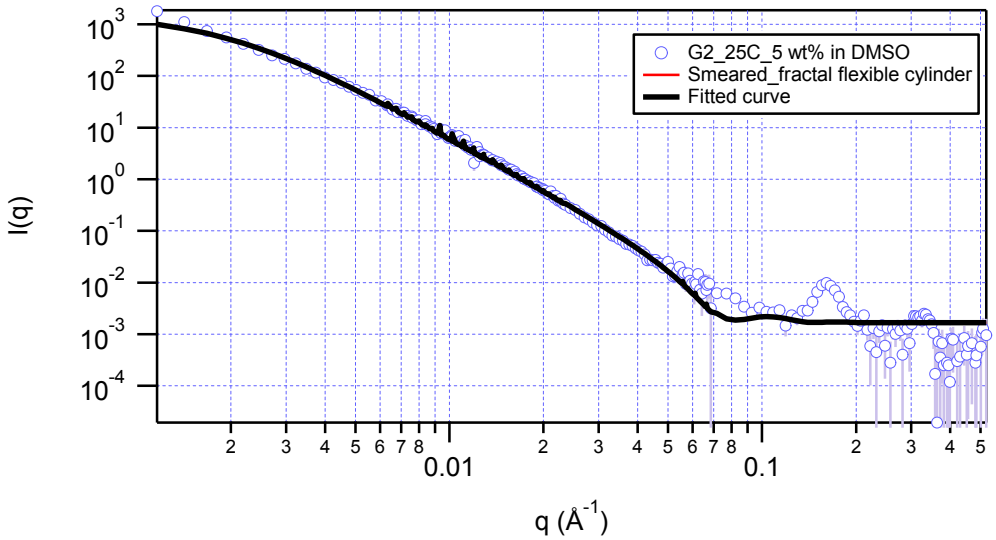


Figure 39 Bis-urea gelator in DMSO at 5 wt% concentration at 25 degree C fitted to a Smeared fractal flexible cylinder model (both low and high q data)

Volume Fraction (scale)	0.000181381	±	2.40126e-06
fractal dimension	2.81818±	0.00353109	
correlation length (Å)	491.238±	7.02241	
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	5.278e-06	±	0
Contour Length (Å)	42.944 ±	0.0959415	
Kuhn Length, b (Å)	60.5975±	0.259207	
Cylinder Radius (Å)	48.6188±	0.400353	
bkgd (cm^{-1} sr^{-1})	0.00165574	±	5.47527e-05

chisq = 2409.81
Npnts = 255 Sqrt(χ ^2/N) = 3.07413

Fitted range = [0,254] = 0.00116 < Q < 0.522
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: G2_25C_absb

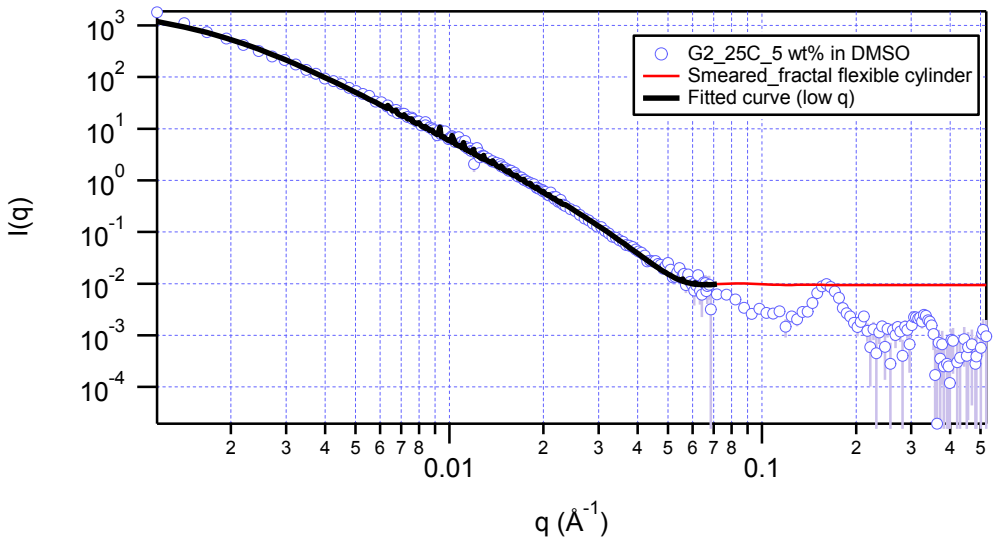


Figure 40 Bis-urea gelator in DMSO at 5 wt% concentration at 25 degree C fitted to a Smeared fractal flexible cylinder model (low q data)

Volume Fraction (scale)	0.000130696	±	1.74871e-06
fractal dimension	2.75989±	0.00470147	
correlation length (Å)	578.464±	12.2097	
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	5.278e-06	±	0

Contour Length (Å)	41.5922±	0.0908716	
Kuhn Length, b (Å)	59.6375±	0.211338	
Cylinder Radius (Å)	59.2477±	0.572704	
bkgd (cm^{-1} sr^{-1})	0.00939278	±	0.000351893

chisq = 861.299
Npnts = 160 Sqrt(χ ^2/N) = 2.32015
Fitted range = [0,159] = 0.00116 < Q < 0.07169
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: G5_25C_absb

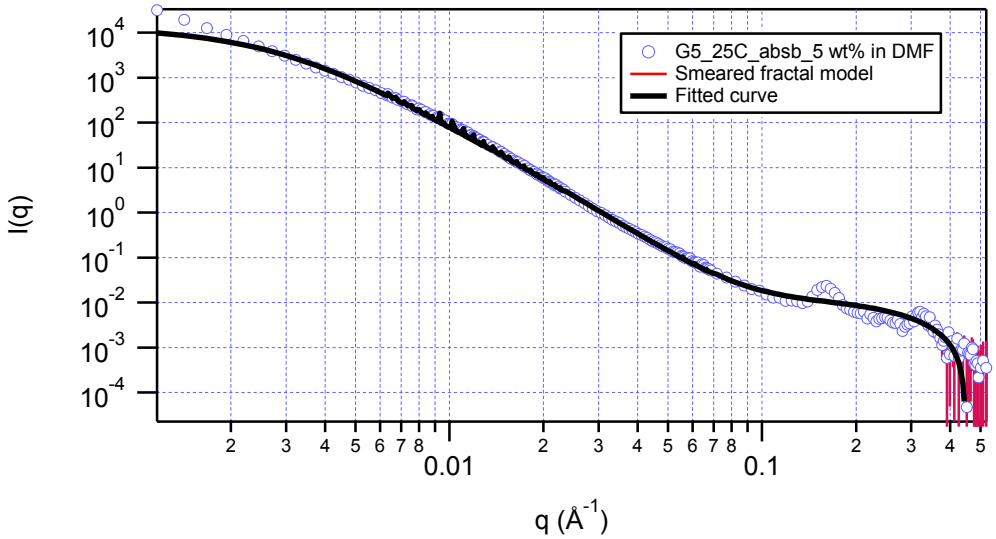


Figure 41 Bis-urea gelator in DMF at 5 wt% concentration at 25 degree C fitted to a Smeared fractal model (both low and high q data)

Volume Fraction (scale)	0.00798994	±	1.70614e-05

Block Radius (Å)	6.59769±	0.0329865	
fractal dimension	3.00782±	0.00041965	
correlation length (Å)	348.16 ±	1.11575	
SLD block ($Å^{-2}$)	2.41e-06	±	0
SLD solvent ($Å^{-2}$)	6.33e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.00196728	±	8.06502e-05

chisq = 7135.16
Npnts = 255 Sqrt(χ ^2/N) = 5.28971
Fitted range = [0,254] = 0.00116 < Q < 0.522
FitError = No Error FitQuitReason = No decrease in chi-squared

Fit to SmearedFractal,
Data file: G5_25C_absb

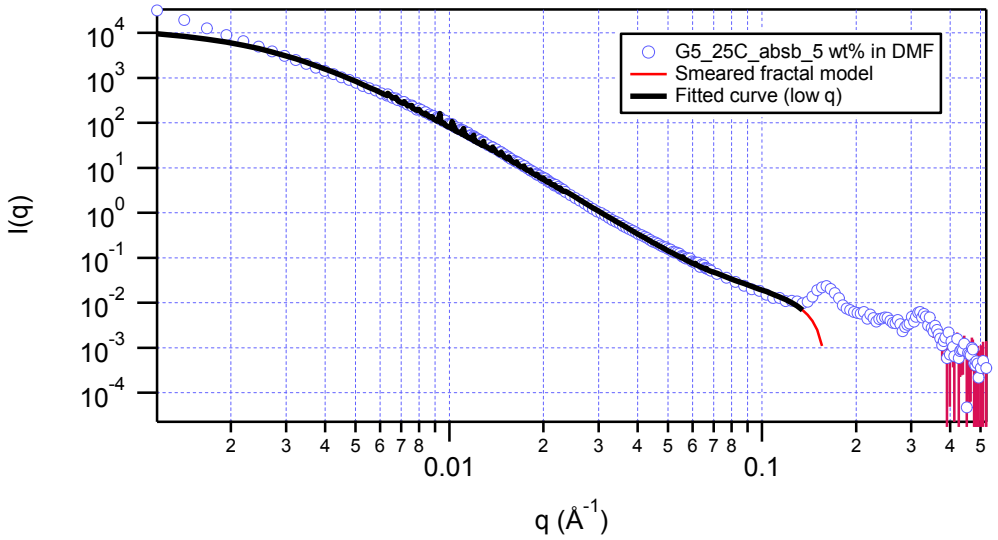


Figure 42. Bis-urea gelator in DMF at 5 wt% concentration at 25 degree C fitted to a Smeared fractal model (low q data)

Volume Fraction (scale)	0.00797182	±	1.67697e-05
Block Radius (Å)	10.485	±	0.118011
fractal dimension	3.01219	±	0.000550895
correlation length (Å)	340.802	±	1.18623
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	6.33e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.0333306	±	0.00119877

chisq = 5007.57
Npnts = 172 Sqrt(χ ^2/N) = 5.39572
Fitted range = [0,171] = 0.00116 < Q < 0.1348
FitError = No Error FitQuitReason = No decrease in chi-squared

Fit to SmearedFractalFlexCyl,
Data file: G5_25C_absb

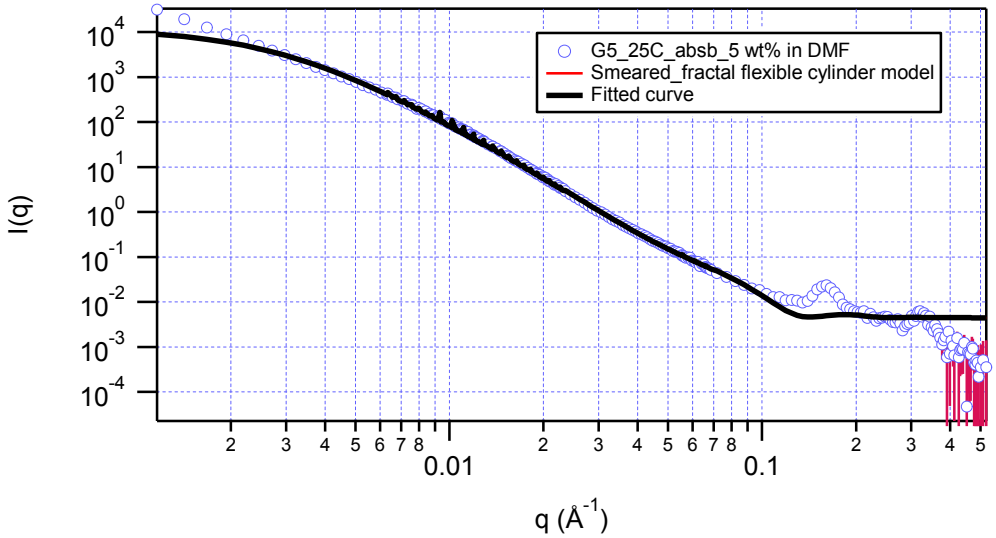


Figure 43. Bis-urea gelator in DMF at 5 wt% concentration at 25 degree C fitted to a Smeared fractal flexible cylinder model (both low and high q data)

Volume Fraction (scale)	0.000742773	±	5.49157e-06
fractal dimension	3.00663±	0.000674705	
correlation length (Å)	332.712±	1.20348	
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	6.33e-06	±	0
Contour Length (Å)	39.9212±	0.0353062	
Kuhn Length, b (Å)	23.9149±	0.0247604	
Cylinder Radius (Å)	27.4791±	0.112436	
bkgd (cm^{-1} sr^{-1})	0.00444961	±	6.36726e-05

chisq = 9708.09
Npnts = 255 Sqrt(χ ^2/N) = 6.17016
Fitted range = [0,254] = 0.00116 < Q < 0.522
FitError = No Error FitQuitReason = No decrease in chi-squared

Fit to SmearedFractalFlexCyl,
Data file: G5_25C_absb

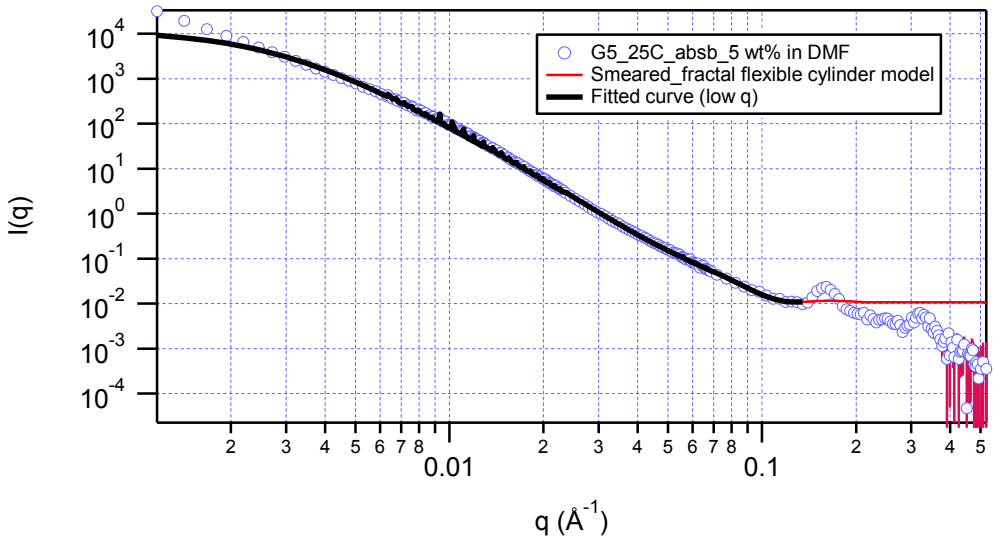


Figure 44. Bis-urea gelator in DMF at 5 wt% concentration at 25 degree C fitted to a Smeared fractal flexible cylinder model (low q data)

Volume Fraction (scale)	0.000658158	±	6.43567e-06
fractal dimension	3.00111±	0.000790373	
correlation length (Å)	338.097±	1.26921	
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	6.33e-06	±	0
Contour Length (Å)	40.3656±	0.0420343	
Kuhn Length, b (Å)	25.0502±	0.0306829	
Cylinder Radius (Å)	30.5365±	0.16707	
bkgd (cm^{-1} sr^{-1})	0.010629	±	0.000264599

chisq = 4469.72
Npnts = 172 Sqrt(χ ^2/N) = 5.09772
Fitted range = [0,171] = 0.00116 < Q < 0.1348
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal
Data file: G5_cool_absb

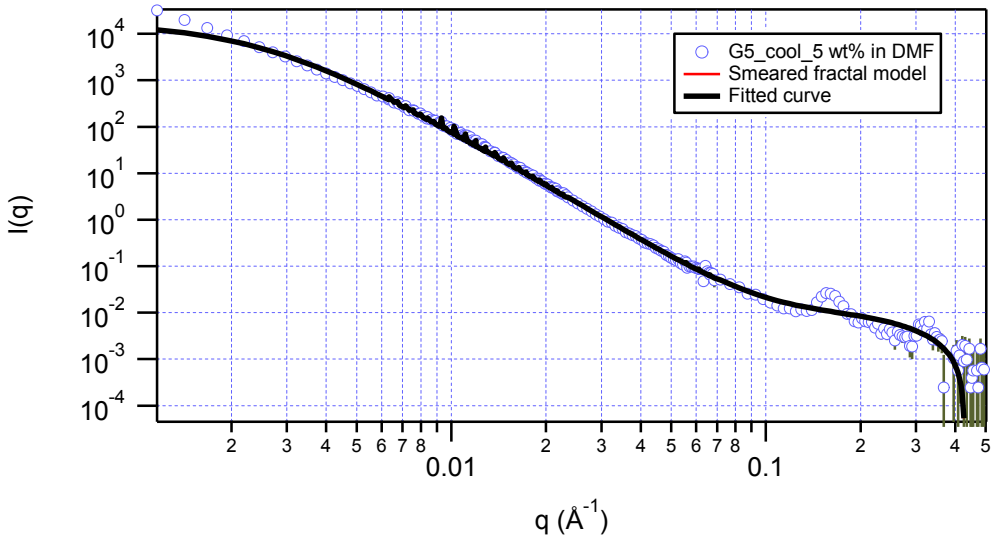


Figure 45. Bis-urea gelator in DMF at 5 wt% concentration at lower temperature (checking reversibility) fitted to a Smeared fractal model (both low and high q data)

Volume Fraction (scale)	0.00840362	±	2.66323e-05
Block Radius (Å)	6.45139±	0.0580658	
fractal dimension	2.98929±	0.000696085	
correlation length (Å)	387.368±	1.88058	
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	6.33e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.00258558	±	0.000143072

chisq = 3315.38
Npnts = 250 Sqrt(χ ^2/N) = 3.64164
Fitted range = [0,249] = 0.00116 < Q < 0.502

FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: G5_cool_absb

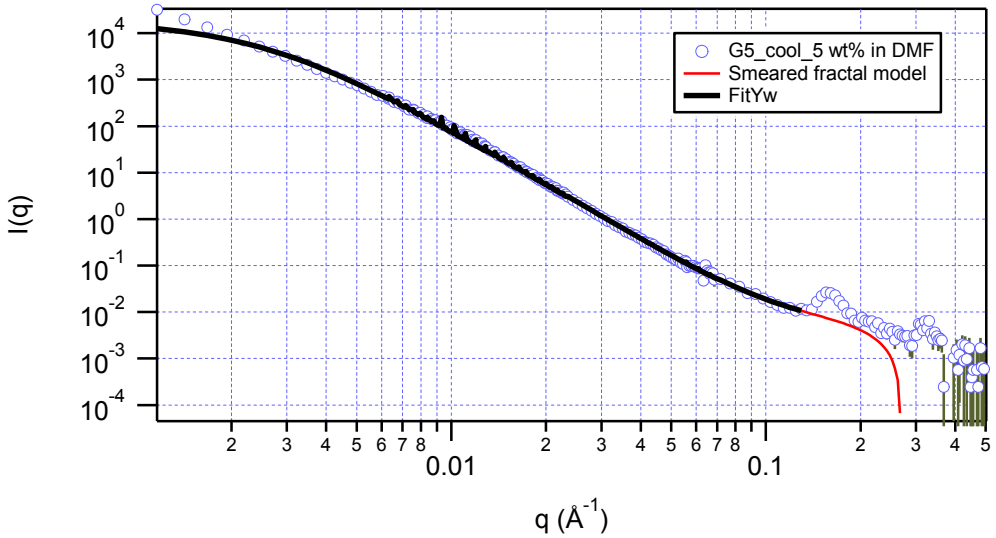


Figure 46. Bis-urea gelator in DMF at 5 wt% concentration at lower temperature (checking reversibility) C fitted to a Smeared fractal model (low q data)

Volume Fraction (scale)	0.00845391	±	3.29487e-05
Block Radius (Å)	6.98859±	1.01546	
fractal dimension	2.98648±	0.000799753	
correlation length (Å)	392.123±	2.06137	

SLD block ($Å^{-2}$)	2.41e-06	±	0
SLD solvent ($Å^{-2}$)	6.33e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.0089982	±	0.00635395

chisq = 2310.04
Npnts = 171 Sqrt(χ ^2/N) = 3.67546
Fitted range = [0,170] = 0.00116 < Q < 0.1296
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: G5_cool_absb

