

Supplementary Information

***In situ* formation of gold nanoparticles using fatty N-acylamino hydrazides organogelators as template**

Renata Ongaratto,^a Naiane Conte,^a Caroline R. Montes D'Oca,^a Rafael C. Brinkerhoff,^a
Caroline Pires Ruas,^b Marcos Alexandre Gelesky,^b and Marcelo G. Montes D'Oca^{a*}

^a*Laboratorio Kolbe de Síntese Orgânica, Escola de Química e Alimentos, Universidade Federal do Rio Grande, Av. Italia, Km 08 s/n, Rio Grande, RS, Brazil*

^b*Laboratório de Catálise e Síntese Inorgânica, Escola de Química e Alimentos, Universidade Federal do Rio Grande, Av. Italia, Km 08 s/n, Rio Grande, RS, Brazil*

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* Corresponding author: Escola de Química e Alimentos, Universidade Federal do Rio Grande, Av. Itália, km 08, s/n. Carreiros. 96203-900. Rio Grande, RS, Brazil. Tel: +55 53 32336960; fax +55 53 3233 6961. E-mail address: dqmdoca@furg.br (MGM D'Oca)

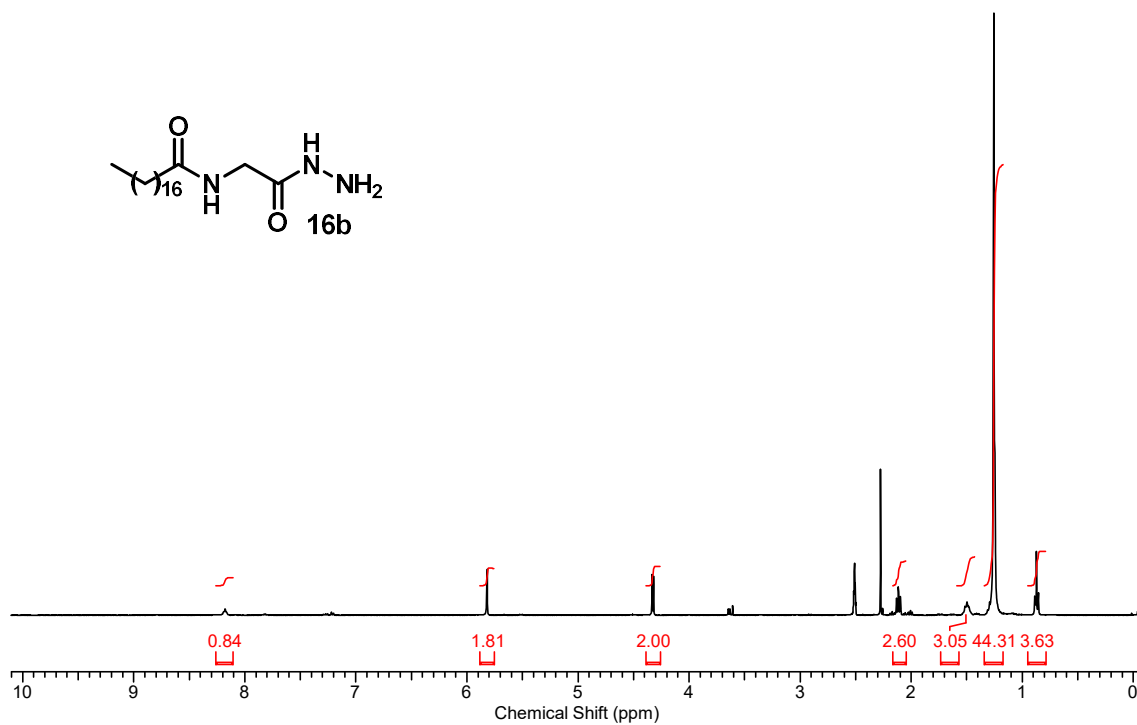


Figure 1 - ^1H NMR (400 MHz, DMSO- d_6) spectra of **16b**.

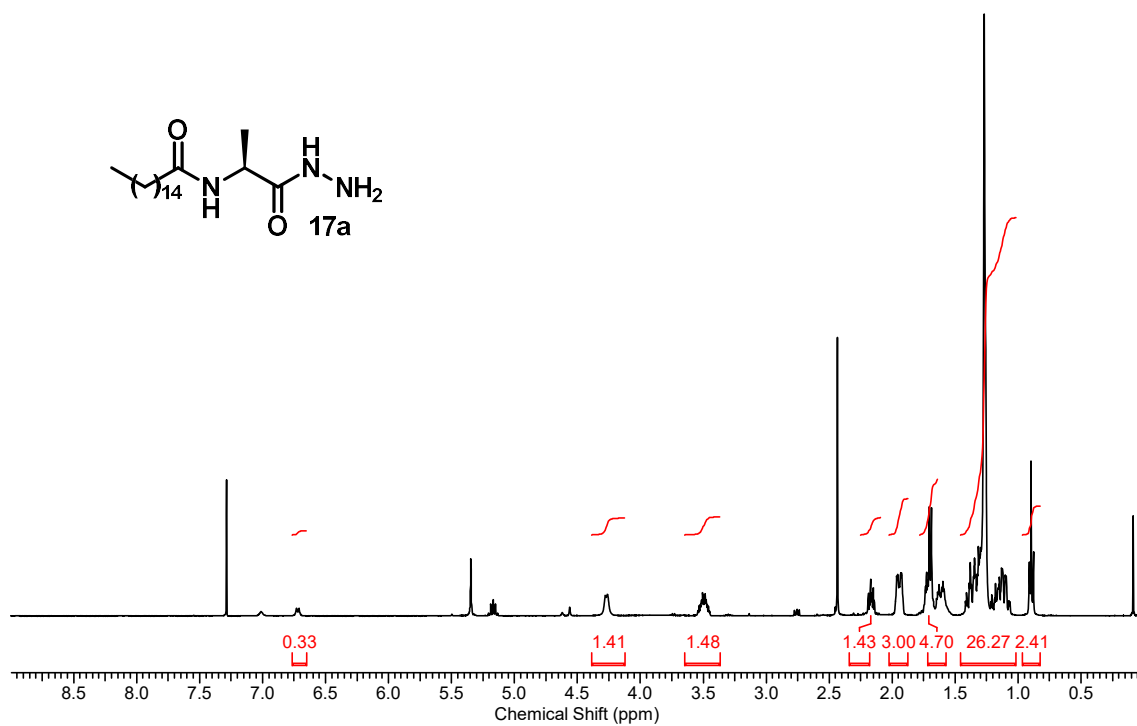


Figure 2 - ^1H NMR (400 MHz, CDCl_3) spectra of **17a**.