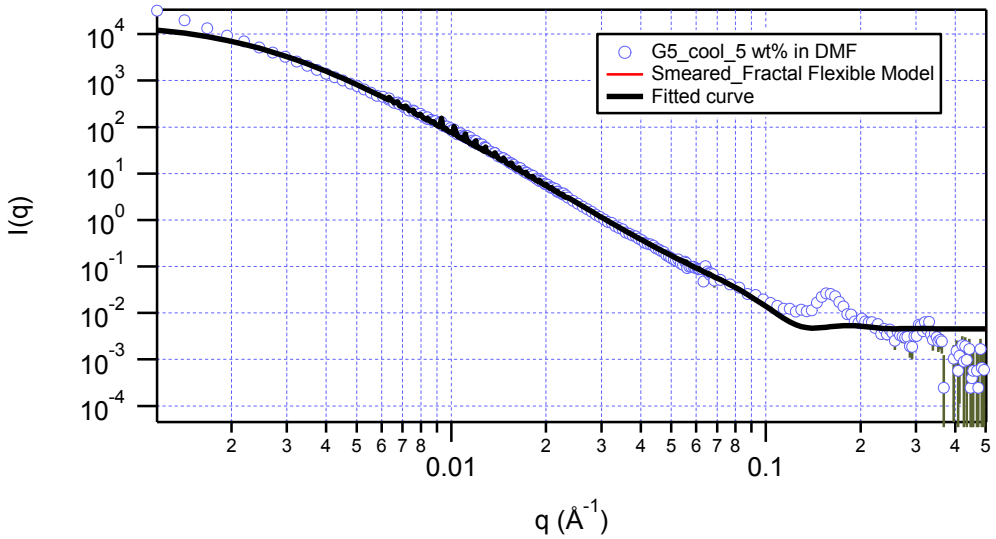


Figure 47. Bis-urea gelator in DMF at 5 wt% concentration at lower temperature (checking reversibility) fitted to a Smeared fractal flexible cylinder model (both low and high q data)

Volume Fraction (scale)	0.00065438	±	7.59492e-06
fractal dimension	2.97533±	0.00112919	
correlation length (Å)	391.574±	2.26114	
SLD block ($Å^{-2}$)	2.41e-06	±	0
SLD solvent ($Å^{-2}$)	6.33e-06	±	0
Contour Length (Å)	43.8413±	0.164422	
Kuhn Length, b (Å)	20.5512±	0.072237	
Cylinder Radius (Å)	27.6937±	0.174128	
bkgd (cm^{-1} sr^{-1})	0.00453914	±	0.000109592

chisq = 4745.9
Npnts = 250 Sqrt(χ^2/N) = 4.35702
Fitted range = [0,249] = 0.00116 < Q < 0.502
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: G5_cool_absb

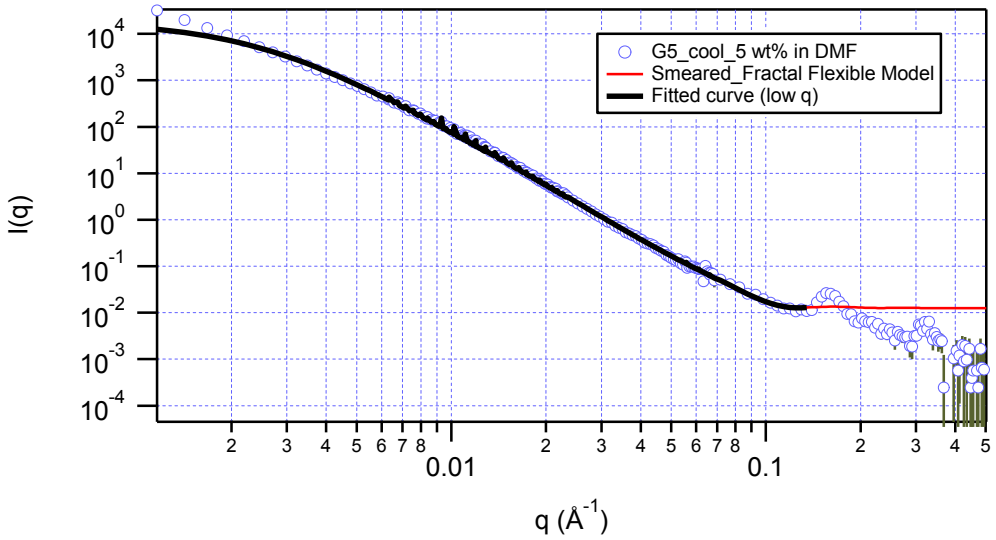


Figure 48. Bis-urea gelator in DMF at 5 wt% concentration at lower temperature (checking reversibility) fitted to a Smeared fractal flexible cylinder model (low q data)

Volume Fraction (scale)	0.000526276	±	8.31113e-06
fractal dimension	2.96693±		0.00134857
correlation length (Å)	399.88 ±		2.51797
SLD block (Å^{-2})	2.41e-06	±	0
SLD solvent (Å^{-2})	6.33e-06	±	0
Contour Length (Å)	42.366 ±		0.0727872
Kuhn Length, b (Å)	20.4802±		0.02455
Cylinder Radius (Å)	30.7806±		0.273377
bkgd (cm^{-1} sr^{-1})	0.0125866	±	0.000439912

chisq = 2182.9
Npnts = 172 Sqrt(χ^2/N) = 3.56248
Fitted range = [0,171] = 0.00116 < Q < 0.1348
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: set6_1_cool25C_abs_b_txt

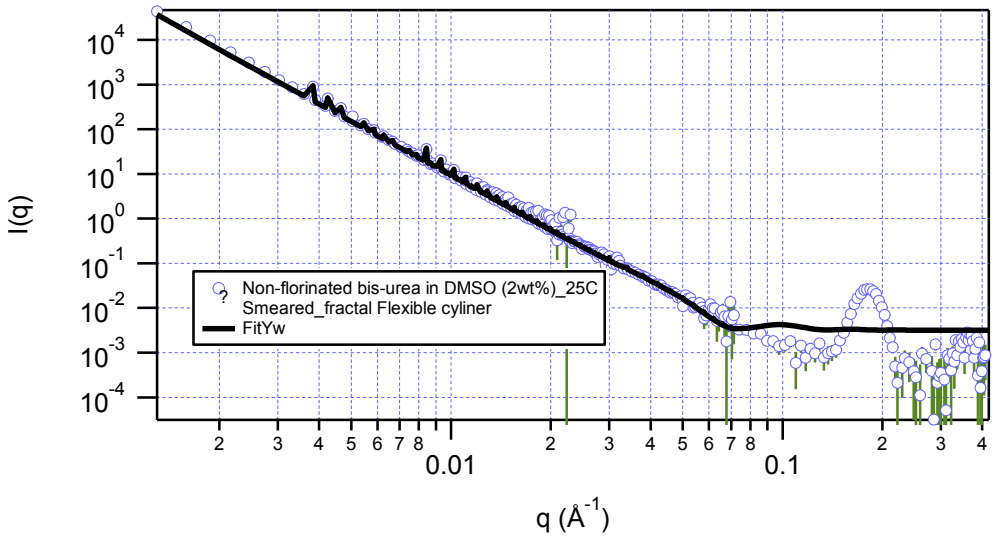


Figure 49 Non-fluorinated Bis-urea gelator in DMSO at 2 wt% concentration cooled down to 25 degree C fitted to a Smeared fractal flexible cylinder model (low and high q data)

Volume Fraction (scale)	0.000130089	±	3.75657e-06
fractal dimension	2.99797±	0.00021891	
correlation length (Å)	3262.2 ±	152.094	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å^{-2})	5.278e-06	±	0
Contour Length (Å)	40.6701±	0.0936512	
Kuhn Length, b (Å)	20.8082±	0.0304573	
Cylinder Radius (Å)	52.4526±	0.518954	
bkgd (cm^{-1} sr^{-1})	0.00317586	±	4.34466e-05

chisq = 22045.5
Npnts = 324 Sqrt(χ ^2/N) = 8.24875
Fitted range = [0,323] = 0.001298 < Q < 0.4188
FitError = No Error FitQuitReason = No decrease in chi-squared

Fit to SmearedFractalFlexCyl,
Data file: set6_1_cool25C_abs_b_txt

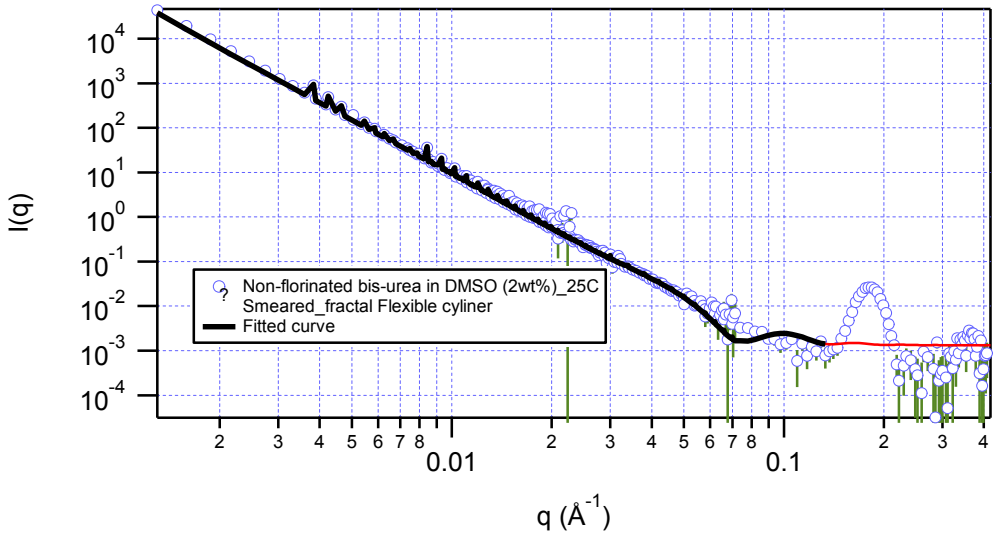


Figure 50 Non-fluorinated Bis-urea gelator in DMSO at 2 wt% concentration cooled down to 25 degree C fitted to a Smeared fractal flexible cylinder model (low q data)

Volume Fraction (scale)	0.000141572	±	3.52637e-06
fractal dimension	2.99852±	0.000190209	
correlation length (Å)	3469.82±	139.469	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å^{-2})	5.278e-06	±	0
Contour Length (Å)	40.754 ±	0.0547574	
Kuhn Length, b (Å)	20.6132±	0.029027	
Cylinder Radius (Å)	51.6665±	0.485614	
bkgd (cm^{-1} sr^{-1})	0.00132249	±	0.00010633

chisq = 1810.61
Npnts = 246 Sqrt(X^2/N) = 2.71297
Fitted range = [0,245] = 0.001298 < Q < 0.1332
FitError = No Error FitQuitReason = No decrease in chi-squared

Fit to SmearedFractal,
Data file: set6_1_cool25C_abs_b_txt

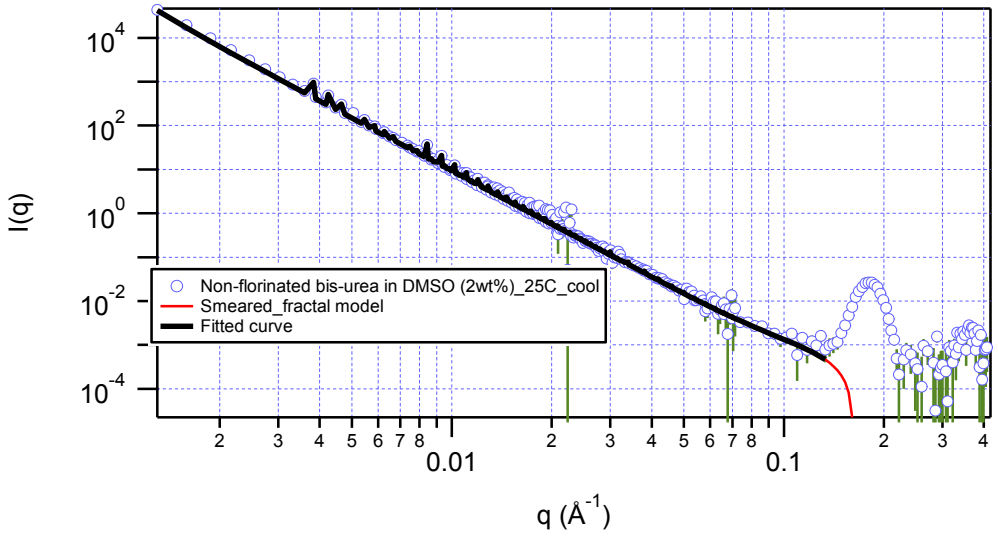


Figure 51 Non-fluorinated Bis-urea gelator in DMSO at 2 wt% concentration cooled down to 25 degree C fitted to a Smeared fractal model (low q data)

Volume Fraction (scale)	0.0151505	±	0.00945681
Block Radius (Å)	4.4519	±	0.801316
fractal dimension	3.00016	±	0.000117457
correlation length (Å)	7913.52	±	4952.2

SLD block ($Å^{-2}$)	9.82e-07	±	0
SLD solvent ($Å^{-2}$)	5.278e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.00940374	±	0.0038959

chisq = 1648.8
Npnts = 246 Sqrt(χ^2/N) = 2.58891
Fitted range = [0,245] = 0.001298 < Q < 0.1332
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: set6_1scat80C_abs_b_txt

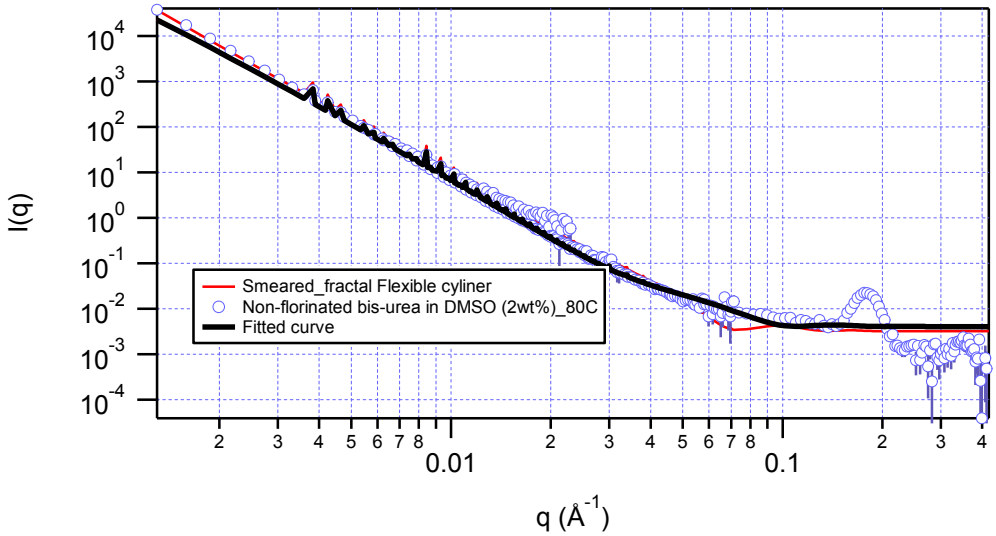


Figure 52 Non-fluorinated Bis-urea gelator in DMSO at 2 wt% concentration at 80 degree C fitted to a Smeared fractal flexible cylinder model (both low and high q data)

Volume Fraction (scale)	0.000108987	±	1.85819e-06
fractal dimension	3.00797±	0.000333025	
correlation length (Å)	1805.66±	56.7709	
SLD block ($Å^{-2}$)	9.82e-07	±	0
SLD solvent ($Å^{-2}$)	5.278e-06	±	0
Contour Length (Å)	41.2649±	0.075254	
Kuhn Length, b (Å)	19.3548±	0.0287975	
Cylinder Radius (Å)	36.0487±	0.498042	
bkgd (cm^{-1} sr^{-1})	0.00406656	±	4.64393e-05

chisq = 17487.6
Npnts = 324 Sqrt(χ ^2/N) = 7.3467
Fitted range = [0,323] = 0.001298 < Q < 0.4188
FitError = No Error FitQuitReason = No decrease in chi-squared

Fit to SmearedFractalFlexCyl,
Data file: set6_1scat80C_abs_b_txt

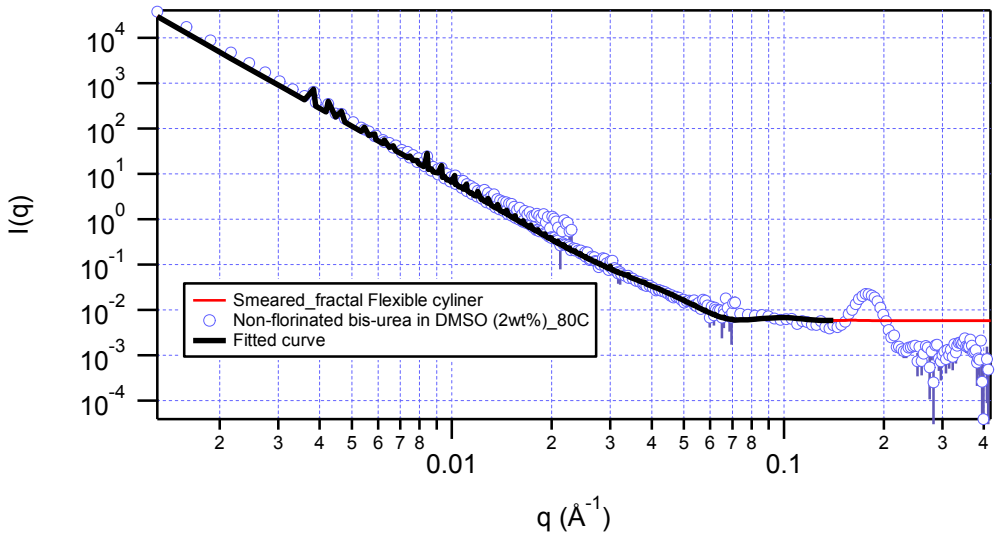


Figure 53 Non-fluorinated Bis-urea gelator in DMSO at 2 wt% concentration at 80 degree C fitted to a Smeared fractal flexible cylinder model (low q data)

Volume Fraction (scale)	0.000170193	±	4.00655e-06
fractal dimension	3.00338±	0.000193684	
correlation length (Å)	3296.09±	128.926	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å $^{-2}$)	5.278e-06	±	0
Contour Length (Å)	27.5289±	0.0145214	
Kuhn Length, b (Å)	33.3963±	0.0254209	
Cylinder Radius (Å)	52.3272±	0.578697	
bkgd (cm^{-1} sr^{-1})	0.00570982	±	0.000104592

chisq = 3901.87
Npnts = 248 Sqrt(χ^2/N) = 3.96653
Fitted range = [0,247] = 0.001298 < Q < 0.141
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: set6_1scat80C_abs_b_txt

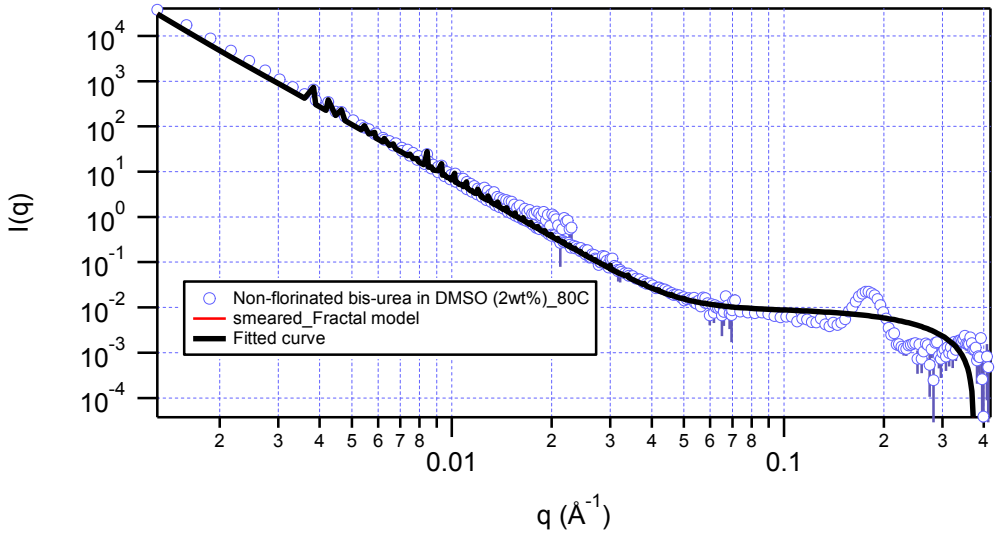


Figure 49 Non-fluorinated Bis-urea gelator in DMSO at 2 wt% concentration at 80 degree C fitted to a Smeared fractal model (both low and high q data)

Volume Fraction (scale)	0.00656663	±	0.0010044
Block Radius (Å)	6.4655 ±	0.24884	
fractal dimension	3.00286±	0.000465411	
correlation length (Å)	4452.68±	680.841	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å^{-2})	5.278e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.00383801	±	0.000610977

chisq = 13617.2
Npnts = 324 Sqrt(X^2/N) = 6.48294
Fitted range = [0,323] = 0.001298 < Q < 0.4188
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: set6_1scat80C_abs_b_txt

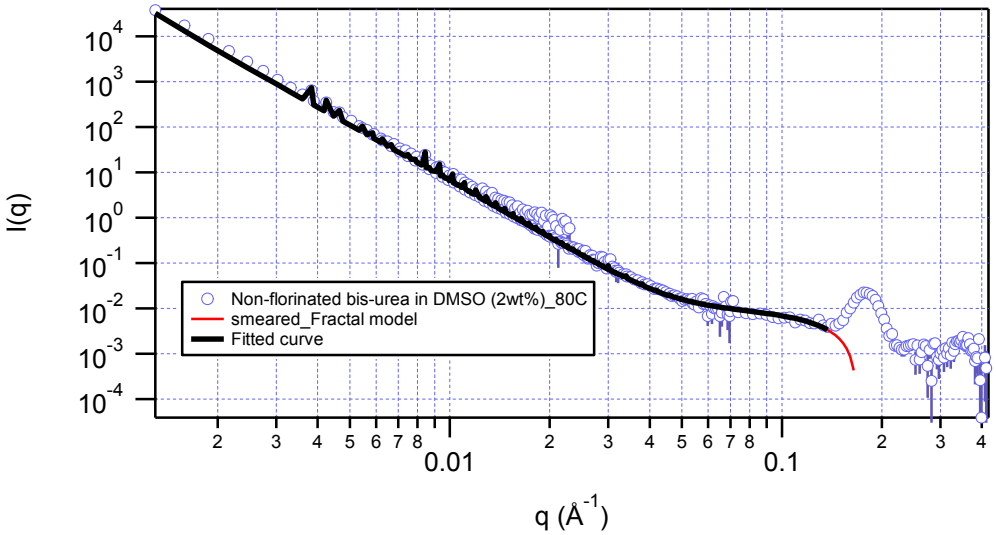


Figure 50 Non-fluorinated Bis-urea gelator in DMSO at 2 wt% concentration at 80 degree C fitted to a Smeared fractal model (low q data)

Volume Fraction (scale)	0.0101187	±	0.00632506
Block Radius (Å)	7.79954±	1.03692	
fractal dimension	3.00186±	0.0011603	
correlation length (Å)	6843.37±	4260.72	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å^{-2})	5.278e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.026001	±	0.00858984

chisq = 3850.79
Npnts = 247 Sqrt(χ^2/N) = 3.94845
Fitted range = [0,246] = 0.001298 < Q < 0.1371

FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: set6_1scat25C_abs_b_txt

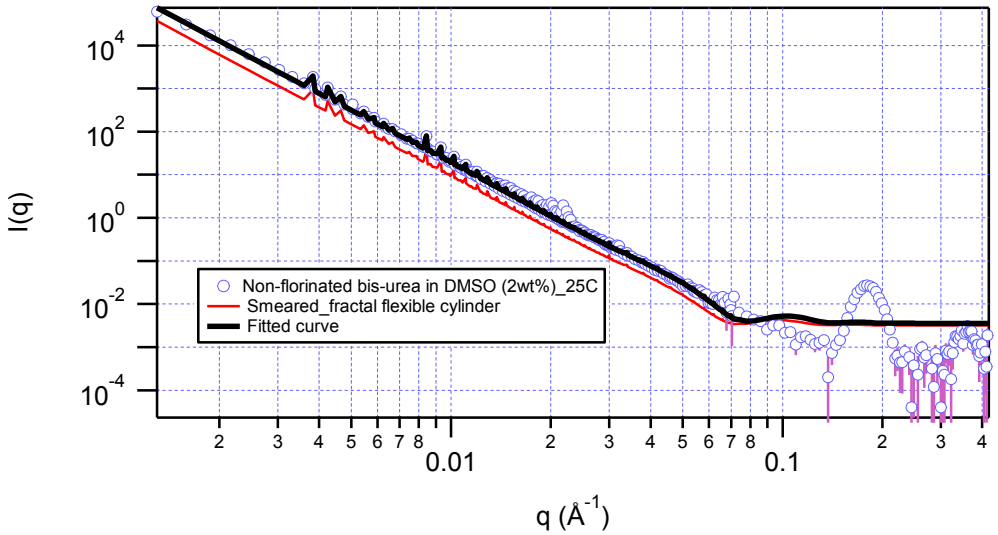


Figure 51 Non-fluorinated Bis-urea gelator in DMSO at 2 wt% concentration at 25 degree C fitted to a Smeared fractal flexible cylinder model (both low and high q data)

Volume Fraction (scale)	0.000241678	±	3.94792e-06
fractal dimension	2.99955±	0.000133232	
correlation length (Å)	2735.25±	70.7213	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å $^{-2}$)	5.278e-06	±	0
Contour Length (Å)	39.8083±	0.0299754	
Kuhn Length, b (Å)	20.1013±	0.031961	
Cylinder Radius (Å)	49.891 ±	0.292416	

bkgd (cm^{-1} sr^{-1})	0.00353746	±	4.32255e-05

chisq = 25330.9
Npnts = 324 Sqrt(χ^2/N) = 8.84205
Fitted range = [0,323] = 0.001298 < Q < 0.4188
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: set6_1scat25C_abs_b_txt

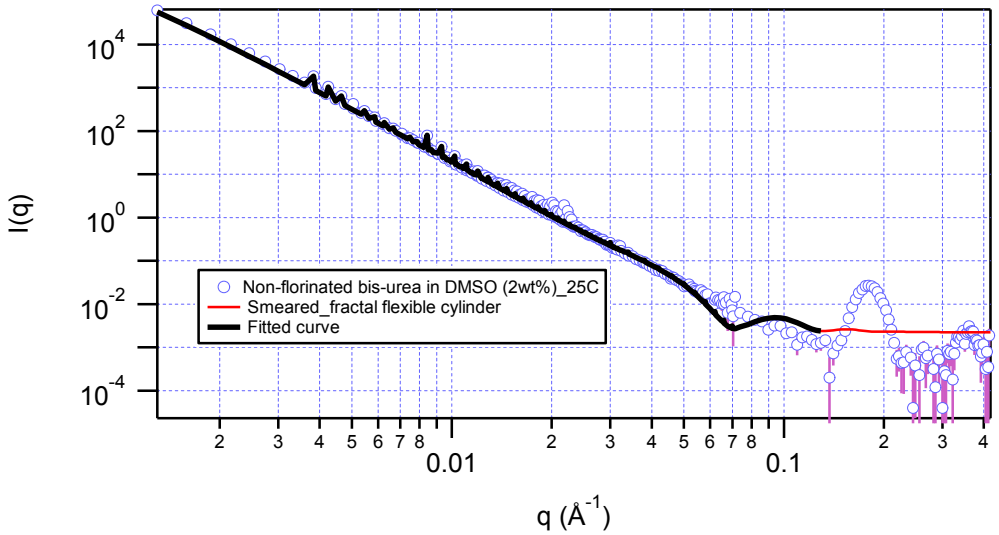


Figure 52 Non-fluorinated Bis-urea gelator in DMSO at 2 wt% concentration at 25 degree C fitted to a Smeared fractal flexible cylinder model (low q data)

Volume Fraction (scale)	0.000341705	±	3.90752e-06
fractal dimension	3.00161±		0.000213785
correlation length (Å)	1650.84±		29.3544
SLD block ($Å^{-2}$)	9.82e-07	±	0

SLD solvent (Å $^{-2}$)	5.278e-06	±	0
Contour Length (Å)	37.4496±	0.0385856	
Kuhn Length, b (Å)	40.0577±	0.0236267	
Cylinder Radius (Å)	54.2296±	0.226938	
bkgd (cm^{-1} sr^{-1})	0.00223991	±	0.000112054

chisq = 3486.04
Npnts = 245 Sqrt(χ^2/N) = 3.7721
Fitted range = [0,244] = 0.001298 < Q < 0.1293
FitError = No Error FitQuitReason = No decrease in chi-squared

Fit to SmearedFractal,
Data file: set6_1scat25C_abs_b_txt

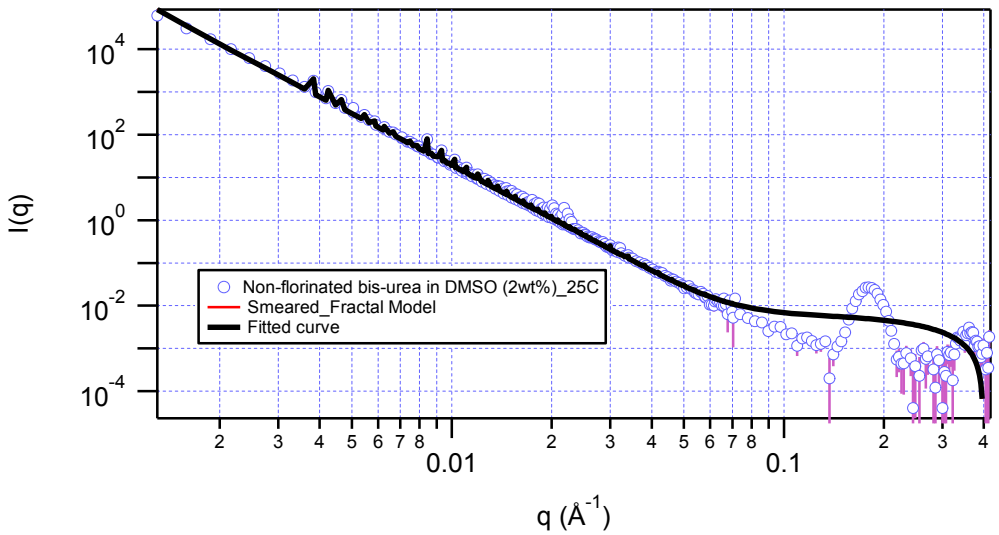


Figure 58 Non-fluorinated Bis-urea gelator in DMSO at 2 wt% concentration at 25 degree C fitted to a Smeared fractal flexible cylinder model (both low and high q data)

Volume Fraction (scale)	0.0169844	±	0.00222709
Block Radius (Å)	4.62883±	0.140249	
fractal dimension	3.00192±	0.000264134	
correlation length (Å)	4097.59±	537.212	
SLD block (Å $^{-2}$)	9.82e-07	±	0
SLD solvent (Å $^{-2}$)	5.278e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.00636368	±	0.00058467

chisq = 23620.8
Npnts = 324 Sqrt(χ^2/N) = 8.53837
Fitted range = [0,323] = 0.001298 < Q < 0.4188
FitError = No Error FitQuitReason = No decrease in chi-squared

Fit to SmearedFractal,
Data file: set6_1scat25C_abs_b_txt

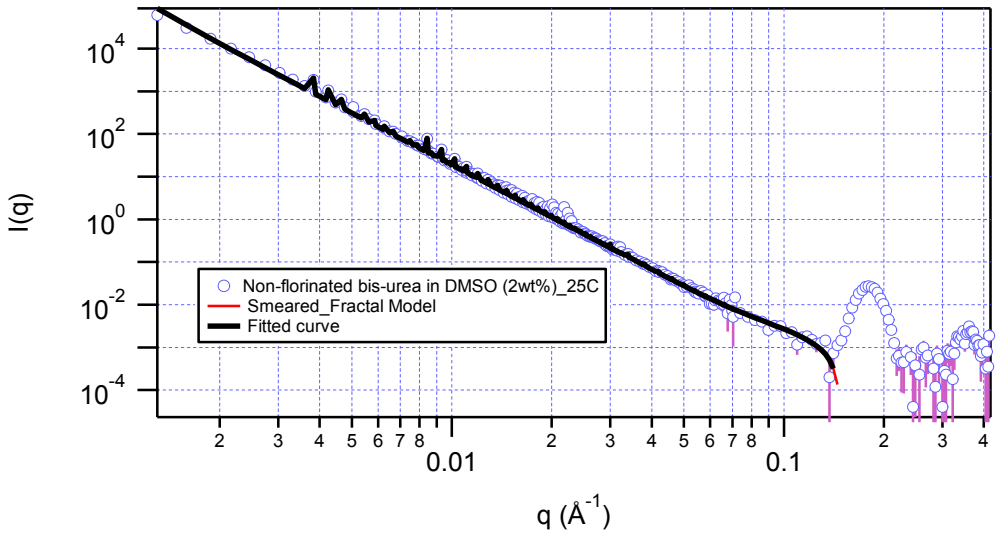


Figure 59 Non-fluorinated Bis-urea gelator in DMSO at 2 wt% concentration at 25 degree C fitted to a Smeared fractal model (low q data)

Volume Fraction (scale)	0.0258968	±	0.008664
Block Radius (Å)	5.2153	±	0.405923
fractal dimension	3.00078	±	0.000269183
correlation length (Å)	6406.52	±	2143.17
SLD block (Å $^{-2}$)	9.82e-07	±	0
SLD solvent (Å $^{-2}$)	5.278e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.0253356	±	0.00393714

chisq = 2732.37
Npnts = 248 Sqrt(χ ^2/N) = 3.31928
Fitted range = [0,247] = 0.001298 < Q < 0.141
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: set6_2scat25C_abs_b_txt

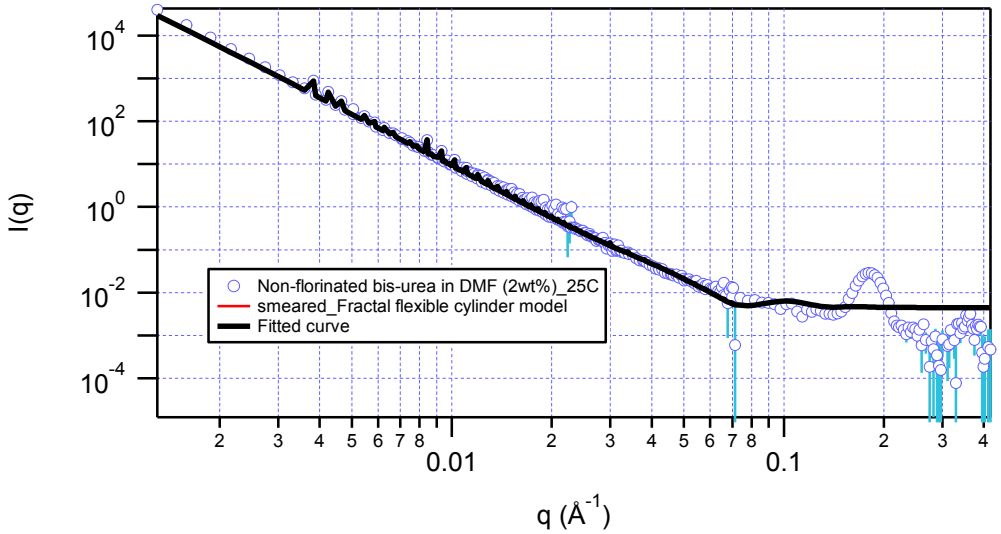


Figure 53 Non-fluorinated Bis-urea gelator in DMF at 5 wt% concentration cooled down to 25 degree C fitted to a Smeared fractal flexible cylinder model (both low and high q data)

Volume Fraction (scale)	0.000187143	±	3.52604e-06
fractal dimension	2.9965	±	0.000279071
correlation length (Å)	2072.42	±	62.4894
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å $^{-2}$)	6.334e-06	±	0
Contour Length (Å)	20.1974	±	0.00708228
Kuhn Length, b (Å)	59.7676	±	0.0231124
Cylinder Radius (Å)	50.5821	±	0.346301
bkgd (cm^{-1} sr^{-1})	0.00444701	±	4.7356e-05

chisq = 22388.8
Npnts = 324 Sqrt(χ^2/N) = 8.31272
Fitted range = [0,323] = 0.001298 < Q < 0.4188
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: set6_2scat25C_abs_b_txt

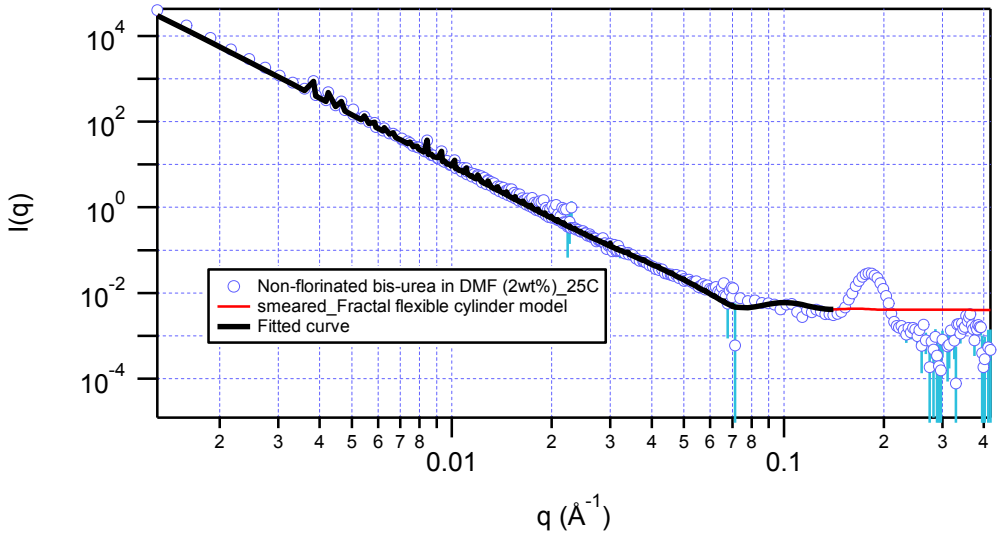


Figure 54 Non-fluorinated Bis-urea gelator in DMF at 2 wt% concentration at 25 degree C fitted to a Smeared fractal flexible cylinder model (low q data)

Volume Fraction (scale)	0.000188983	±	3.47652e-06
fractal dimension	2.99635±	0.000275772	
correlation length (Å)	2139.47±	62.1727	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å $^{-2}$)	6.334e-06	±	0
Contour Length (Å)	20.2472±	0.0153641	
Kuhn Length, b (Å)	59.6474±	0.0248329	
Cylinder Radius (Å)	51.0068±	0.347909	
bkgd (cm^{-1} sr^{-1})	0.00403276	±	0.000113852

chisq = 1799.04
Npnts = 248 Sqrt(χ^2/N) = 2.69336
Fitted range = [0,247] = 0.001298 < Q < 0.141
FitError = No Error FitQuitReason = No Error

to SmearedFractal,
Data file: set6_2scat25C_abs_b_txt

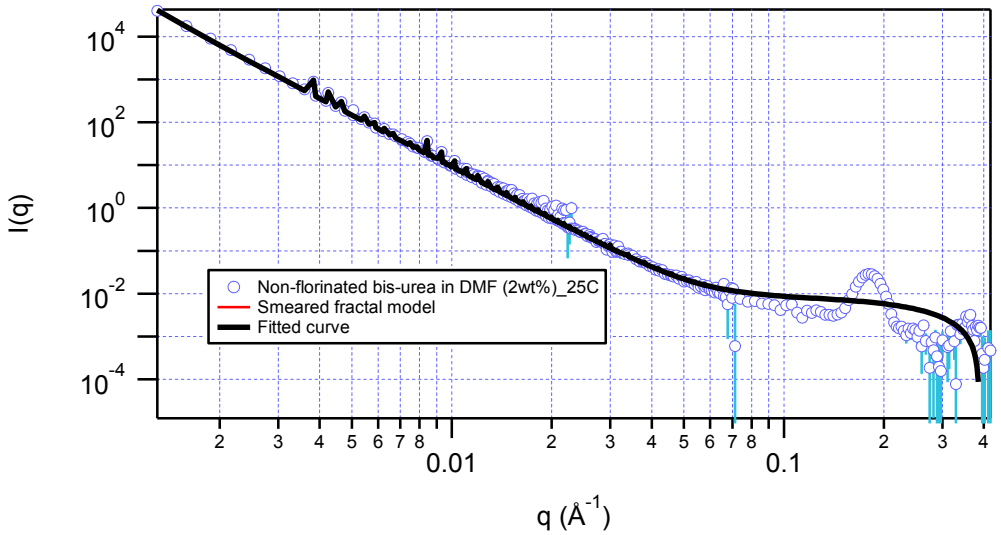


Figure 55 Non-fluorinated Bis-urea gelator in DMF at 2 wt% concentration at 25 degree C fitted to a Smeared fractal model (both low and high q data)