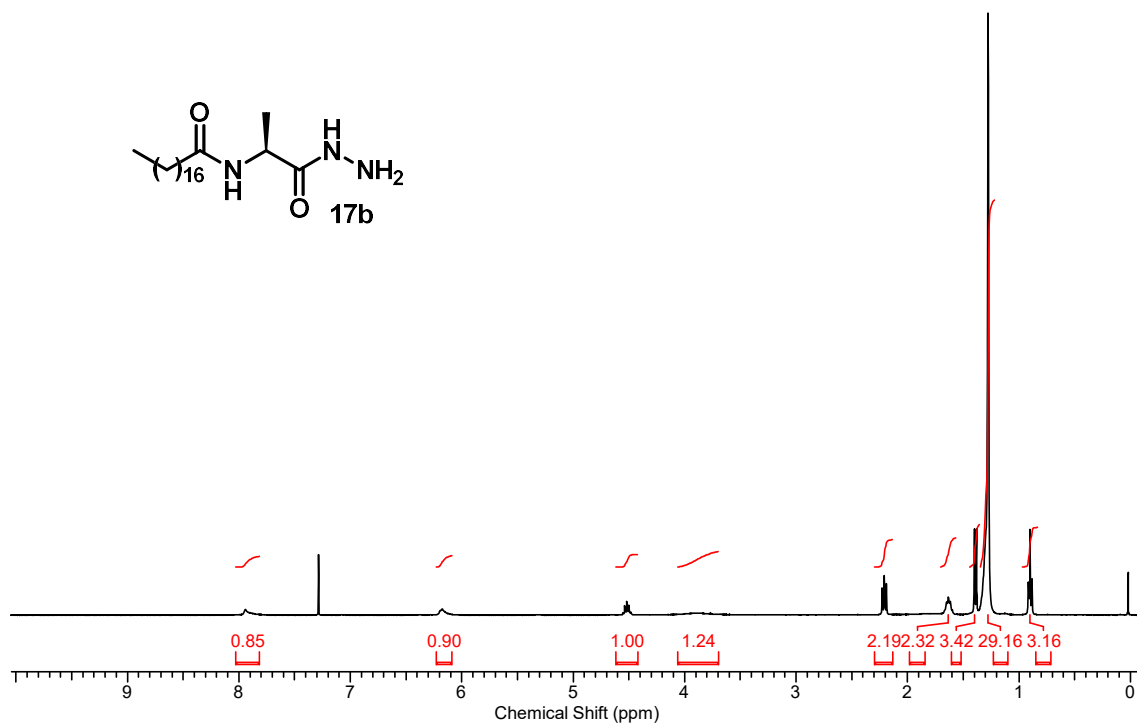


Figure 3 - ^1H NMR (400 MHz, CDCl_3) spectra of **17b**.

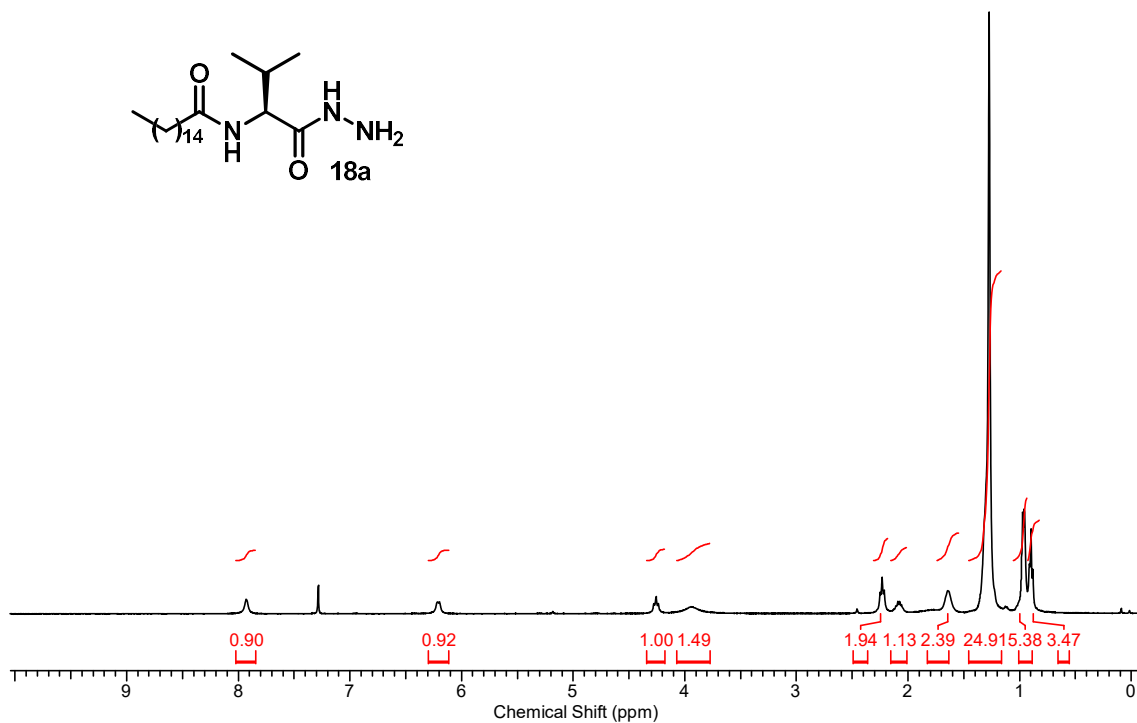


Figure 4 - ^1H NMR (400 MHz, CDCl_3) spectra of **18a**.

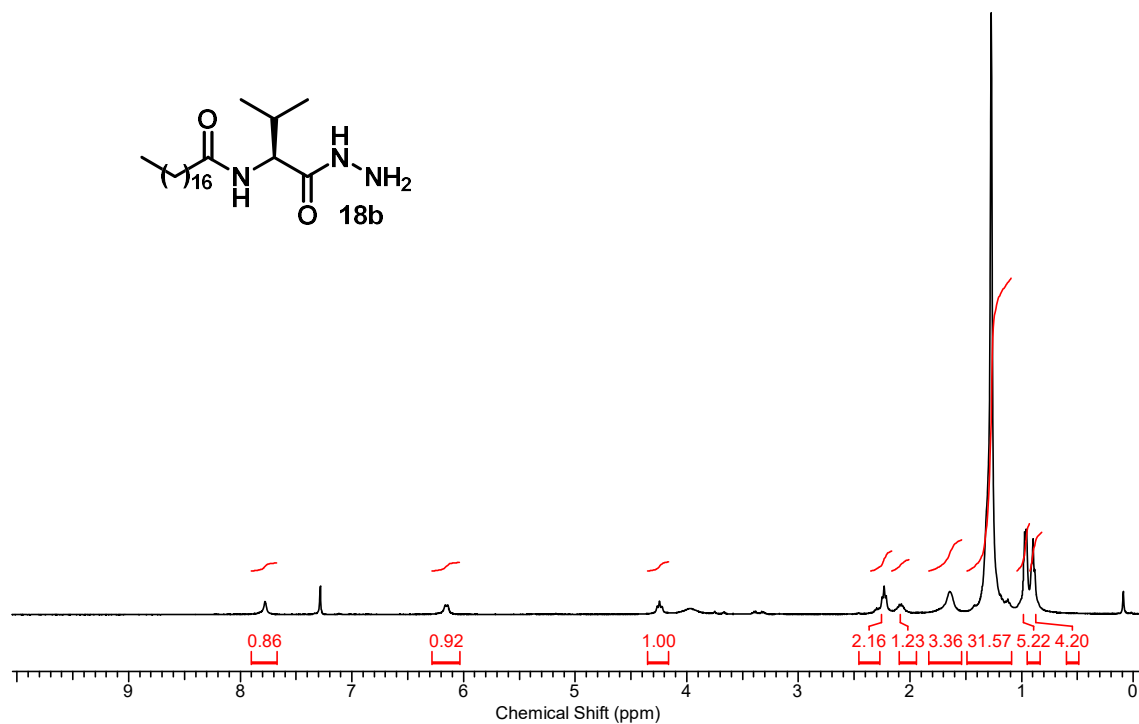


Figure 5 - ¹H NMR (400 MHz, CDCl₃) spectra of **18b**.

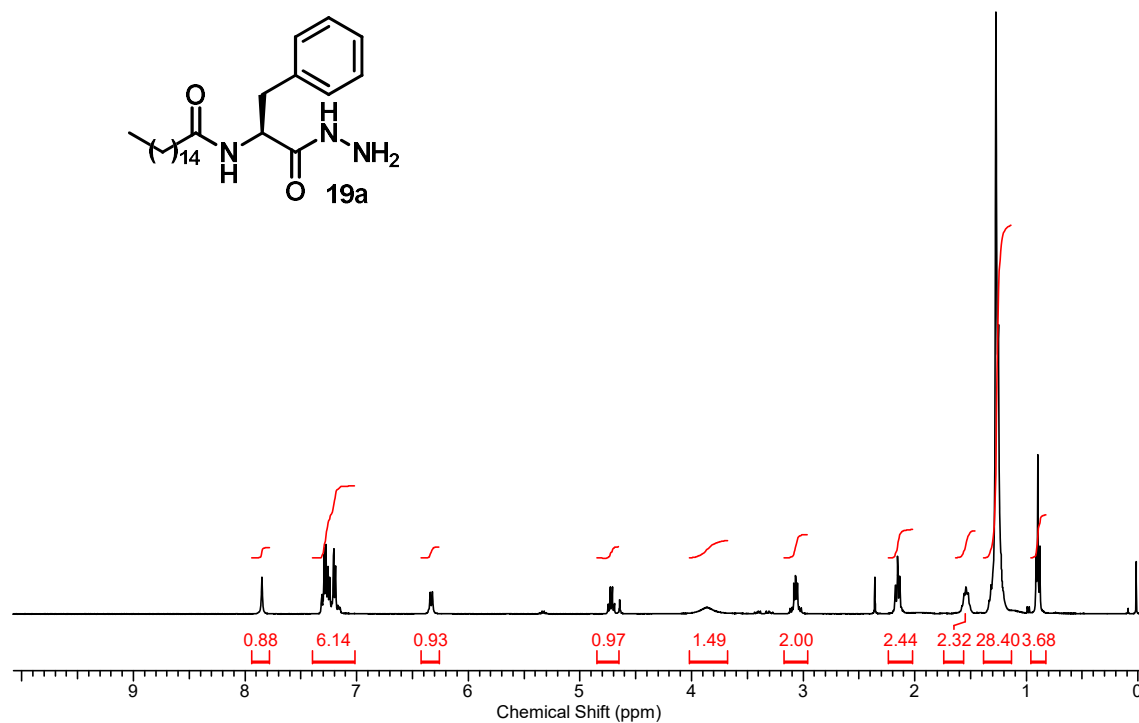


Figure 6 - ¹H NMR (400 MHz, CDCl₃) spectra of **19a**.