Volume Fraction (scale)	0.00891257	±	0.00269511
Block Radius (Å)	5.20312±	0.366439	
fractal dimension	3.00028±	0.000106666	
correlation length (Å)	7304.09±	2216.43	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å^{-2})	6.334e-06	±	0

bkgd (cm^{-1} sr^{-1})	-0.00632507	±	0.00147191

chisq = 19037.4
Npnts = 324 Sqrt(χ^2/N) = 7.66535
Fitted range = [0,323] = 0.001298 < Q < 0.4188
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: set6_2scat25C_abs_b_txt

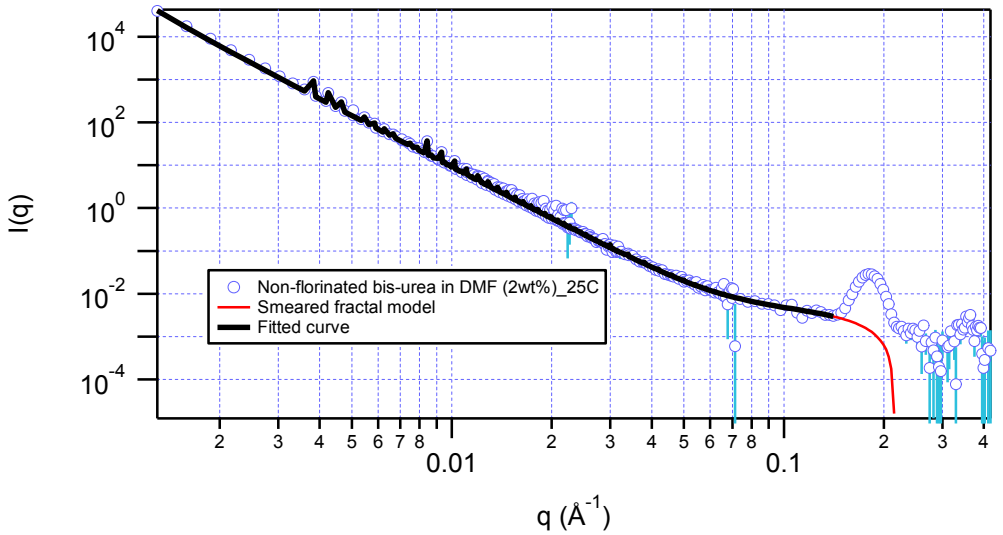


Figure 56 Non-fluorinated Bis-urea gelator in DMF at 2 wt% concentration at 25 degree C fitted to a Smeared fractal model (low q data)

Volume Fraction (scale)	0.0104953	±	0.00787793
Block Radius (Å)	5.47124±	0.905503	

fractal dimension	2.99974±	0.00018552	
correlation length (Å)	8900.13±	6705.4	
SLD block ($Å^{-2}$)	9.82e-07	±	0
SLD solvent ($Å^{-2}$)	6.334e-06	±	0
bkgd ($cm^{-1}\ sr^{-1}$)	-0.0155861	±	0.00591784

chisq = 1328.74
Npnts = 248 Sqrt(χ^2/N) = 2.3147
Fitted range = [0,247] = 0.001298 < Q < 0.141
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: set6_2scat80C_abs_b_txt

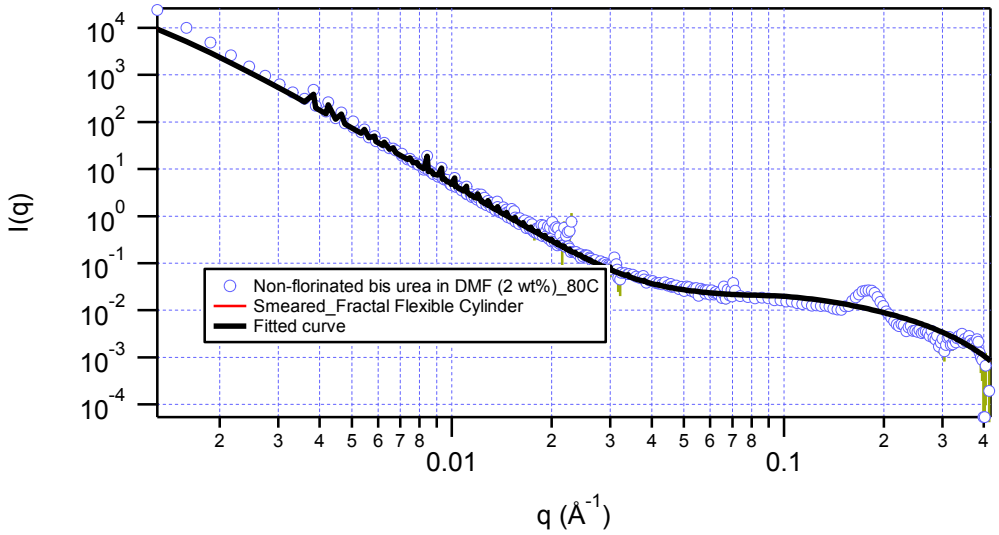


Figure 57 Non-fluorinated Bis-urea gelator in DMF at 2 wt% concentration at 80 degree C fitted to a Smeared fractal flexible cylinder model (both low and high q data)

Volume Fraction (scale)	0.0023247	±	0.000162014
fractal dimension	3.00613±	0.000408195	
correlation length (Å)	1179.45±	11.5144	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å $^{-2}$)	6.334e-06	±	0
Contour Length (Å)	26.2905±	0.0235996	
Kuhn Length, b (Å)	41.7198±	0.0365835	
Cylinder Radius (Å)	6.47832±	0.211899	
bkgd (cm^{-1} sr^{-1})	0.000124234	±	0.000256619

chisq = 10100.1
Npnts = 324 Sqrt(χ^2/N) = 5.58329
Fitted range = [0,323] = 0.001298 < Q < 0.4188
FitError = No Error FitQuitReason = No decrease in chi-squared

Fit to SmearedFractalFlexCyl,
Data file: set6_2scat80C_abs_b_txt

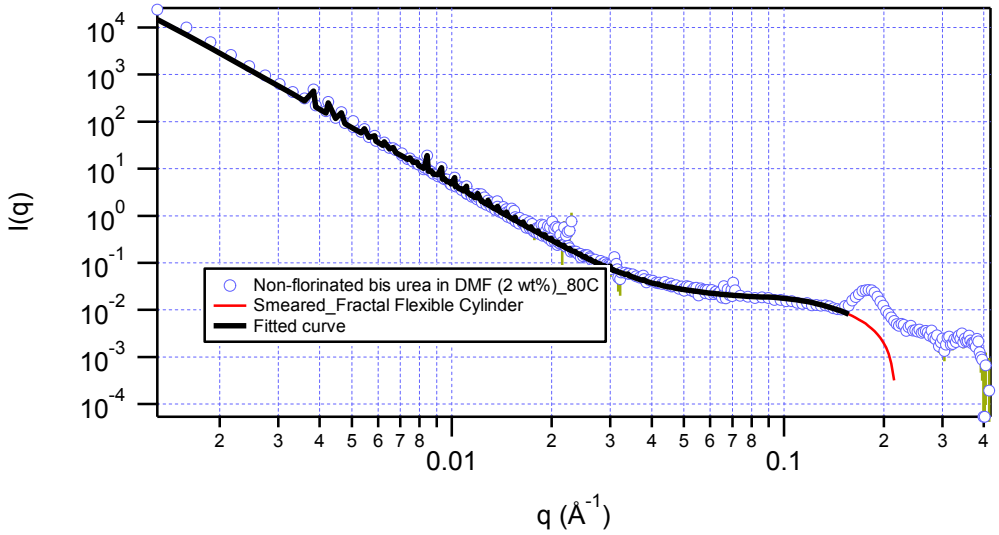


Figure 58 Non-fluorinated Bis-urea gelator in DMF at 2 wt% concentration at 80 degree C fitted to a Smeared fractal flexible cylinder model (low q data)

Volume Fraction (scale)	0.00448687	±	0.00147288
fractal dimension	3.00211±	0.000409075	
correlation length (Å)	1918.39±	137.345	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å $^{-2}$)	6.334e-06	±	0
Contour Length (Å)	26.5034±	0.0404965	
Kuhn Length, b (Å)	40.7421±	0.0613354	
Cylinder Radius (Å)	5.77345±	0.757614	
bkgd (cm^{-1} sr^{-1})	-0.0127782	±	0.00265627

chisq = 1354.3
Npnts = 252 Sqrt(χ ^2/N) = 2.31823
Fitted range = [0,251] = 0.001298 < Q < 0.1567
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: set6_2scat80C_abs_b_txt

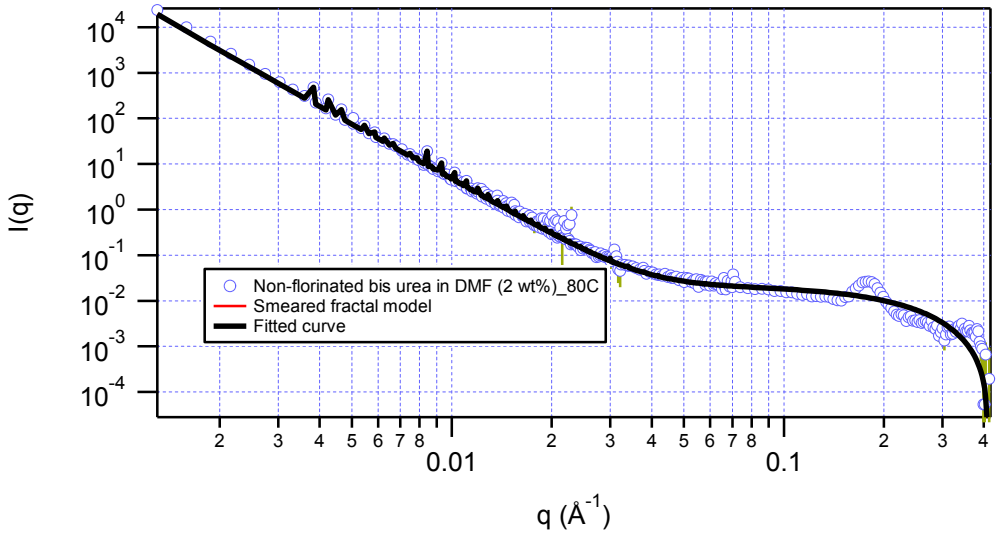


Figure 59 Non-fluorinated Bis-urea gelator in DMF at 2 wt% concentration at 80 degree C fitted to a Smeared fractal model (both low and high q data)

Volume Fraction (scale)	0.00226691	±	8.38259e-05
Block Radius (Å)	9.26886±	0.105871	
fractal dimension	3.00074±	0.000149885	
correlation length (Å)	3592.63±	137.926	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å^{-2})	6.334e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.000418472	±	0.00017872

chisq = 8510.9
Npnts = 324 Sqrt(χ ^2/N) = 5.12525
Fitted range = [0,323] = 0.001298 < Q < 0.4188
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: set6_2scat80C_abs_b_txt

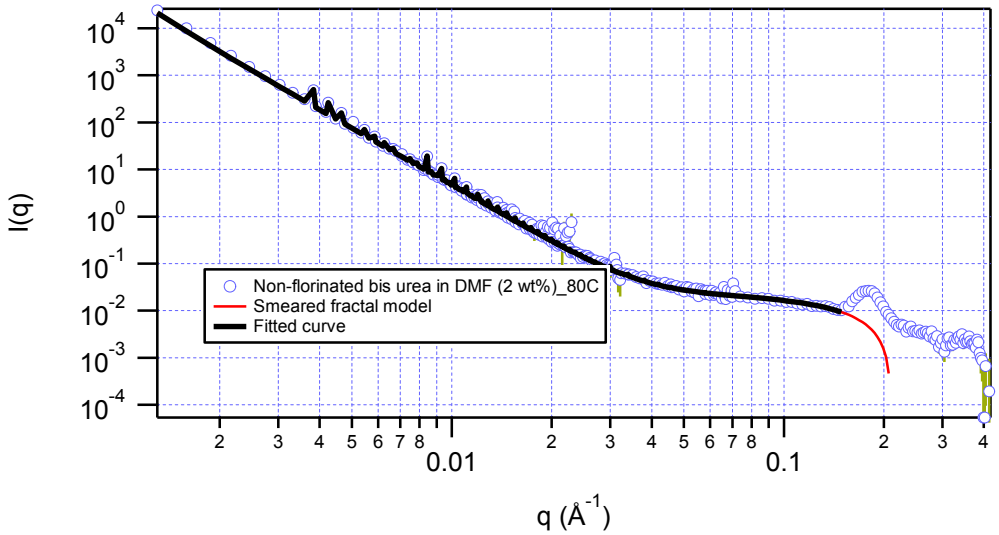


Figure 60 Non-fluorinated Bis-urea gelator in DMF at 2 wt% concentration at 80 degree C fitted to a Smeared fractal model (low q data)

Volume Fraction (scale)	0.00387184	±	0.00210814
Block Radius (Å)	9.50888±	1.13763	
fractal dimension	3.0005 ±	0.000322876	
correlation length (Å)	6134.45±	3357.4	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å^{-2})	6.334e-06	±	0

bkgd (cm^{-1} sr^{-1})	-0.017107	±	0.00767481

chisq = 878.887
Npnts = 250 Sqrt(χ ^2/N) = 1.87498
Fitted range = [0,249] = 0.001298 < Q < 0.1489
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: set6_2_cool25C_abs_b_txt

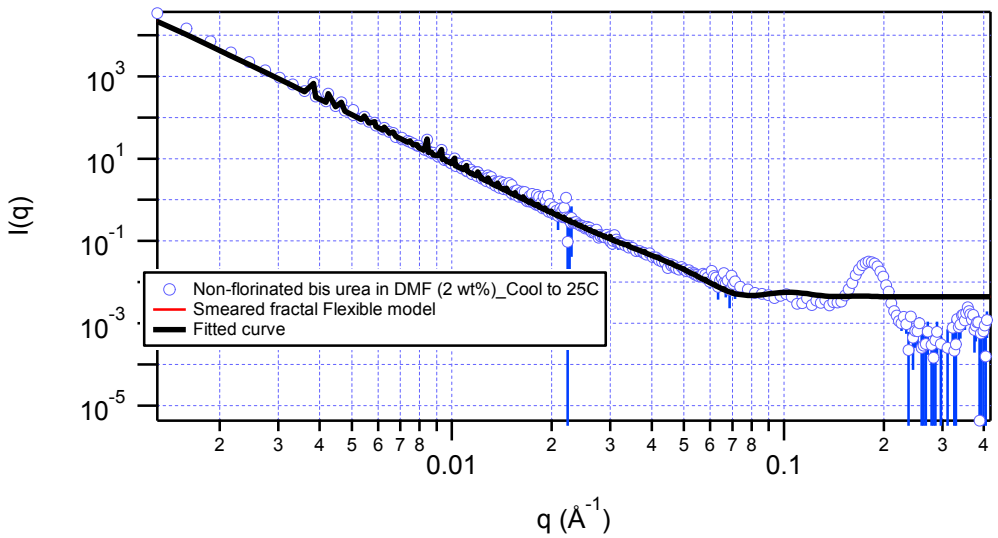


Figure 68 Non-fluorinated Bis-urea gelator in DMF at 2 wt% concentration cooled down to 25 degree C fitted to a Smeared fractal flexible cylinder model (both low and high q data)

Volume Fraction (scale)	0.000137266	±	2.74352e-06
fractal dimension	2.99386±		0.000391798
correlation length (Å)	1860.52±		65.4517

SLD block ($Å^{-2}$)	9.82e-07	±	0
SLD solvent ($Å^{-2}$)	6.334e-06	±	0
Contour Length (Å)	25.9101±	0.0145713	
Kuhn Length, b (Å)	53.6934±	0.0165129	
Cylinder Radius (Å)	49.3846±	0.421282	
bkgd (cm^{-1} sr^{-1})	0.00437734	±	4.73357e-05

chisq = 25947.3
Npnts = 324 Sqrt(χ ^2/N) = 8.94898
Fitted range = [0,323] = 0.001298 < Q < 0.4188
FitError = No Error FitQuitReason = No decrease in chi-squared

Fit to SmearedFractalFlexCyl,
Data file: set6_2_cool25C_abs_b_txt

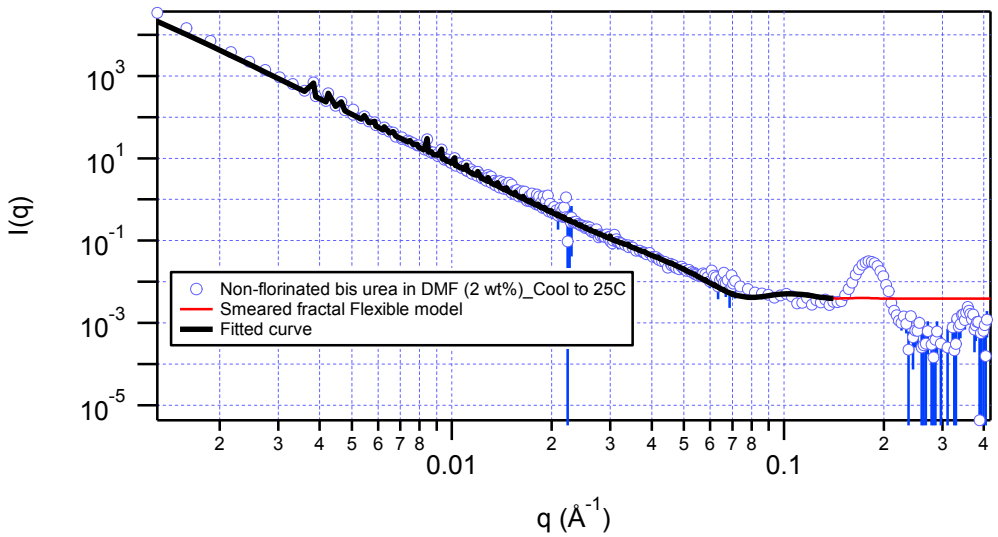


Figure 69 Non-fluorinated Bis-urea gelator in DMF at 2 wt% concentration cooled down to 25 degree C fitted to a Smeared fractal flexible cylinder model (low q data)

Volume Fraction (scale)	0.000135113	±	2.63088e-06

fractal dimension	2.99359±	0.000395	
correlation length (Å)	1810.63±	61.4222	
SLD block ($Å^{-2}$)	9.82e-07	±	0
SLD solvent ($Å^{-2}$)	6.334e-06	±	0
Contour Length (Å)	26.1042±	0.0118376	
Kuhn Length, b (Å)	53.3169±	0.0490105	
Cylinder Radius (Å)	48.9343±	0.427834	
bkgd (cm^{-1} sr^{-1})	0.00384721	±	0.000114632

chisq = 1445.79
Npnts = 248 Sqrt(χ ^2/N) = 2.41449
Fitted range = [0,247] = 0.001298 < Q < 0.141
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: set6_2_cool25C_abs_b_txt

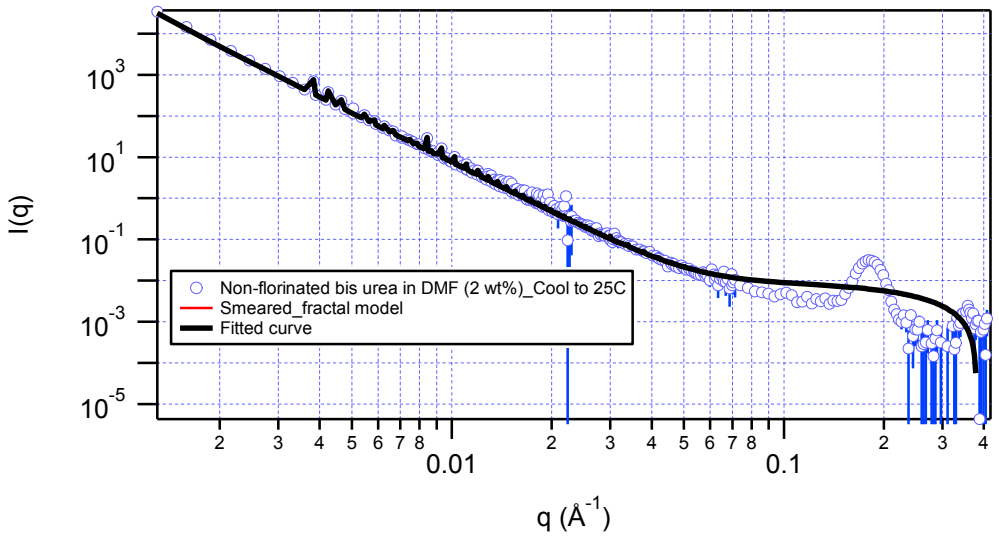


Figure 61 Non-fluorinated Bis-urea gelator in DMF at 2 wt% concentration cooled down to 25 degree C fitted to a Smeared fractal model (both low and high q data)