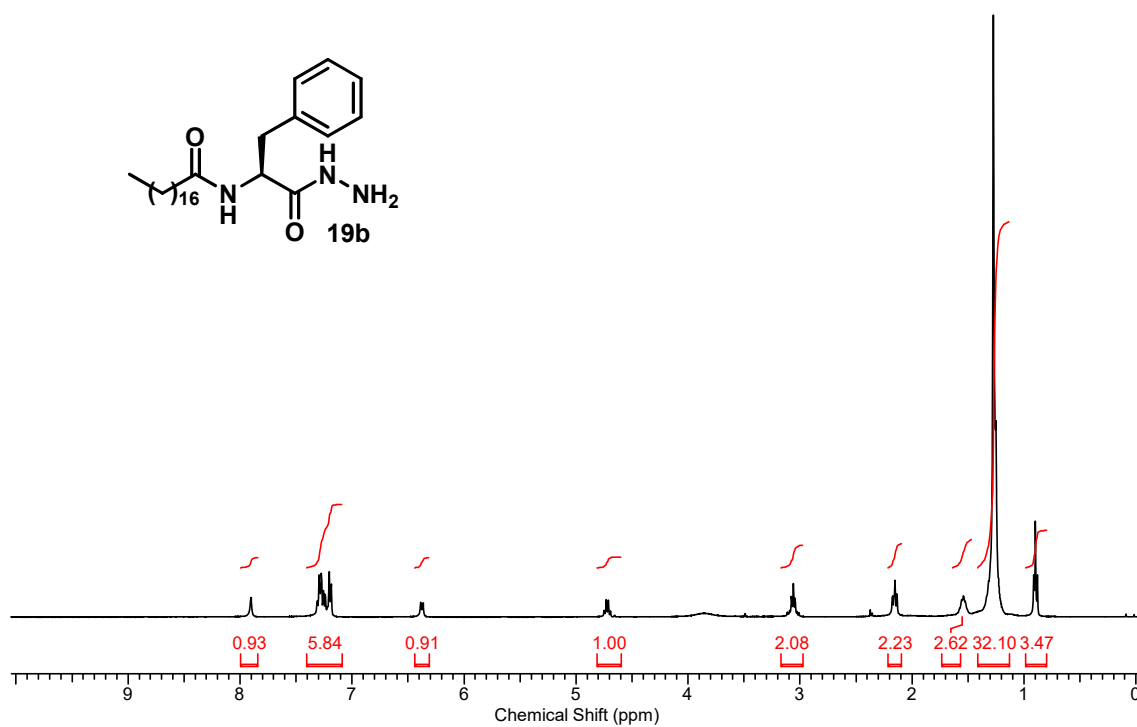


Figure 7 - ^1H NMR (400 MHz, CDCl_3) spectra of **19b**.

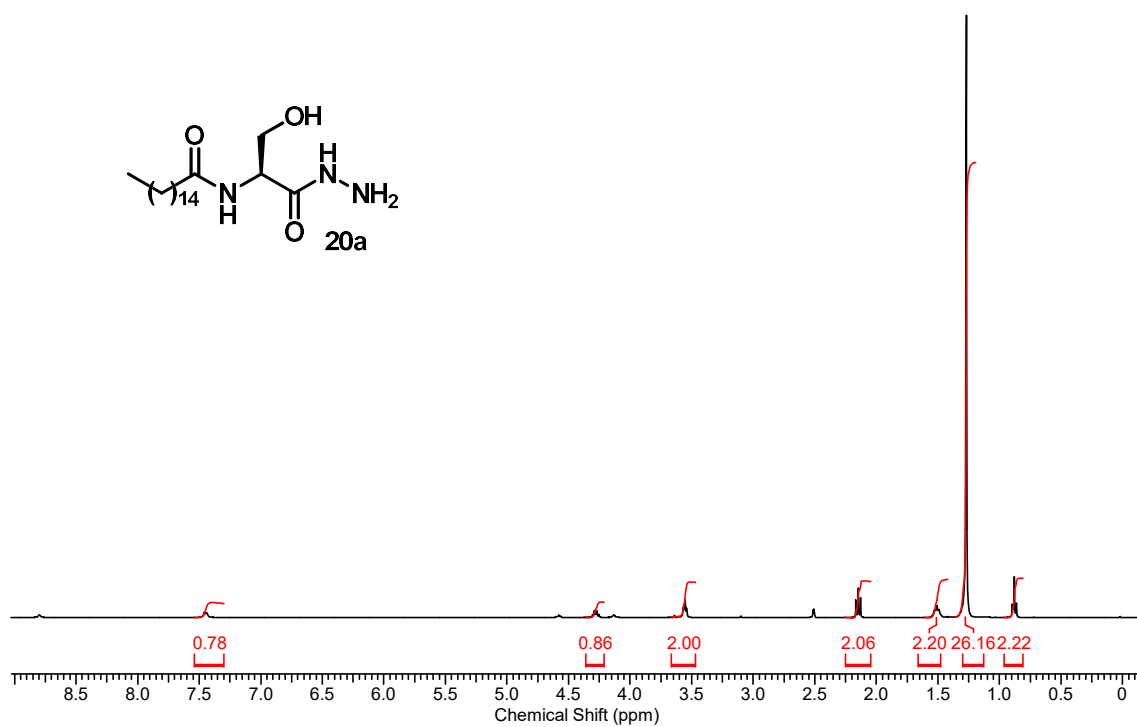


Figure 8 - ^1H NMR (400 MHz, DMSO-d_6) spectra of **20a**.

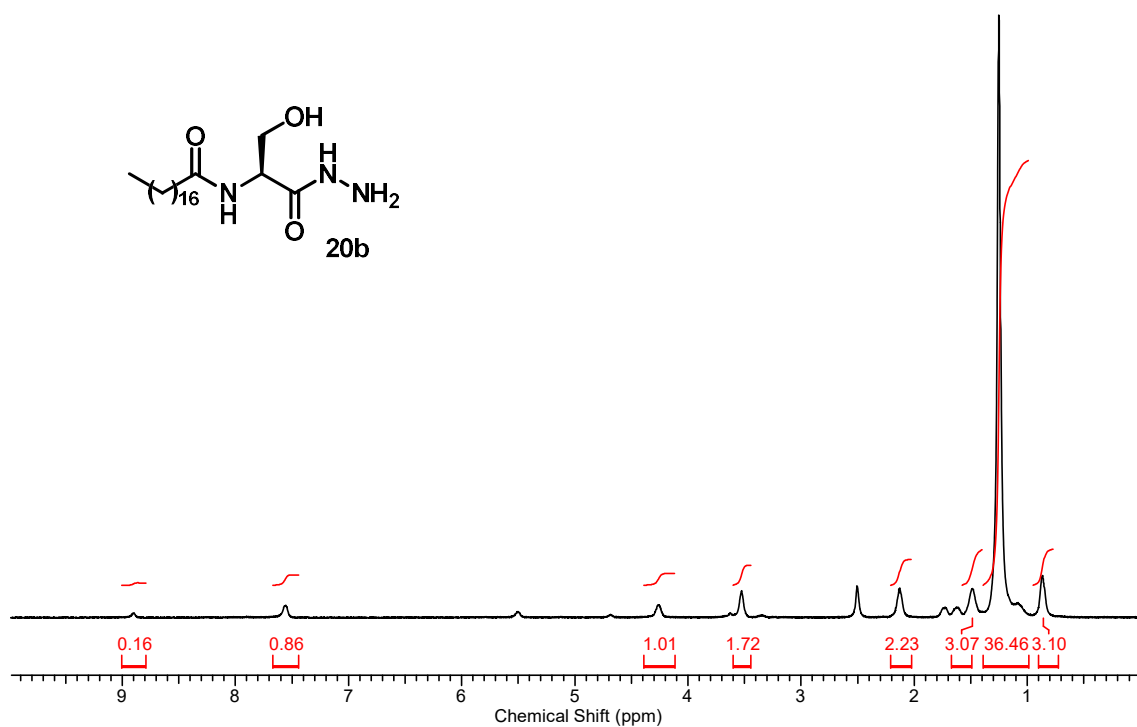


Figure 9 – ^1H NMR (400 MHz, DMSO- d_6) spectra of **20b**.

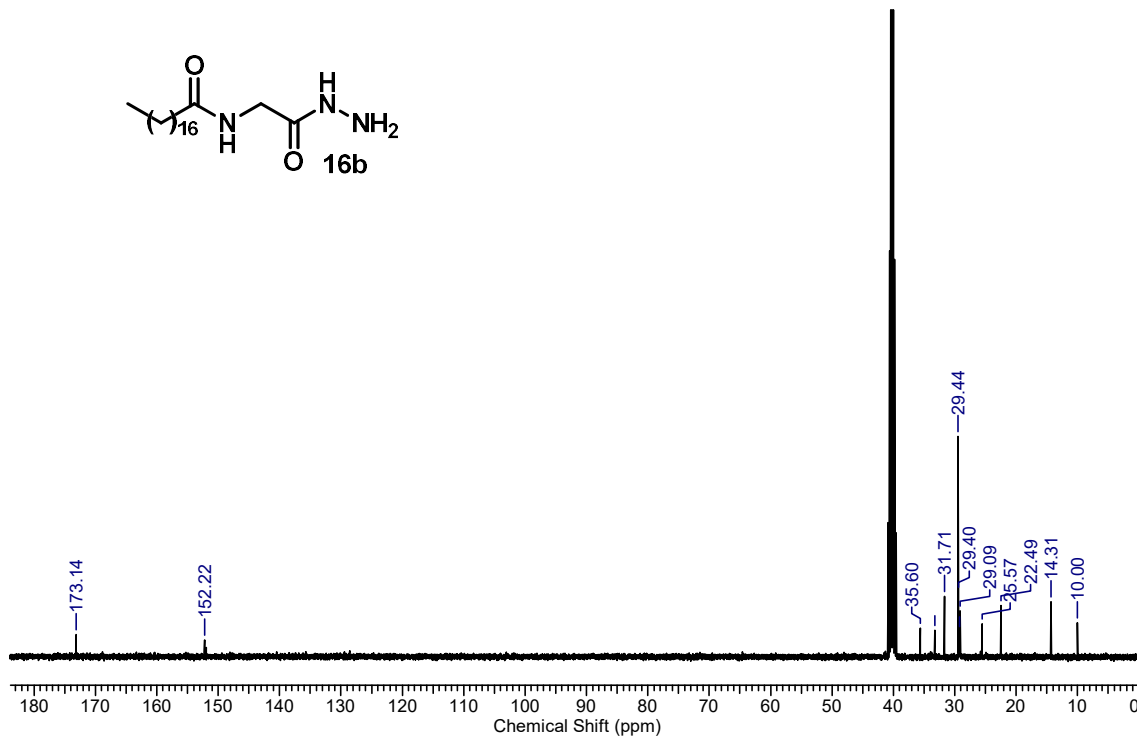


Figure 10 – ^{13}C NMR (100 MHz, DMSO- d_6) spectra of **16b**.

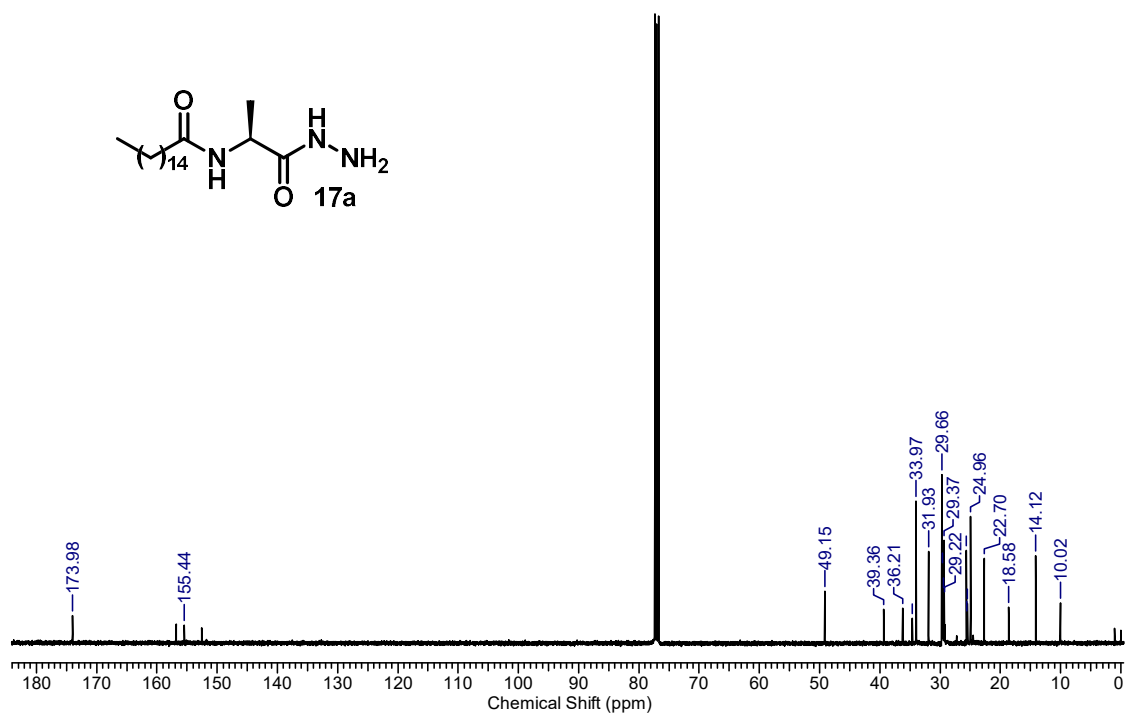


Figure 11 – ^{13}C NMR (100 MHz, CDCl_3) spectra of **17a**.