Volume Fraction (scale)	0.00442319	±	0.000777766
Block Radius (Å)	6.22962±	0.27362	
fractal dimension	2.99952±	9.06045e-05	
correlation length (Å)	4516.8 ±	806.459	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å^{-2})	6.334e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.00376274	±	0.000669515

chisq = 22143.6
Npnts = 324 Sqrt(χ ^2/N) = 8.26707
Fitted range = [0,323] = 0.001298 < Q < 0.4188
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: set6_2_cool25C_abs_b_txt

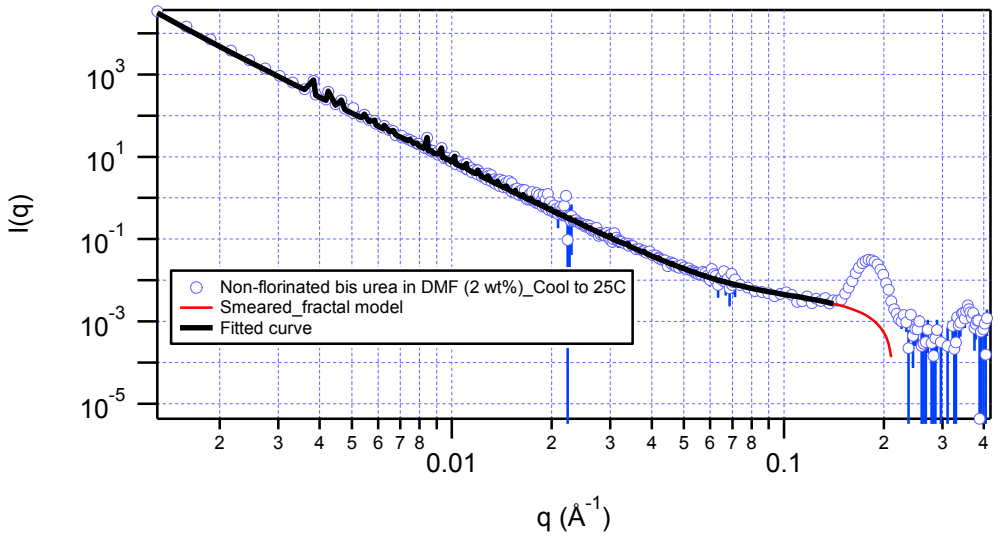


Figure 62 Non-fluorinated Bis-urea gelator in DMF at 2 wt% concentration cooled down to 25 degree C fitted to a Smeared fractal model (low q data)

Volume Fraction (scale)	0.0059325	±	0.00261854
Block Radius (Å)	6.05469±		0.642726
fractal dimension	2.99863±		0.000575994
correlation length (Å)	6345.85±		2836.09
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å^{-2})	6.334e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.0112379	±	0.00286591

chisq = 972.657
Npnts = 248 Sqrt(χ ^2/N) = 1.9804
Fitted range = [0,247] = 0.001298 < Q < 0.141
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: set6_3scat25C_abs_b_txt

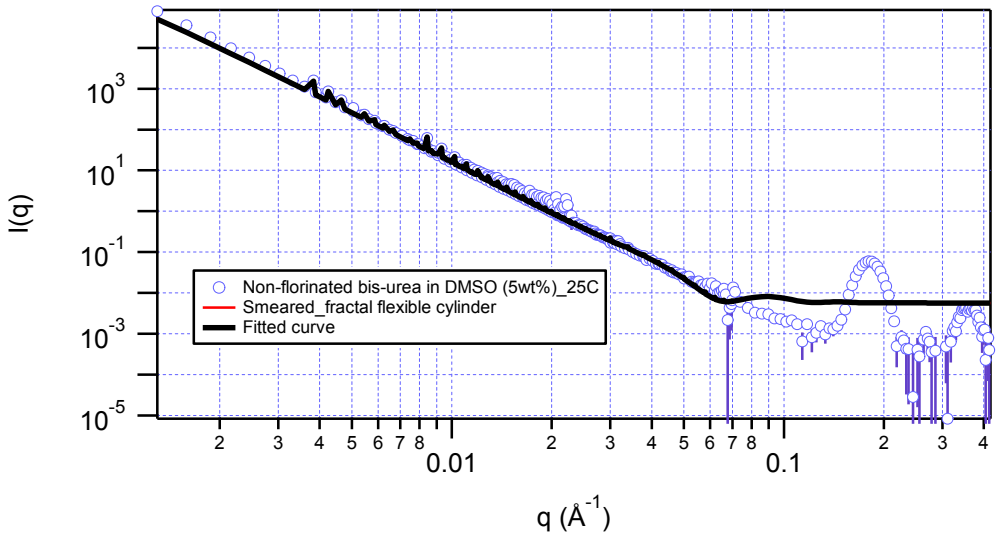


Figure 63 Non-fluorinated Bis-urea gelator in DMSO at 5 wt% concentration at 25 degree C fitted to a Smeared fractal model (low and high q data)

Volume Fraction (scale)	0.000272144	±	4.01551e-06
fractal dimension	2.99934±	0.000234131	
correlation length (Å)	1897.85±	45.4669	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å $^{-2}$)	5.278e-06	±	0
Contour Length (Å)	38.9789±	0.0325834	
Kuhn Length, b (Å)	38.6071±	0.159953	
Cylinder Radius (Å)	57.5839±	0.283664	
bkgd (cm^{-1} sr^{-1})	0.00566592	±	4.62883e-05

chisq = 77259.3
Npnts = 324 Sqrt(χ ^2/N) = 15.442
Fitted range = [0,323] = 0.001298 < Q < 0.4188
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: set6_3scat25C_abs_b_txt

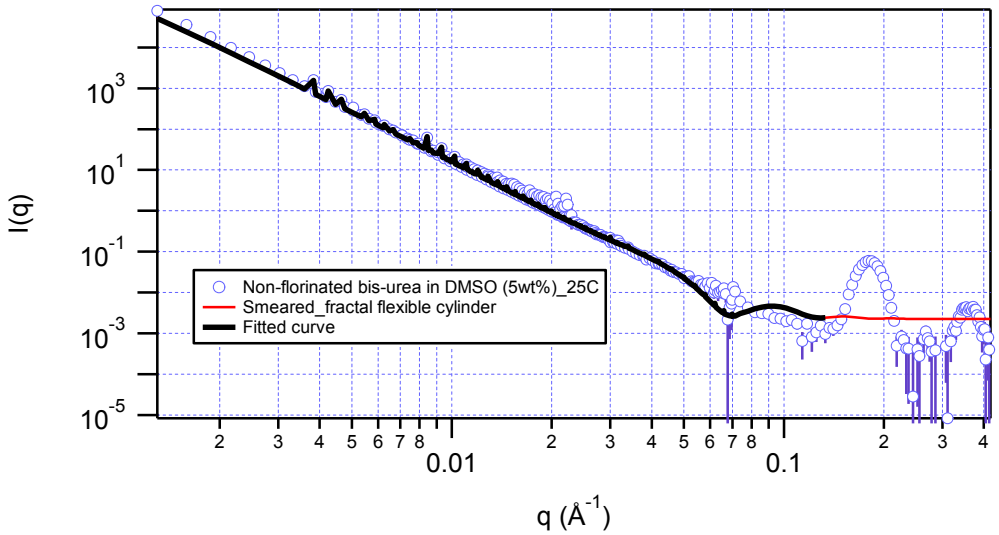


Figure 64 Non-fluorinated Bis-urea gelator in DMSO at 5 wt% concentration at 25 degree C fitted to a Smeared fractal flexible cylinder model (low q data)

Volume Fraction (scale)	0.000285926	±	4.14852e-06
fractal dimension	3.00052±	0.000221688	
correlation length (Å)	1871.51±	40.216	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å $^{-2}$)	5.278e-06	±	0
Contour Length (Å)	39.0356±	0.117085	
Kuhn Length, b (Å)	38.1632±	0.0847979	

Cylinder Radius (Å)	55.5676±	0.272409	
bkgd (cm^{-1} sr^{-1})	0.0022333	±	0.000111313

chisq = 4424.92
Npnts = 246 Sqrt(χ ^2/N) = 4.24116
Fitted range = [0,245] = 0.001298 < Q < 0.1332
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: set6_3scat25C_abs_b_txt

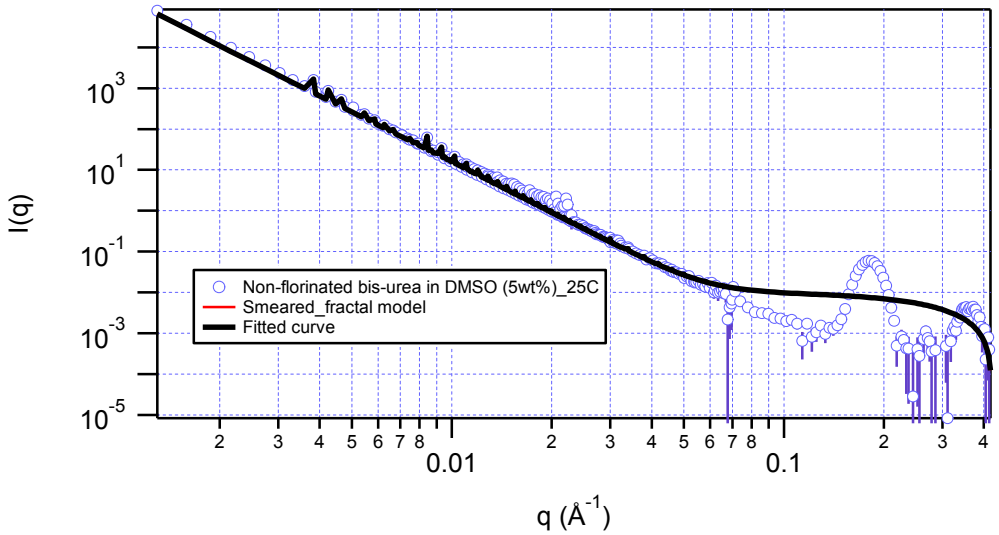


Figure 65 Non-fluorinated Bis-urea gelator in DMSO at 5 wt% concentration at 25 degree C fitted to a Smeared fractal model (low and high q data)

Volume Fraction (scale)	0.0105701	±	0.00118172
Block Radius (Å)	5.62584±	0.153096	
fractal dimension	3.00327±	0.000390851	
correlation length (Å)	3031.83±	338.974	

SLD block ($Å^{-2}$)	9.82e-07	±	0
SLD solvent ($Å^{-2}$)	5.278e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.00420425	±	0.000510833

chisq = 73170.1
Npnts = 324 Sqrt(χ ^2/N) = 15.0278
Fitted range = [0,323] = 0.001298 < Q < 0.4188
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: set6_3scat25C_abs_b_txt

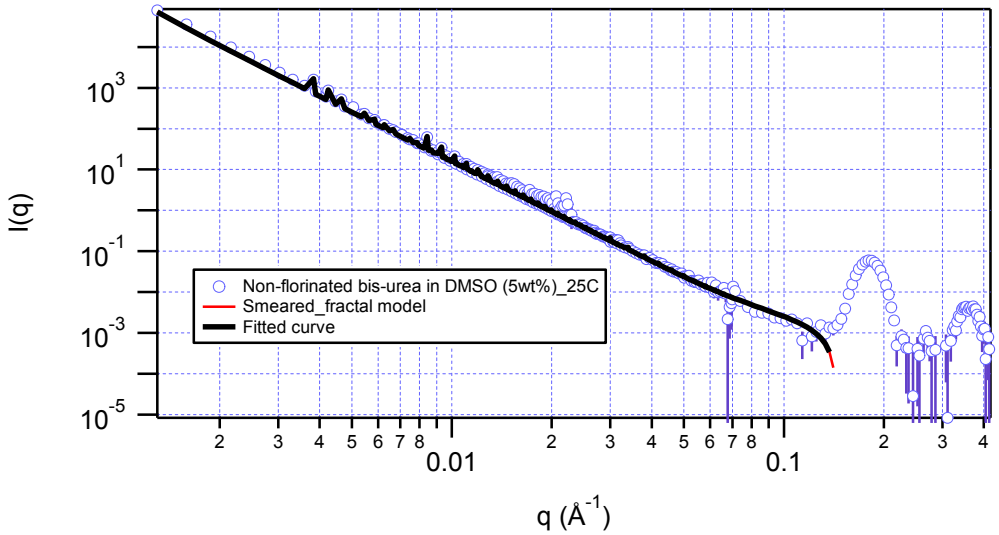


Figure 66 Non-fluorinated Bis-urea gelator in DMSO at 5 wt% concentration at 25 degree C fitted to a Smeared fractal model (low q data)

Volume Fraction (scale)	0.02222±		0.0123586

Block Radius (Å)	5.49399±	0.677266	
fractal dimension	3.00067±	0.000381737	
correlation length (Å)	6682.22±	3716.02	
SLD block ($Å^{-2}$)	9.82e-07	±	0
SLD solvent ($Å^{-2}$)	5.278e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.0252652	±	0.00607293

chisq = 3366.75
Npnts = 247 Sqrt(χ ^2/N) = 3.69196
Fitted range = [0,246] = 0.001298 < Q < 0.1371
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: set6_3scat80C_abs_b_txt

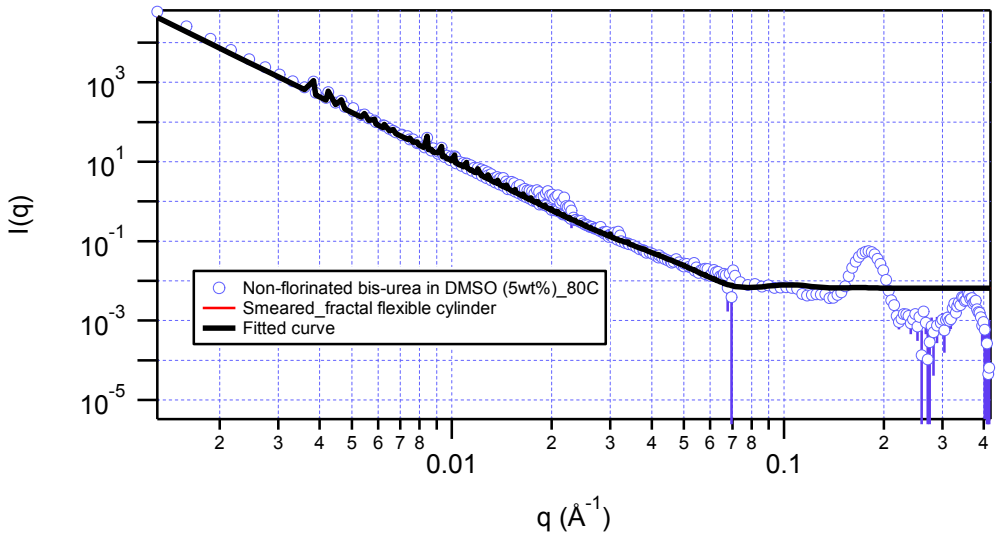


Figure 67. Non-fluorinated Bis-urea gelator in DMSO at 5 wt% concentration at 80 degree C fitted to a Smeared fractal flexible cylinder model (both low and high q data)

Volume Fraction (scale)	0.000283607	±	6.03613e-06
fractal dimension	3.00077±	0.000167105	
correlation length (Å)	2893.84±	102.116	
SLD block ($Å^{-2}$)	9.82e-07	±	0
SLD solvent ($Å^{-2}$)	5.278e-06	±	0
Contour Length (Å)	22.4934±	0.00893391	
Kuhn Length, b (Å)	38.8147±	0.00758556	
Cylinder Radius (Å)	49.7568±	0.438411	
bkgd (cm^{-1} sr^{-1})	0.00652505	±	4.79914e-05

chisq = 65489.1
Npnts = 324 Sqrt(χ ^2/N) = 14.2171
Fitted range = [0,323] = 0.001298 < Q < 0.4188
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: set6_3scat80C_abs_b_txt

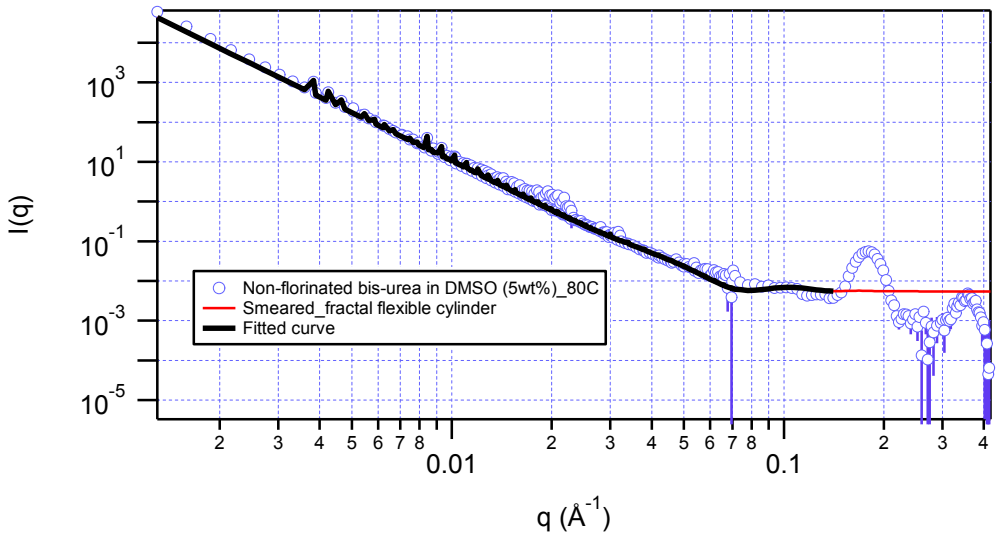


Figure 68 Non-fluorinated Bis-urea gelator in DMSO at 5 wt% concentration at 80 degree C fitted to a Smeared fractal flexible cylinder model (low q data)

Volume Fraction (scale)	0.000291081	±	6.10029e-06
fractal dimension	3.00078±	0.000164334	
correlation length (Å)	2972.16±	102.012	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å $^{-2}$)	5.278e-06	±	0
Contour Length (Å)	22.4024±	0.00175069	
Kuhn Length, b (Å)	38.8257±	0.00637624	
Cylinder Radius (Å)	49.7609±	0.439825	
bkgd (cm^{-1} sr^{-1})	0.00545602	±	0.000112952

chisq = 3258.7
Npnts = 248 Sqrt(χ ^2/N) = 3.6249
Fitted range = [0,247] = 0.001298 < Q < 0.141
FitError = No Error FitQuitReason = No decrease in chi-squared

Fit to SmearedFractal,
Data file: set6_3scat80C_abs_b_txt

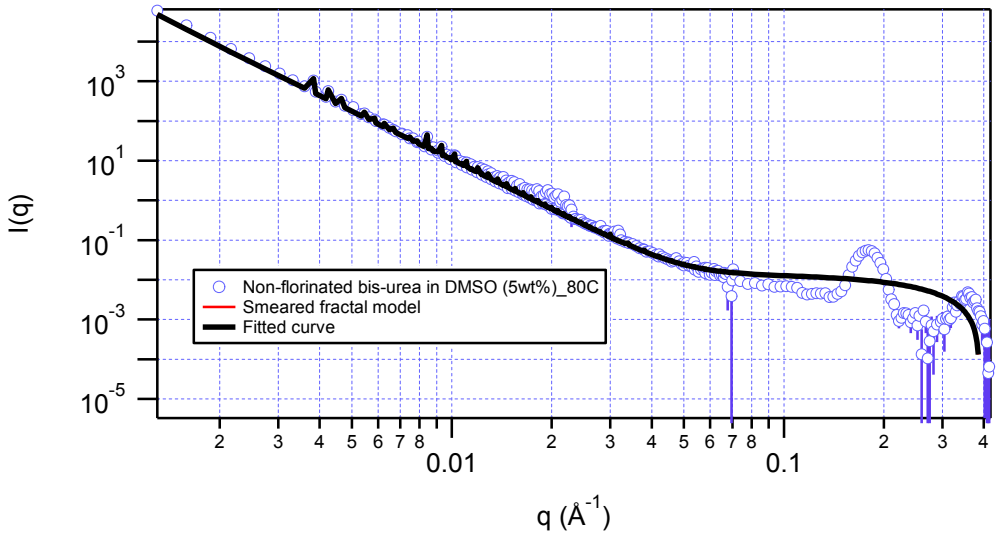


Figure 769 Non-fluorinated Bis-urea gelator in DMSO at 5 wt% concentration at 80 degree C fitted to a Smeared fractal model (low and high q data)

Volume Fraction (scale)	0.0100804	±	0.00131944
Block Radius (Å)	6.27239±	0.204377	
fractal dimension	3.00251±	0.000354015	
correlation length (Å)	4285.27±	561.429	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å^{-2})	5.278e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.0052115	±	0.00074387

chisq = 58252.2
Npnts = 324 Sqrt(χ ^2/N) = 13.4086

Fitted range = [0,323] = 0.001298 < Q < 0.4188
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: set6_3scat80C_abs_b_txt

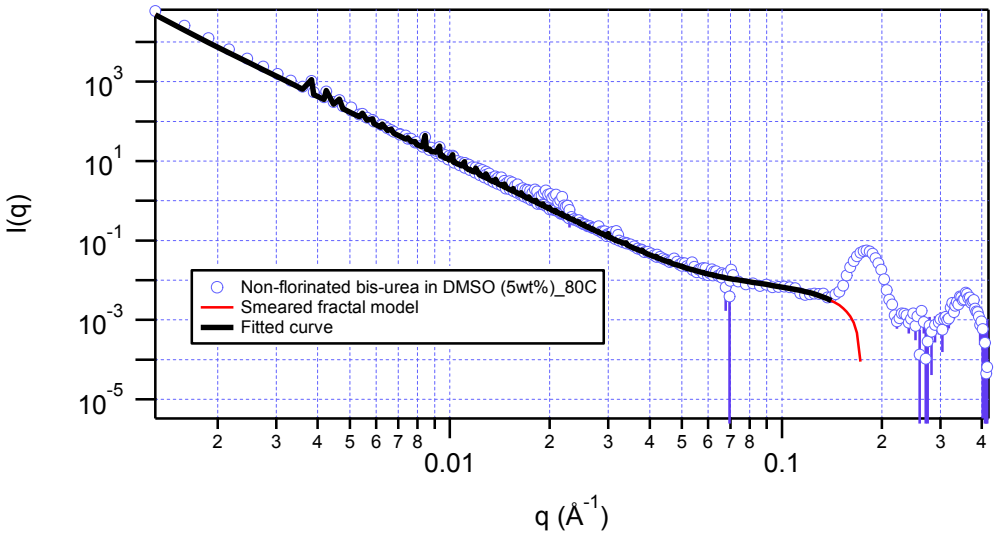


Figure 79 Non-fluorinated Bis-urea gelator in DMSO at 5 wt% concentration at 80 degree C fitted to a Smeared fractal model (low q data)

Volume Fraction (scale)	0.0132777	±	0.00584578
Block Radius (Å)	7.10657±	0.67679	
fractal dimension	3.00104±	0.00047173	
correlation length (Å)	5862.85±	2582.35	

SLD block ($Å^{-2}$)	9.82e-07	±	0
SLD solvent ($Å^{-2}$)	5.278e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.0270278	±	0.00600539

chisq = 2899.76
Npnts = 248 Sqrt(χ ^2/N) = 3.41944
Fitted range = [0,247] = 0.001298 < Q < 0.141
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: set6_3_cool25_abs_b_txt

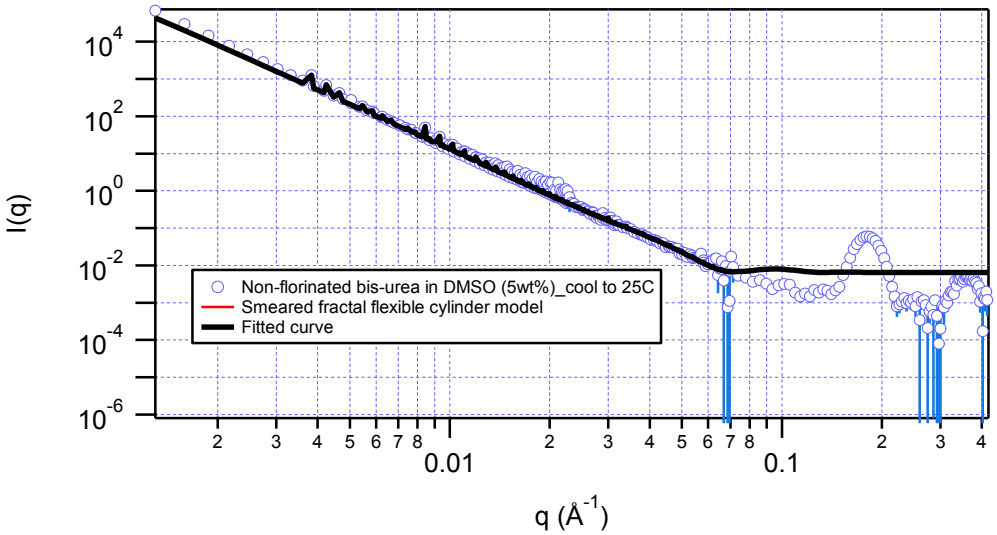


Figure 70 Non-fluorinated Bis-urea gelator in DMSO at 5 wt% concentration cooled down to 25 degree C fitted to a Smeared fractal flexible cylinder model (both low and high q data)

Volume Fraction (scale)	0.000231944	±	4.91926e-06
fractal dimension	2.99741±	0.000251204	

correlation length (Å)	2161.87±	72.0273	
SLD block ($Å^{-2}$)	9.82e-07	±	0
SLD solvent ($Å^{-2}$)	5.278e-06	±	0
Contour Length (Å)	31.1435±	0.019252	
Kuhn Length, b (Å)	36.4921±	0.0395361	
Cylinder Radius (Å)	53.7741±	0.379028	
bkgd (cm^{-1} sr^{-1})	0.00638803	±	4.67613e-05

chisq = 78674.6
Npnts = 324 Sqrt(χ ^2/N) = 15.5828
Fitted range = [0,323] = 0.001298 < Q < 0.4188
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: set6_3_cool25_abs_b_txt

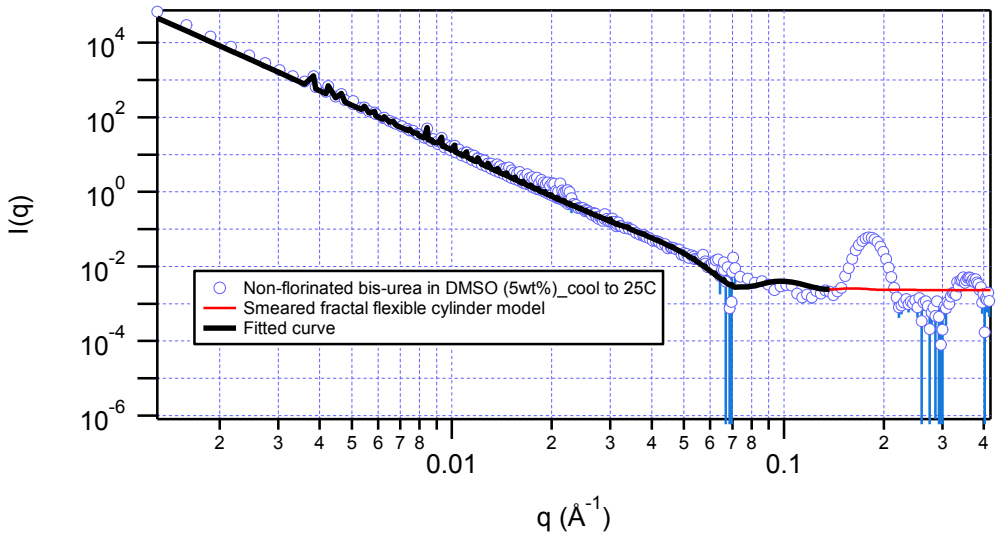


Figure 71 Non-fluorinated Bis-urea gelator in DMSO at 5 wt% concentration cooled down to 25 degree C fitted to a Smeared fractal flexible cylinder model (low q data)

Volume Fraction (scale)	0.000262394	±	4.83774e-06
fractal dimension	2.99876±	0.000219815	
correlation length (Å)	2304.79±	66.9464	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å $^{-2}$)	5.278e-06	±	0
Contour Length (Å)	31.2717±	0.0340122	
Kuhn Length, b (Å)	36.0495±	0.0426208	
Cylinder Radius (Å)	52.0105±	0.348849	
bkgd (cm^{-1} sr^{-1})	0.0023136	±	0.000111241

chisq = 3571.26
Npnts = 247 Sqrt(χ ^2/N) = 3.80244
Fitted range = [0,246] = 0.001298 < Q < 0.1371
FitError = No Error FitQuitReason = No decrease in chi-squared

Fit to SmearedFractal,
Data file: set6_3_cool25_abs_b_txt

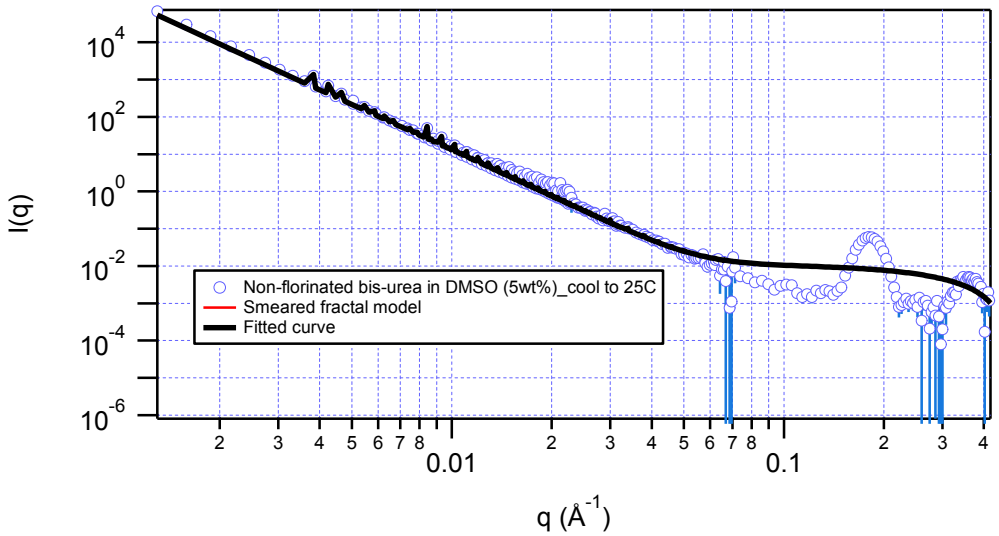


Figure 72 Non-fluorinated Bis-urea gelator in DMSO at 5 wt% concentration cooled down to 25 degree C fitted to a Smeared fractal model (low and high q data)

Volume Fraction (scale)	0.00853758	±	0.00097071
Block Radius (Å)	5.90371±	0.166506	
fractal dimension	3.00318±	0.000399867	
correlation length (Å)	2976.3 ±	339.583	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å^{-2})	5.278e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.00252074	±	0.000473132

chisq = 74990.6
Npnts = 324 Sqrt(χ ^2/N) = 15.2136
Fitted range = [0,323] = 0.001298 < Q < 0.4188
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: set6_3_cool25_abs_b_txt

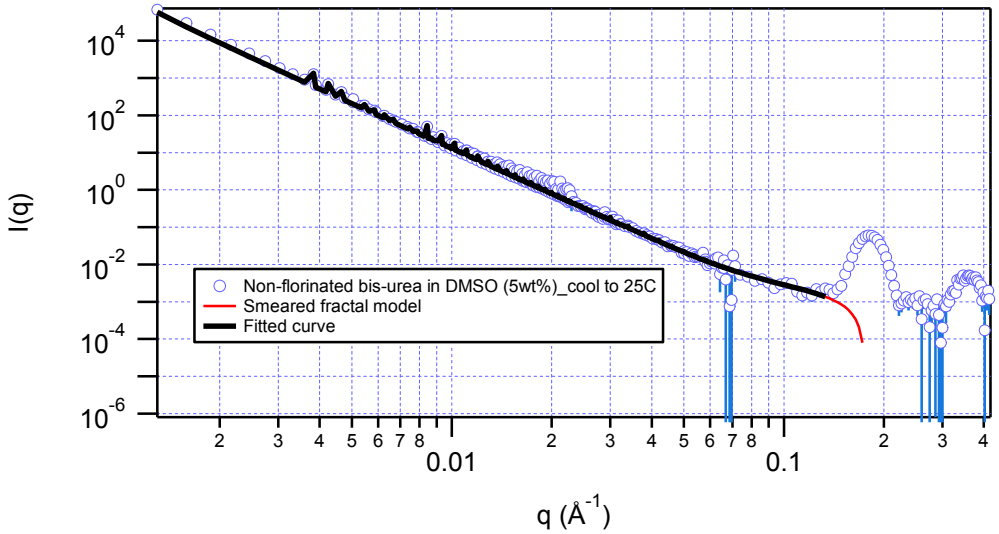


Figure 73 Non-fluorinated Bis-urea gelator in DMSO at 5 wt% concentration cooled down to 25 degree C fitted to a Smeared fractal model (low q data)

Volume Fraction (scale)	0.016065	±	0.00728533
Block Radius (Å)	5.28089±	0.61883	
fractal dimension	3.00038±	0.00019698	
correlation length (Å)	5949.84±	2706.4	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å^{-2})	5.278e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.0154688	±	0.00374759

chisq = 3014.07
Npnts = 246 Sqrt(χ ^2/N) = 3.50033
Fitted range = [0,245] = 0.001298 < Q < 0.1332
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: set6_4scat25C_abs_b_txt

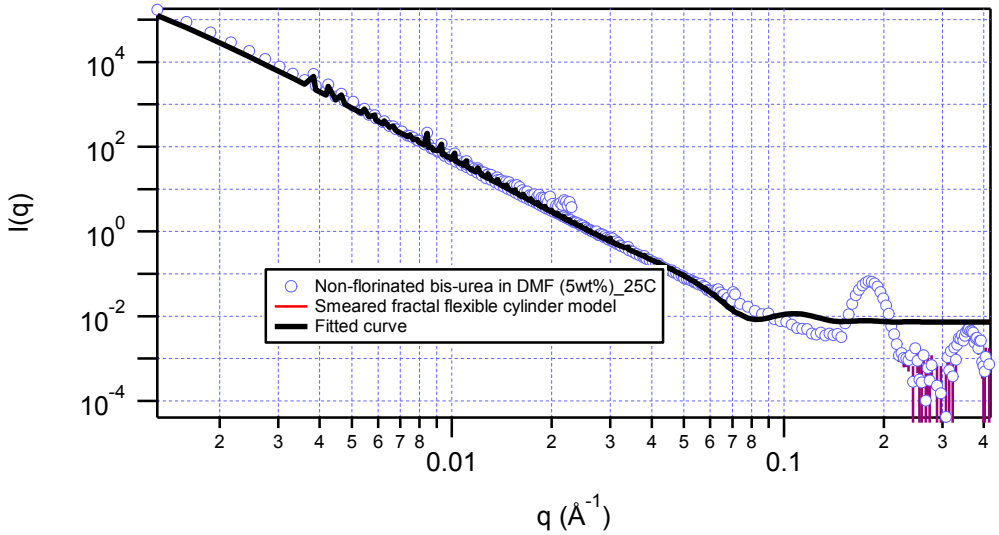


Figure 74. Non-fluorinated Bis-urea gelator in DMF at 5 wt% concentration at 25 degree C fitted to a Smeared fractal flexible cylinder model (both low and high q data)

Volume Fraction (scale)	0.000513121	±	4.41295e-06
fractal dimension	3.00126±	0.000185784	
correlation length (Å)	1399.56±	17.9192	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å $^{-2}$)	6.334e-06	±	0
Contour Length (Å)	34.0226±	0.0276892	
Kuhn Length, b (Å)	35.946 ±	0.0603705	

Cylinder Radius (Å)	47.6333±	0.134748	
bkgd (cm^{-1} sr^{-1})	0.00721758	±	5.0399e-05

chisq = 86760.3
Npnts = 324 Sqrt(χ^2/N) = 16.3639
Fitted range = [0,323] = 0.001298 < Q < 0.4188
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: set6_4scat25C_abs_b_txt

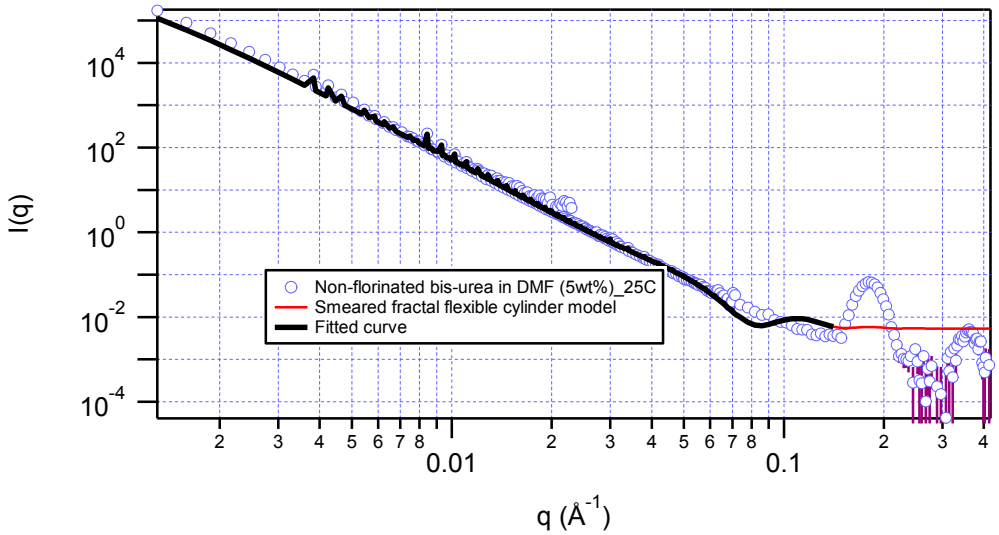


Figure 75 Non-fluorinated Bis-urea gelator in DMF at 5 wt% concentration at 25 degree C fitted to a Smeared fractal flexible cylinder model (low q data)

Volume Fraction (scale)	0.000490796	±	4.15601e-06
fractal dimension	3.00127±	0.000198549	

correlation length (Å)	1280.54±	16.5737	
SLD block ($Å^{-2}$)	9.82e-07	±	0
SLD solvent ($Å^{-2}$)	6.334e-06	±	0
Contour Length (Å)	34.5525±	0.0542503	
Kuhn Length, b (Å)	35.72 ±	0.0121842	
Cylinder Radius (Å)	46.5616±	0.13503	
bkgd (cm^{-1} sr^{-1})	0.00527778	±	0.00011928

chisq = 7239.38
Npnts = 248 Sqrt(χ ^2/N) = 5.40287
Fitted range = [0,247] = 0.001298 < Q < 0.141
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: set6_4scat25C_abs_b_txt

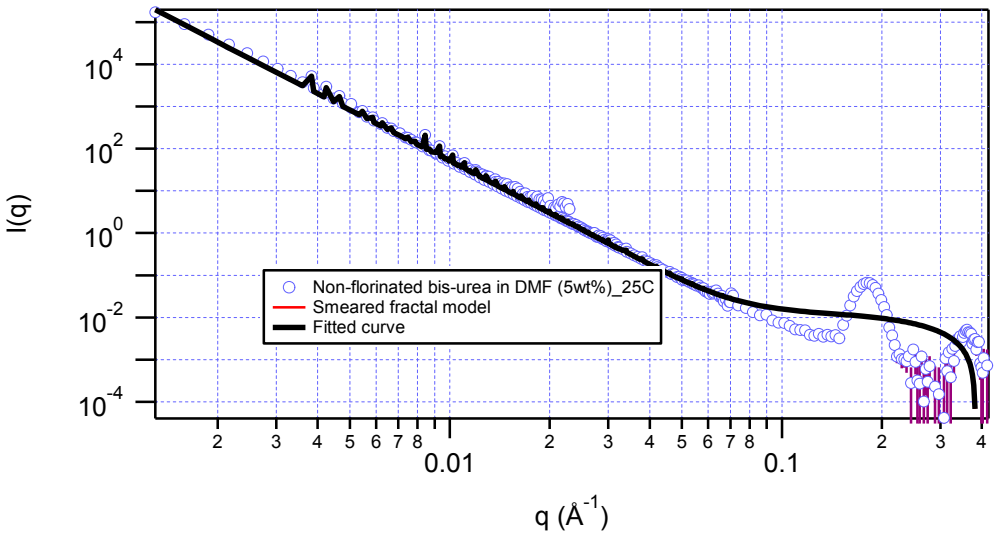


Figure 76 Non-fluorinated Bis-urea gelator in DMF at 5 wt% concentration at 25 degree C fitted to a Smeared fractal model (low and high q data)