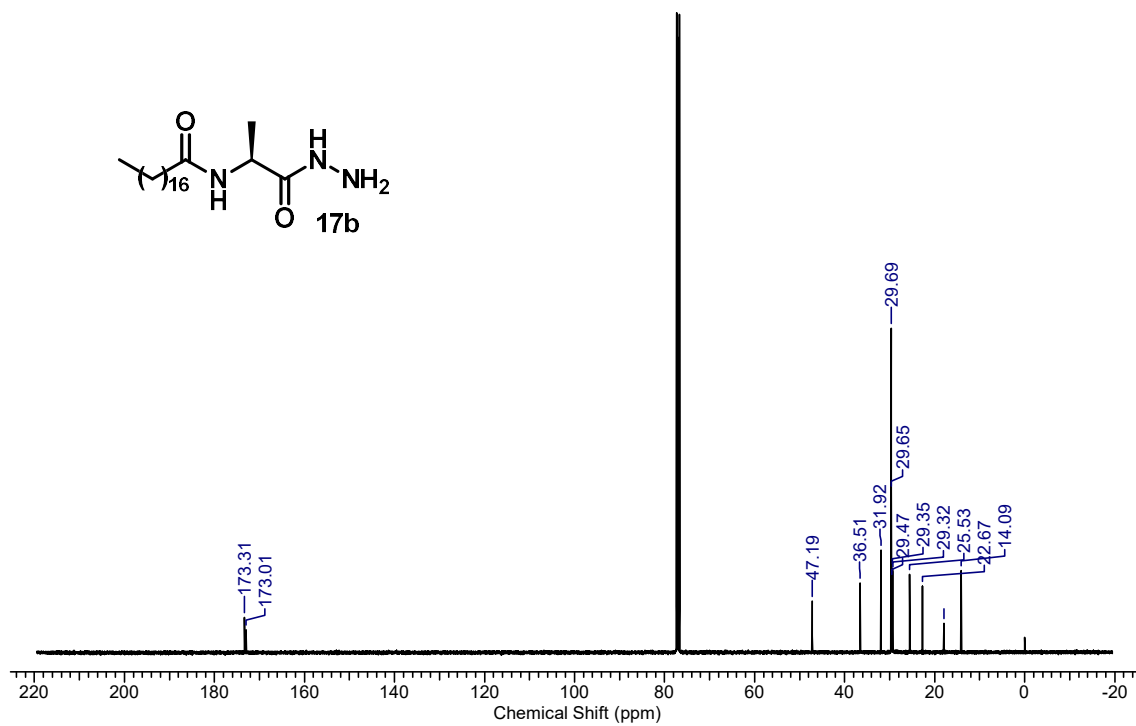


Figure 12 – ^{13}C NMR (100 MHz, CDCl_3) spectra of **17b**.

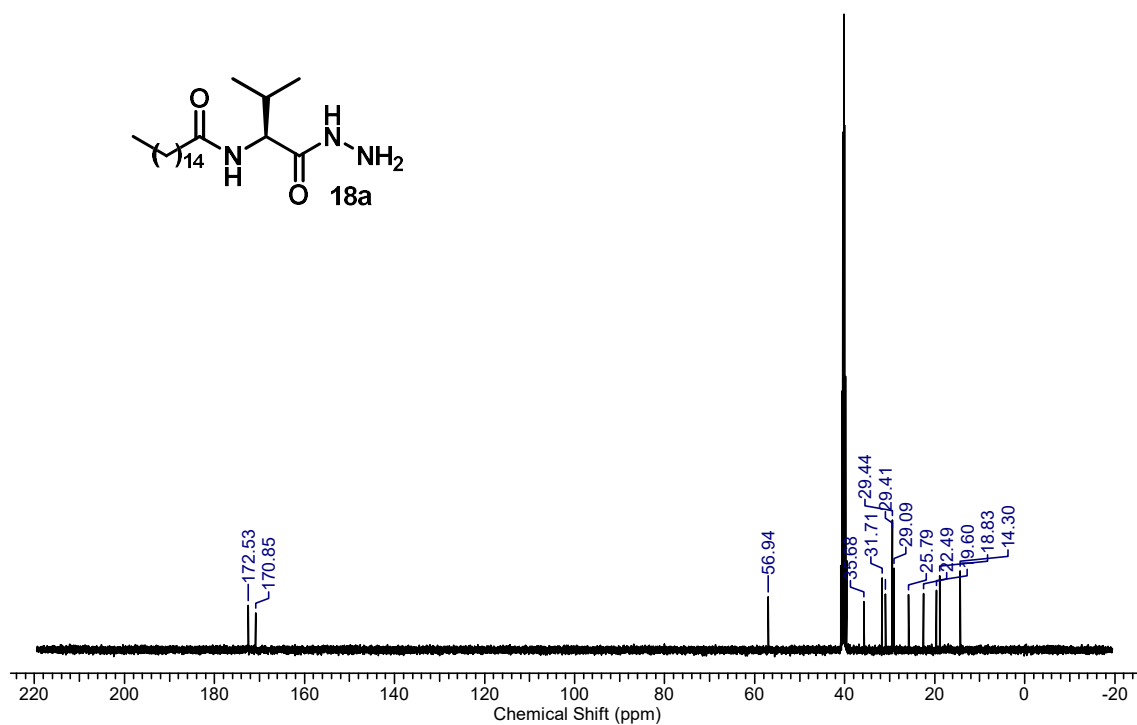


Figure 13 – ^{13}C NMR (100 MHz, DMSO- d_6) spectra of **18a**.