Volume Fraction (scale)	0.0185479	±	0.0013052
Block Radius (Å)	4.95684±	0.0825559	
fractal dimension	3.00231±	0.000180932	
correlation length (Å)	2647.61±	187.161	
SLD block ($Å^{-2}$)	9.82e-07	±	0
SLD solvent ($Å^{-2}$)	6.334e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.012645	±	0.000631097

chisq = 78314.7
Npnts = 324 Sqrt(χ^2/N) = 15.5471
Fitted range = [0,323] = 0.001298 < Q < 0.4188
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: set6_4scat25C_abs_b_txt

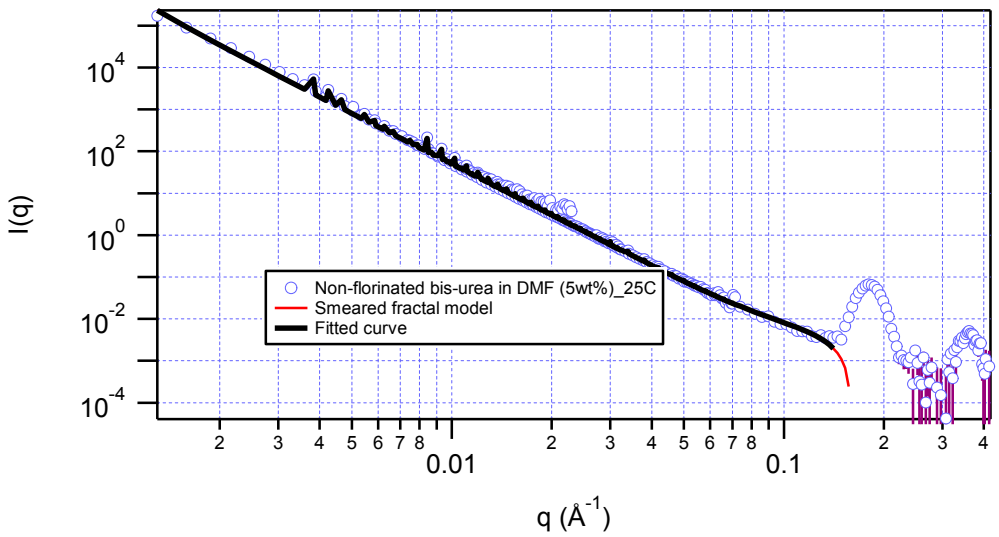


Figure 77 Non-fluorinated Bis-urea gelator in DMF at 5 wt% concentration at 25 degree C fitted to a Smeared fractal model (low and high q data)

Volume Fraction (scale)	0.0625673	±	0.0375071
Block Radius (Å)	4.65844±	0.588822	
fractal dimension	3.00027±	0.000161316	
correlation length (Å)	9301.63±	5575.4	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å^{-2})	6.334e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.0684226	±	0.0174035

chisq = 4115.35
Npnts = 248 Sqrt(χ ^2/N) = 4.07359
Fitted range = [0,247] = 0.001298 < Q < 0.141
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: set6_4scat80C_abs_b_txt

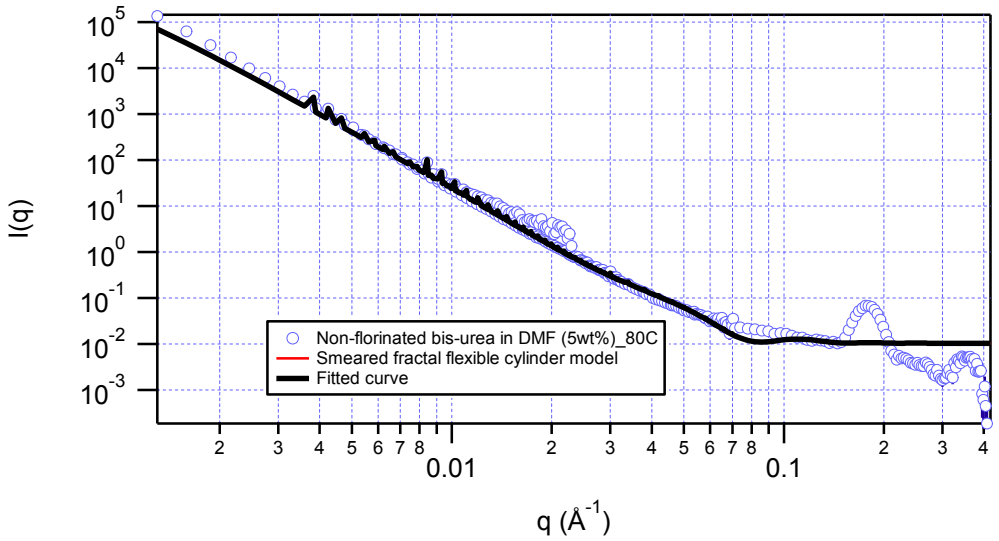


Figure 88 Non-fluorinated Bis-urea gelator in DMF at 5 wt% concentration at 80 degree C fitted to a Smeared fractal flexible cylinder model (both low and high q data)

Volume Fraction (scale)	0.000311728	±	3.26548e-06
fractal dimension	3.00506±	0.00022129	
correlation length (Å)	1585.16±	26.7505	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å $^{-2}$)	6.334e-06	±	0
Contour Length (Å)	36.056 ±	0.0676509	
Kuhn Length, b (Å)	35.7901±	0.0613985	
Cylinder Radius (Å)	46.1284±	0.197042	
bkgd (cm^{-1} sr^{-1})	0.0103697	±	5.29357e-05

chisq = 80056.2
Npnts = 324 Sqrt(χ^2/N) = 15.719
Fitted range = [0,323] = 0.001298 < Q < 0.4188
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: set6_4scat80C_abs_b_txt

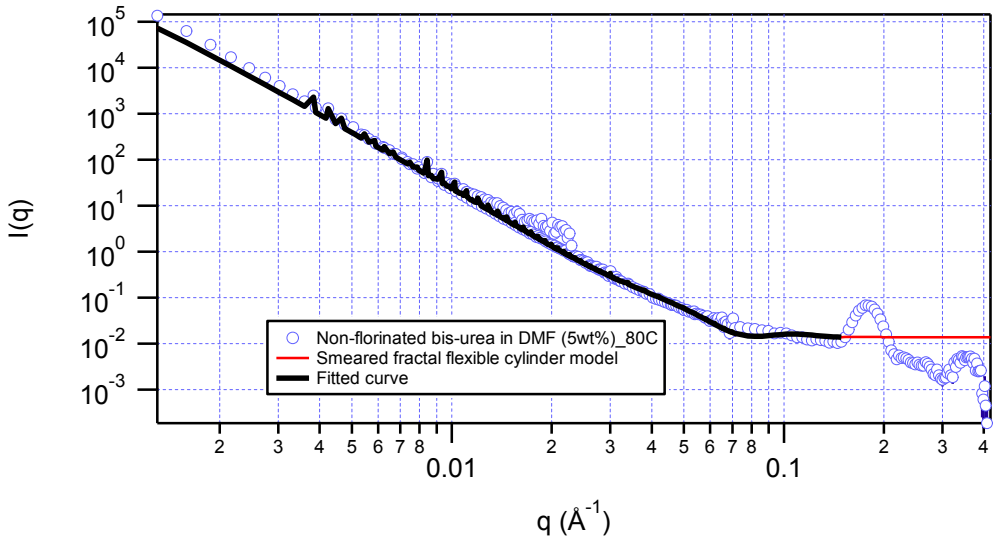


Figure 89 Non-fluorinated Bis-urea gelator in DMF at 5 wt% concentration at 80 degree C fitted to a Smeared fractal flexible cylinder model (low q data)

Volume Fraction (scale)	0.000282925	±	3.45643e-06
fractal dimension	3.00383±	0.000221414	
correlation length (Å)	1727.71±	32.2771	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å $^{-2}$)	6.334e-06	±	0
Contour Length (Å)	36.1135±	0.0809172	
Kuhn Length, b (Å)	33.9615±	0.0591918	
Cylinder Radius (Å)	47.7223±	0.227045	
bkgd (cm^{-1} sr^{-1})	0.0137678	±	0.00011747

chisq = 5987.82
Npnts = 250 Sqrt(χ^2/N) = 4.894

Fitted range = [0,249] = 0.001298 < Q < 0.1489
FitError = No Error FitQuitReason = No decrease in chi-squared

Fit to SmearedFractal,
Data file: set6_4scat80C_abs_b_txt

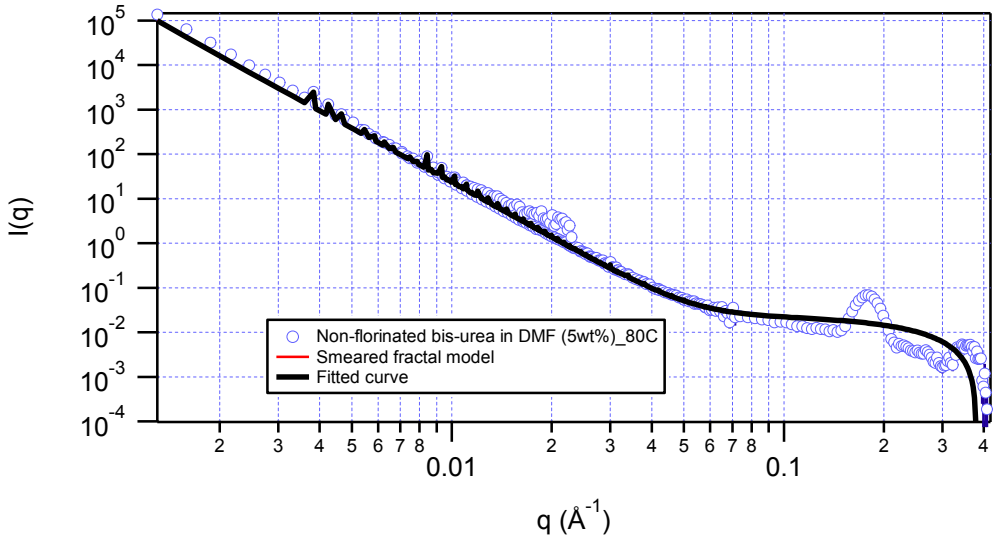


Figure 78 Non-fluorinated Bis-urea gelator in DMF at 5 wt% concentration at 80 degree C fitted to a Smeared fractal model (low and high q data)

Volume Fraction (scale)	0.011256	±	0.000960145
Block Radius (Å)	6.27339±	0.134066	
fractal dimension	3.00204±	0.000205683	
correlation length (Å)	3461.72±	297.358	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å^{-2})	6.334e-06	±	0

bkgd (cm^{-1} sr^{-1}) -0.00963339 ± 0.000835386

chisq = 61378.4
Npnts = 324 Sqrt(χ ^2/N) = 13.7637
Fitted range = [0,323] = 0.001298 < Q < 0.4188
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal
Data file: set6_4scat80C_abs_b_txt

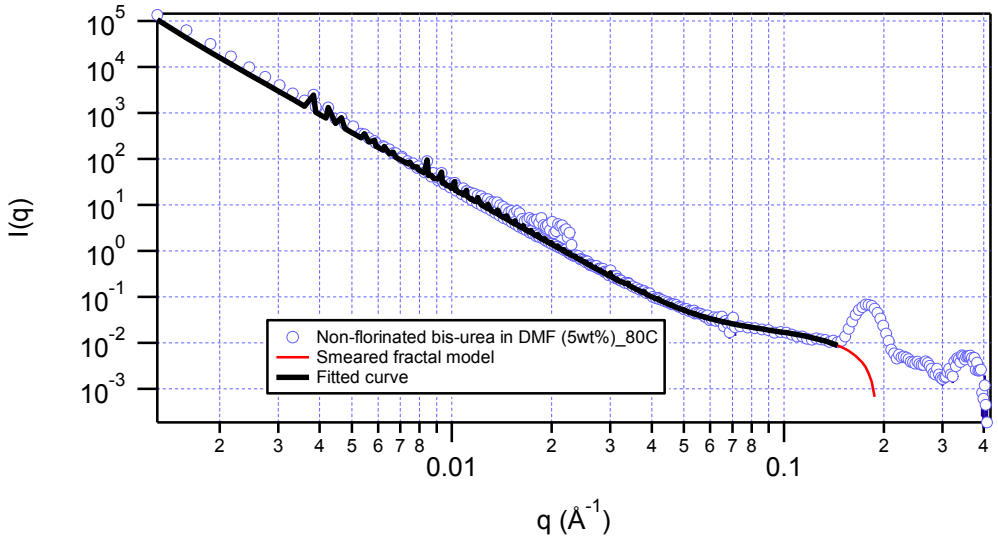


Figure 79 Non-fluorinated Bis-urea gelator in DMF at 5 wt% concentration at 80 degree C fitted to a Smeared fractal model (low q data)

Volume Fraction (scale)	0.0197285	±	0.0102853
Block Radius (Å)	6.83763±		0.756084

fractal dimension	3.00074±	0.000388405	
correlation length (Å)	6217.14±	3241.04	
SLD block ($Å^{-2}$)	9.82e-07	±	0
SLD solvent ($Å^{-2}$)	6.334e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.0533423	±	0.0146456

chisq = 4400.54
Npnts = 249 Sqrt(χ^2/N) = 4.20391
Fitted range = [0,248] = 0.001298 < Q < 0.1449
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: set6_4_cool25_abs_b_txt

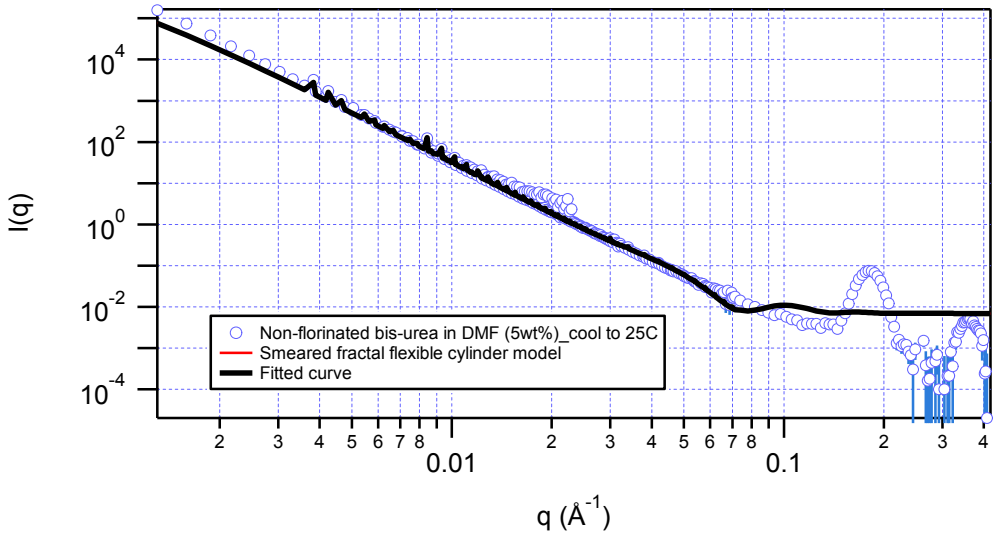


Figure 92 Non-fluorinated Bis-urea gelator in DMF at 5 wt% concentration cooled down to 25 degree C fitted to a Smeared fractal flexible cylinder model (both low and high q data)

Volume Fraction (scale)	0.000399939	±	4.33449e-06
fractal dimension	2.99989±	0.000280766	
correlation length (Å)	1380.3 ±	22.5035	
SLD block ($Å^{-2}$)	9.82e-07	±	0
SLD solvent ($Å^{-2}$)	6.334e-06	±	0
Contour Length (Å)	33.3266±	0.077899	
Kuhn Length, b (Å)	46.5913±	0.133244	
Cylinder Radius (Å)	50.7789±	0.178251	
bkgd (cm^{-1} sr^{-1})	0.00688075	±	5.22515e-05

chisq = 87368.2
Npnts = 324 Sqrt(χ ^2/N) = 16.4212
Fitted range = [0,323] = 0.001298 < Q < 0.4188
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractalFlexCyl,
Data file: set6_4_cool25_abs_b_txt

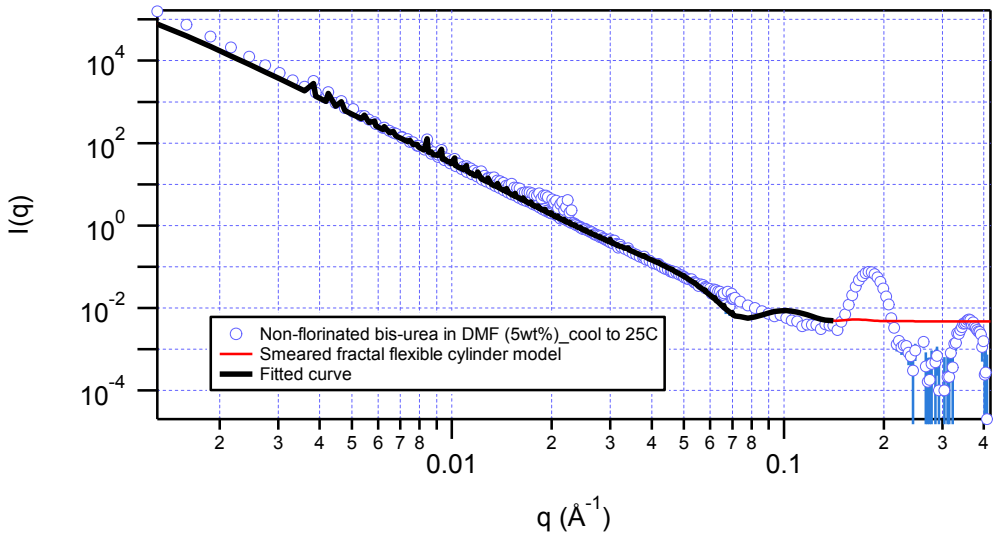


Figure 80. Non-fluorinated Bis-urea gelator in DMF at 5 wt% concentration cooled down to 25 degree C fitted to a Smeared fractal flexible cylinder model (low q data)

Volume Fraction (scale)	0.000394626	±	4.27791e-06
fractal dimension	2.99972±	0.000280029	
correlation length (Å)	1405.17±	22.9396	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å $^{-2}$)	6.334e-06	±	0
Contour Length (Å)	34.3127±	0.0483585	
Kuhn Length, b (Å)	45.1583±	0.0201203	
Cylinder Radius (Å)	50.7005±	0.181039	
bkgd (cm^{-1} sr^{-1})	0.00466354	±	0.000119003

chisq = 6027.46
Npnts = 248 Sqrt(χ ^2/N) = 4.92994
Fitted range = [0,247] = 0.001298 < Q < 0.141
FitError = No Error FitQuitReason = No decrease in chi-squared

Fit to SmearedFractal,
Data file: set6_4_cool25_abs_b_txt

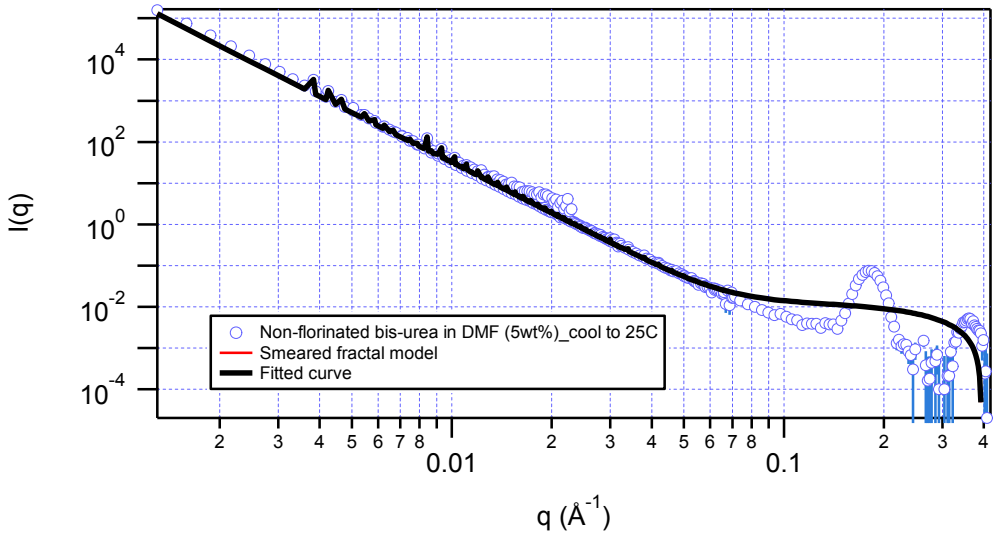


Figure 81 Non-fluorinated Bis-urea gelator in DMF at 5 wt% concentration cooled down to 25 degree C fitted to a Smeared fractal model (low and high q data)