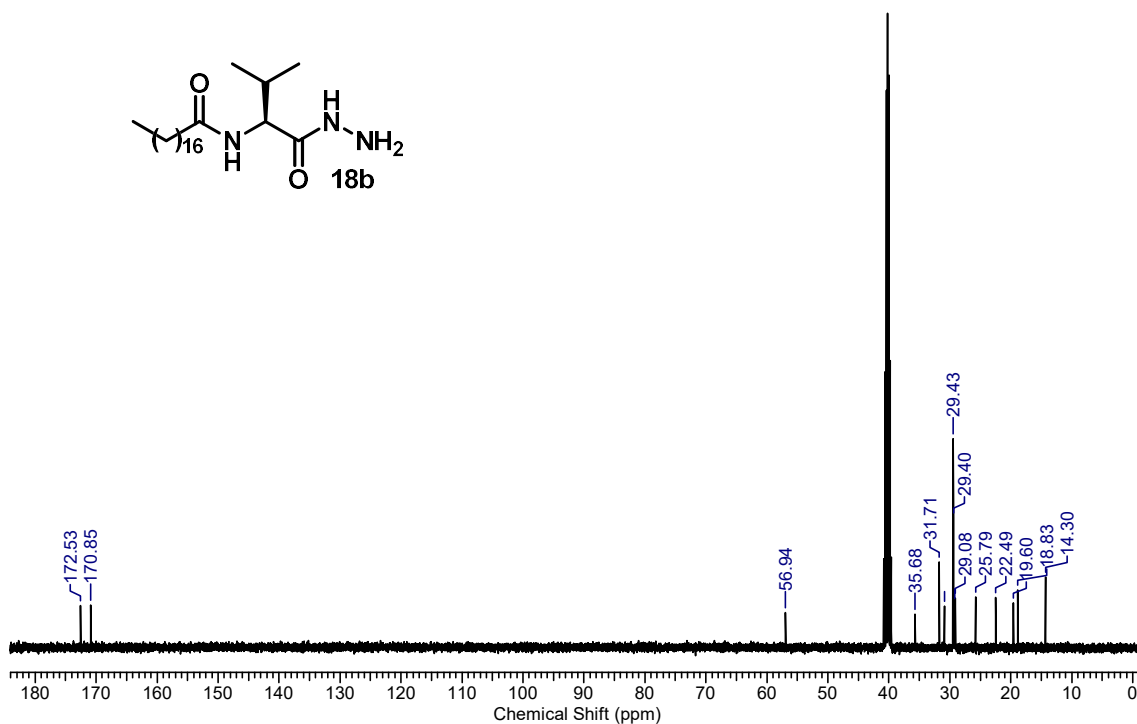


Figure 14 – ^{13}C NMR (100 MHz, DMSO- d_6) spectra of **18b**.

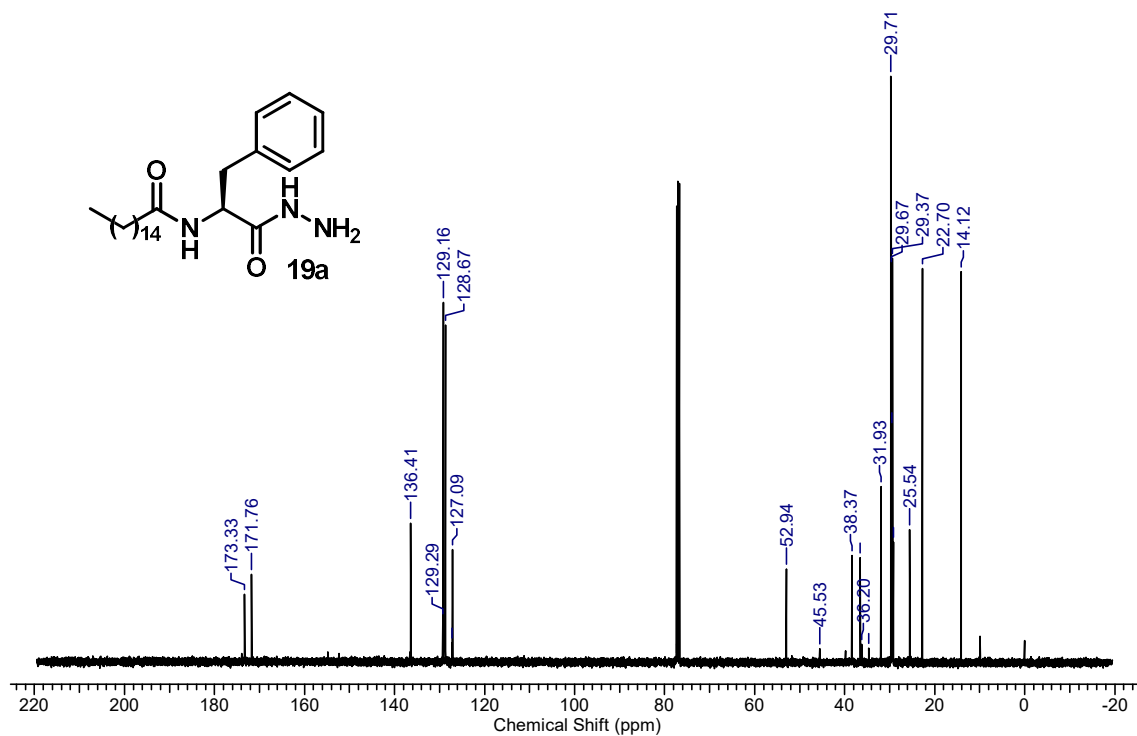


Figure 15 – ¹³C NMR (100 MHz, CDCl₃) spectra of **19a**.

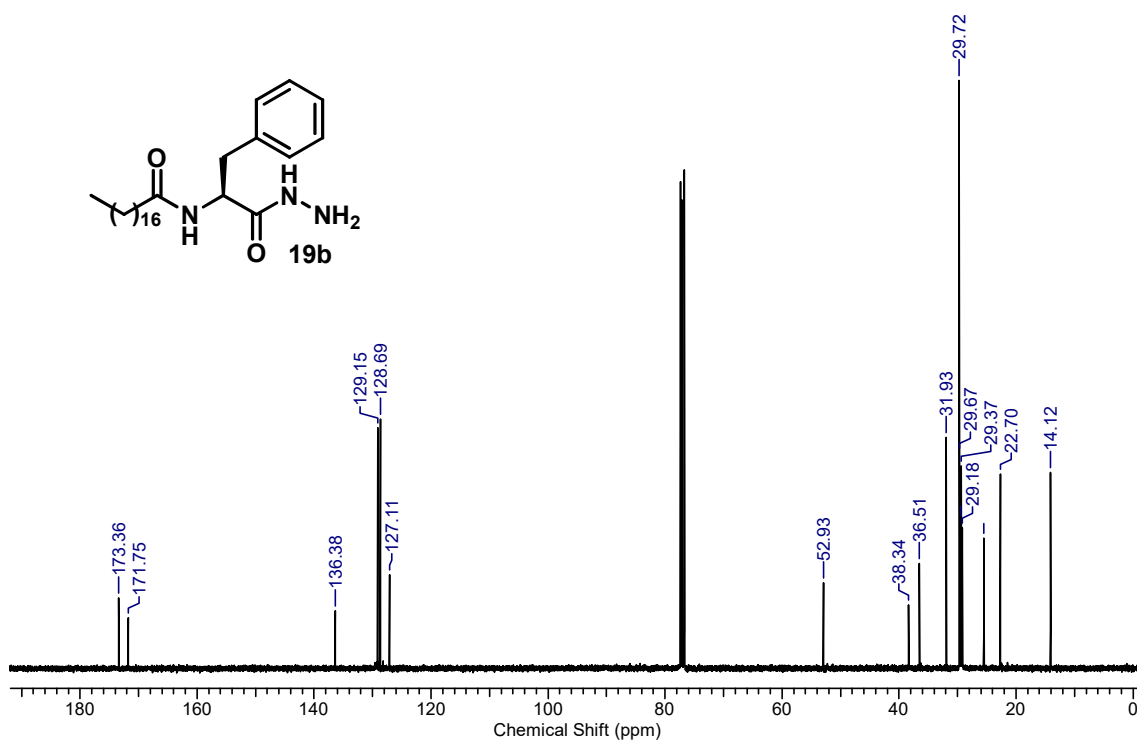


Figure 16 – ¹³C NMR (100 MHz, CDCl₃) spectra of **19b**.