Volume Fraction (scale)	0.0136826	±	0.00164759
Block Radius (Å)	5.18659±	0.147781	
fractal dimension	3.00178±	0.000240587	
correlation length (Å)	3132.28±	378.857	
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å^{-2})	6.334e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.00944391	±	0.000888972

chisq = 80610.3
Npnts = 324 Sqrt(χ^2/N) = 15.7733
Fitted range = [0,323] = 0.001298 < Q < 0.4188
FitError = No Error FitQuitReason = No Error

Fit to SmearedFractal,
Data file: set6_4_cool25_abs_b_txt

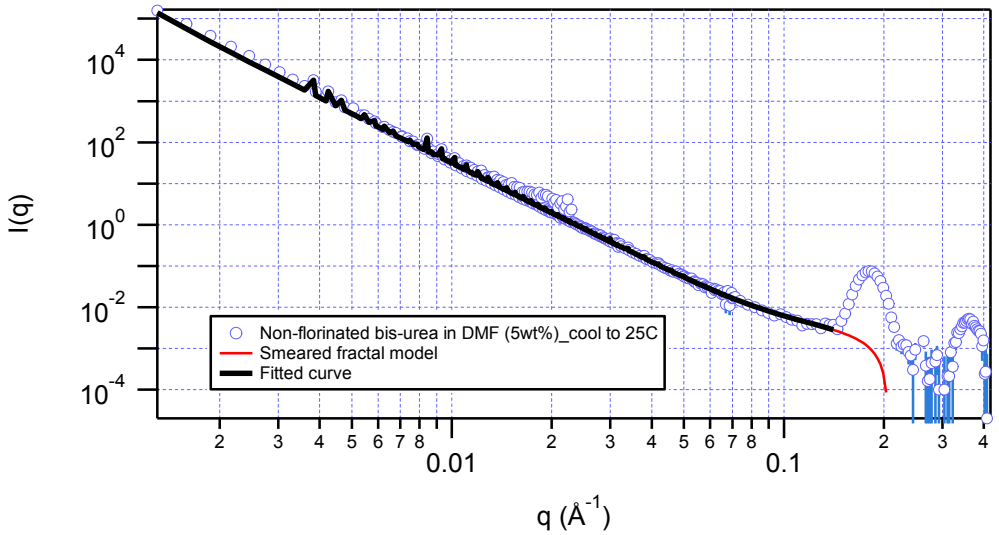


Figure 82. Non-fluorinated Bis-urea gelator in DMF at 5 wt% concentration cooled down to 25 degree C fitted to a Smeared fractal model (low q data only)

Volume Fraction (scale)	0.0275813	±	0.0151294
Block Radius (Å)	4.41458±		0.581032
fractal dimension	2.99996±		3.56635e-05
correlation length (Å)	6705	±	3688.47
SLD block (Å^{-2})	9.82e-07	±	0
SLD solvent (Å^{-2})	6.334e-06	±	0
bkgd (cm^{-1} sr^{-1})	-0.0242616	±	0.00653102

chisq = 3686.01
Npnts = 248 Sqrt(χ ^2/N) = 3.85525
Fitted range = [0,247] = 0.001298 < Q < 0.141

FitError = No Error FitQuitReason = No Error

Table 1. Gaussian Fit Results For Fluorinated Bis-Urea Gelator

High q X0 peak data points_florinated gelator_Gaussain Fit

Conc. (wt%)	Solvent	Code	Temp (°C)	Peak height 1	Error bar	Peak height 1	Error bar	D spacing	D spacing	Peak position ratio
2	DMSO	G1	25	0.16217	0.00124	0.32767	0.00044	38.72479	19.16562	2.020534
2	DMSO	G1	80	0.16064	0.00117	0.33059	0.00651	39.09363	18.99634	2.057956
2	DMSO	G1	cool	0.16302	0.00147	0.35577	0.0432	38.52288	17.65185	2.18237
5	DMSO	G2	25	0.1614	0.00037	0.31997	0.00507	38.90954	19.62684	1.982466
5	DMSO	G2	80	0.16203	0.00094	0.31929	0.00491	38.75825	19.66864	1.970561
5	DMSO	G2	cool	0.1609	0.00113	0.31897	0.00523	39.03045	19.68837	1.982411
2	DMF	G4	25	0.15804	0.00136	0.32266	0.0142	39.73678	19.46321	2.041635
2	DMF	G4	80	STRUCTRUE BROKE						
2	DMF	G4	cool	0.16161	0.00094	0.31246	0.00924	38.85898	20.09857	1.933427
5	DMF	G5	25	0.1594	0.00031	0.3207	0.00172	39.39774	19.58216	2.011924
5	DMF	G5	80	STRUCTRUE BROKE						
5	DMF	G5	cool	0.15855	0.00061	0.32037	0.0024	39.60896	19.60233	2.020624

Table 2. Gaussian Fit Results For Non-fluorinated Bis-Urea Gelator

High q X0 peak data points_non-florinated gelator_Gaussain Fit

Conc. (wt%)	Solvent	Code	Temp (°C)	Peak height 1	Error bar	Peak height 1	Error bar	D spacing	D spacing	Peak position ratio
2	DMSO	6-1	25	0.18062	0.000124	0.35776	0.00018 3	34.76913	17.55367	1.980733
2	DMSO	6-1	80	0.17846	0.000277	0.34822	0.00337	35.18996	18.03458	1.95125
2	DMSO	6-1	Cool	0.18119	0.00102	0.36064	0.00285	34.65975	17.41349	1.990397
5	DMSO	6-3	25	0.18135	8.04E-05	0.36085	0.00092 3	34.62917	17.40335	1.989799
5	DMSO	6-3	80	0.17912	0.000122	0.35501	0.0013	35.06029	17.68964	1.981967
5	DMSO	6-3	cool	0.1814	9.05E-05	0.35922	0.00115	34.61963	17.48232	1.980265
2	DMF	6-2	25	0.1809	0.000134	0.35992	0.00274	34.71531	17.44832	1.989608
2	DMF	6-2	80	0.17781	4.28E-04	0.34252	0.0029	35.31866	18.33476	1.926326
2	DMF	6-2	Cool	0.18113	0.000153	0.35763	0.00187	34.67123	17.56005	1.974438
5	DMF	6-4	25	0.1811	9.62E-05	0.36017	0.0014	34.67697	17.43621	1.988791
5	DMF	6-4	80	0.1787	0.000121	0.35269	0.00143	35.14271	17.80601	1.973643
5	DMF	6-4	Cool	0.18129	7.39E-05	0.36099	0.000606	34.64063	17.39665	1.991233

Table 3. Contour and Kuhn lengths for fluorinated gelator

Conc	Solvent	Sample Code	T	Contour Length	Kuhn Length
2wt%	DMSO	G1	25C	58.3193	52.07
2wt%	DMSO	G1	80C	67.6354	48.3672
2wt%	DMSO	G1	cool	59.7336	51.7336
5wt%	DMSO	G2	25C	41.5922	59.6375
5wt%	DMSO	G2	80C	51.9515	49.4843
5wt%	DMSO	G2	cool	61.9873	40.7336
2wt%	DMF	G4	25C	39.6765	24.5881
2wt%	DMF	G4	80C	Structure broken	
2wt%	DMF	G4	cool	30.5202	20.7846
5wt%	DMF	G5	25C	40.3656	25.0502
5wt%	DMF	G5	80C	Structure broken	
5wt%	DMF	G5	cool	42.366	20.4802

Table 4. Contour and Kuhn lengths for non-fluorinated gelator

Conc	Solvent	Sample Code	T	Contour Length	Kuhn Length
2wt%	DMSO	Set 6-1	25C	37.4496	40.0577
2wt%	DMSO	Set 6-1	80C	27.5289	33.3963
2wt%	DMSO	Set 6-1	cool	40.754	20.6132
5wt%	DMSO	Set 6-3	25C	39.0356	38.1632
5wt%	DMSO	Set 6-3	80C	22.4024	38.8257
5wt%	DMSO	Set 6-3	cool	31.2717	36.0495
2wt%	DMF	Set 6-2	25C	20.2472	59.6474
2wt%	DMF	Set 6-2	80C	26.5034	40.7421
2wt%	DMF	Set 6-2	cool	26.1042	53.3169
5wt%	DMF	Set 6-4	25C	34.5525	35.72
5wt%	DMF	Set 6-4	80C	36.1135	33.9615
5wt%	DMF	Set 6-4	cool	34.3127	45.1583

Table 5. Bis-urea gelator results summary tables (Smeared fractal fit)

Solvent	Temp.	Conc.	Q range	Model	chi-sqrt	Block radius	Fractal dimesnsion	Correlation length
Fluorinated Bis-urea gelator								
DMSO	25 C	2 wt%	low q + high q	Smeared fractal	3.42713	6	2.94105	365.193
DMSO	80 C	2 wt%	low q + high q	Smeared fractal	1.88824	10.3561	3.02439	530.544
DMSO	low T	2 wt%	low q + high q	Smeared fractal	1.3574	9.68656	3.00927	523.894
DMSO	25 C	2 wt%	low q	Smeared fractal	3.14173	5 (fixed)	3.14173	424.943
DMSO	25 C	2 wt%	low q	Smeared fractal	3.13585	10 (fixed)	2.89229	425.884
DMSO	80 C	2 wt%	low q	Smeared fractal	2.10664	5 (fixed)	3.0275	526.453
DMSO	80 C	2 wt%	low q	Smeared fractal	2.10547	10 (fixed)	3.02713	526.556
DMSO	low T	2 wt%	low q	Smeared fractal	1.44895	5 (fixed)	3.00764	526.745
DMSO	low T	2 wt%	low q	Smeared fractal	1.44755	10 (fixed)	3.0073	526.796
DMF	25 C	2 wt%	low q + high q	Smeared fractal	5.11616	7.3183	3.02342	230.947
DMF	80 C	2 wt%	low q + high q	Power law + Schulz sphere	1.01882	Sphere R= 9.134		
DMF	low T	2 wt%	low q + high q	Smeared fractal	3.40445	6.75612	2.98904	372.0898
DMF	25 C	2 wt%	low q	Smeared fractal	6.09121	8.13037	3.02298	231.209
DMF	low T	2 wt%	low q	Smeared fractal	3.95102	6.38885	2.98551	376.773
DMSO	25 C	5 wt%	low q + high q	Smeared fractal	3.27893	7.71927	2.91878	391.845
DMSO	80 C	5 wt%	low q + high q	Smeared fractal	2.35082	11.529	3.02735	474.299
DMSO	low T	5 wt%	low q + high q	Smeared fractal	1.8392	8.23741	2.9924	473.305
DMF	25 C	5 wt%	low q + high q	Smeared fractal	5.28971	6.59769	3.00782	348.16
DMF	80 C	5 wt%	low q + high q	Power law + Schulz sphere		Sphere R= 11		
DMF	low T	5 wt%	low q + high q	Smeared fractal	3.64164	6.45139	2.98929	387.368
DMF	25 C	5 wt%	low q	Smeared fractal	5.39572	10.485	3.01219	340.802
DMF	low T	5 wt%	low q	Smeared fractal	3.67546	6.98859	2.98648	392.123
Non-fluorinated bis-urea gelator								
DMSO	25 C	2 wt%	low q + high q	Smeared fractal	8.53837	4.62883	3.00192	4097.59
DMSO	80 C	2 wt%	low q + high q	Smeared fractal	6.4655	6.4655	3.00286	4452.68
DMSO	low T	2 wt%	low q	Smeared fractal	2.58891	4.4519	3.00016	7913.52
DMF	25 C	2 wt%	low q + high q	Smeared fractal	7.66535	5.20312	3.00028	7304+/- 2216
DMF	80 C	2 wt%	low q + high q	Smeared fractal	5.12525	9.26886	3.00074	3592+/-138

DMF	low T	2 wt%	low q + high q	Smeared fractal	8.26707	6.22962	2.99952	4516.8+/-806.459
DMF	25 C	2 wt%	low q	Smeared fractal	2.3147	5.47124	2.99974	8900+/-6705
DMF	80 C	2 wt%	low q	Smeared fractal	1.87498	9.50888	3.0005	6134.5+/-3357.4
DMF	low T	2 wt%	low q	Smeared fractal	1.9804	6.05469	2.99863	6345.85+/-2836.09
DMSO	25 C	5 wt%	low q + high q	Smeared fractal	15.0278	5.62584	3.00327	3031.83 +/- 338
DMSO	25 C	5 wt%	low q	Smeared fractal	3.69196	5.49399	3.00067	6682+/-3716
DMSO	80 C	5 wt%	low q + high q	Smeared fractal	13.4086	6.27239	3.00251	4285+/-561
DMSO	80 C	5 wt%	low q	Smeared fractal	3.41944	7.10657	3.00104	5862+/-2582
DMSO	low T	5 wt%	low q + high q	Smeared fractal	15.2136	5.90371	3.00318	2976+/-339
DMSO	low T	5 wt%	low q	Smeared fractal	3.50033	5.28089	3.00038	5949+/-2706
DMF	25 C	5 wt%	low q + high q	Smeared fractal	15.5471	4.95684	3.00231	2647 +/- 187
DMF	80 C	5 wt%	low q + high q	Smeared fractal	13.7637	6.27339	3.00204	3461.7 +/- 297
DMF	low T	5 wt%	low q + high q	Smeared fractal	15.7733	5.18659	3.00178	3132 +/- 379
DMF	25 C	5 wt%	low q	Smeared fractal	4.07359	4.65844	3.00027	9301 +/- 5575
DMF	80 C	5 wt%	low q	Smeared fractal	4.20391	6.83763	3.00074	6217 +/- 3241
DMF	low T	5 wt%	low q	Smeared fractal	3.85525	4.41458	2.99996	6705+/- 3688

Table 6. Bis-urea gelator results summary tables (Smeared fractal flexible cylinder fit)

Fluorinated Bis-urea gelator

Solvent	Temp.	Conc.	Q range	Model	Chi-sqrt	Fractal dimension	Correlation length	Contour Length	Kuhn Length	Cylinder radius
DMSO	low T	2 wt%	low q + high q	Smeared fractal flexible cylinder	1.41656	3.01034	506.203	64.075	47.5284	44.4198
DMSO	low T	2 wt%	low q	Smeared fractal flexible cylinder	1.38348	3.01237	504.722	59.7336	51.7336	43.4084
DMSO	80 C	2 wt%	low q + high q	Smeared fractal flexible cylinder	1.83254	3.03262	506.418	63.1647	48.547	43.0193
DMSO	80 C	2 wt%	low q	Smeared fractal	1.97845	3.03286	505.25	67.6354	48.3672	45.6986

				flexible cylinder						
DMSO	25 C	2 wt%	low q + high q	Smeared fractal flexible cylinder	2.19098	2.76453	575.059	56.1255	52.3816	58.7316
DMSO	25 C	2 wt%	low q	Smeared fractal flexible cylinder	2.26072	2.75486	580.313	58.3193	52.07	61.3212
DMF	low T	2 wt%	low q + high q	Smeared fractal flexible cylinder	3.54843	2.95629	405.043	30.5311	21.0536	28.7189
DMF	low T	2 wt%	low q	Smeared fractal flexible cylinder	3.6342	2.94658	401.826	30.5202	20.7846	33.3175
DMF	25 C	2 wt%	low q + high q	Smeared fractal flexible cylinder	5.46498	3.00492	233.544	37.6413	21.2433	25.2056
DMF	25 C	2 wt%	low q	Smeared fractal flexible cylinder	5.74992	2.96578	248.356	39.6765	24.5881	35.6998
DMSO	low T	5 wt%	low q + high q	Smeared fractal flexible cylinder	1.98962	2.97681	477.531	61.6077	43.2419	44.0413
DMSO	low T	5 wt%	low q	Smeared fractal flexible cylinder	1.72847	2.97439	479.286	61.9873	40.7336	43.8945
DMSO	80 C	5 wt%	low q + high q	Smeared fractal flexible cylinder	2.5758	3.03009	453.313	59.6636	48.6347	43.6925
DMSO	80 C	5 wt%	low q	Smeared fractal flexible cylinder	2.44927	3.02584	456.359	51.9515	49.4843	45.4618
DMSO	25 C	5 wt%	low q + high q	Smeared fractal flexible cylinder	3.07413	2.81818	491.238	42.944	60.5975	48.6188
DMSO	25 C	5 wt%	low q	Smeared fractal flexible cylinder	2.32015	2.75989	578.464	41.5922	59.6375	59.2477
DMF	low T	5 wt%	low q + high q	Smeared fractal flexible cylinder	4.35702	2.97533	391.574	43.8413	20.5512	27.6937
DMF	low T	5 wt%	low q	Smeared fractal flexible cylinder	3.56248	2.96693	399.88	42.366	20.4802	30.7806
DMF	25 C	5 wt%	low q + high q	Smeared fractal flexible cylinder	6.17016	3.00663	332.712	39.9212	23.9149	27.4791
DMF	25 C	5 wt%	low q	Smeared fractal flexible cylinder	5.09772	3.0111	338.097	40.3656	25.0502	30.5365

Non-fluorniated bis urea gelator

DMSO	low T	2 wt%	low q + high q	Smeared fractal flexible cylinder	8.24875	2.99797	3262.2	40.6701	20.8082	52.4526
DMSO	low T	2 wt%	low q	Smeared fractal flexible cylinder	2.71297	2.99652	3469.82	40.754	20.6132	51.6665
DMSO	80 C	2 wt%	low q + high q	Smeared fractal flexible cylinder	7.3467	3.00797	1805.66	41.2649	19.3548	36.0487
DMSO	80 C	2 wt%	low q	Smeared fractal flexible cylinder	3.96653	3.00338	3296.09	27.5289	33.3963	52.3272
DMSO	25 C	2 wt%	low q + high q	Smeared fractal flexible cylinder	8.84205	2.99955	2735.25	39.8083	20.1013	49.891
DMSO	25 C	2 wt%	low q	Smeared fractal flexible cylinder	3.7721	3.00161	1650.84	37.4496	40.0577	54.2296
DMF	low T	2 wt%	low q + high q	Smeared fractal flexible cylinder	8.94898	2.99386	1860.52	25.9101	53.6934	49.3846
DMF	low T	2 wt%	low q	Smeared fractal flexible cylinder	2.41449	2.99359	1810.63	26.1042	53.3169	48.9343
DMF	80 C	2 wt%	low q + high q	Smeared fractal flexible cylinder	5.58329	3.00613	1179.45	26.2905	41.7198	6.47832
DMF	80 C	2 wt%	low q	Smeared fractal flexible cylinder	2.31823	3.00211	1918.39	26.5034	40.7421	5.77345
DMF	25 C	2 wt%	low q + high q	Smeared fractal flexible cylinder	8.31272	2.9965	2072.42	20.1974	59.7676	50.5821
DMF	25 C	2 wt%	low q	Smeared fractal flexible cylinder	2.69336	2.99635	2139.47	20.2472	59.6474	51.0068
DMSO	low T	5 wt%	low q + high q	Smeared fractal flexible cylinder	15.5828	2.99741	2161+/-72	31.1435	36.4921	53.7741
DMSO	low T	5 wt%	low q	Smeared fractal flexible cylinder	3.80244	2.99876	2305+/-67	31.2717	36.0495	52.0105
DMSO	80 C	5 wt%	low q + high q	Smeared fractal flexible cylinder	14.2171	3.00077	2893+/-102	22.493	38.8147	49.7568
DMSO	80 C	5 wt%	low q	Smeared fractal	3.6249	3.00078	2972.16+/-	22.4024	38.8257	49.7609

				flexible cylinder			102			
DMSO	25 C	5 wt%	low q + high q	Smeared fractal flexible cylinder	15.442	2.99934	1897.85	38.9789	38.6071	57.5839
DMSO	25 C	5 wt%	low q	Smeared fractal flexible cylinder	4.24116	3.00052	1871.51	39.0356	38.1632	55.5676
DMF	low T	5 wt%	low q + high q	Smeared fractal flexible cylinder	16.4212	2.99989	1380 +/- 23	33.3266	46.5913	50.7789
DMF	low T	5 wt%	low q	Smeared fractal flexible cylinder	4.92994	2.99972	1405 +/- 23	34.3127	45.1583	50.7005
DMF	80 C	5 wt%	low q + high q	Smeared fractal flexible cylinder	15.719	3.00506	1585 +/- 27	36.05565	35.7901	46.1284
DMF	80 C	5 wt%	low q	Smeared fractal flexible cylinder	4.894	3.00383	1727.71 +/- 32	36.1135	33.9615	47.7223
DMF	25 C	5 wt%	low q + high q	Smeared fractal flexible cylinder	16.3639	3.00126	1399.6 +/- 18	34.0026	35.946	47.6333
DMF	25 C	5 wt%	low q	Smeared fractal flexible cylinder	5.40287	3.00127	1280 +/- 16	34.5525	35.72	46.5616