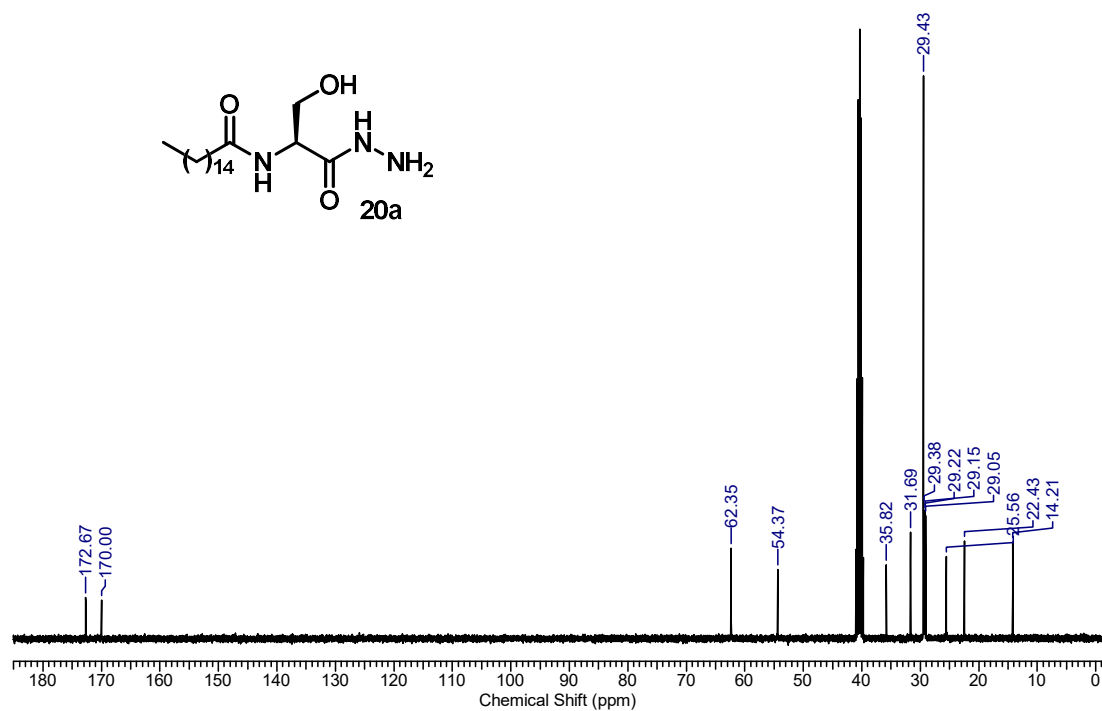


Figure 17 – ^{13}C NMR (100 MHz, DMSO- d_6) spectra of **20a**.

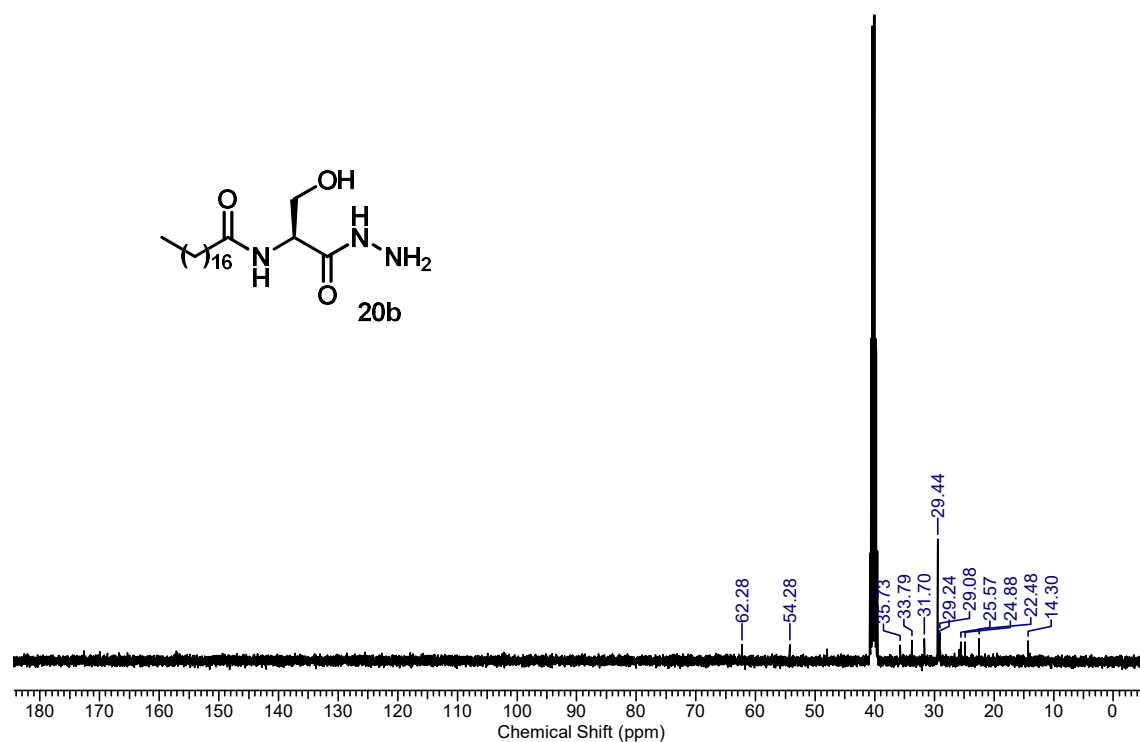


Figure 18 – ^{13}C NMR (100 MHz, DMSO- d_6) spectra of **20b**.

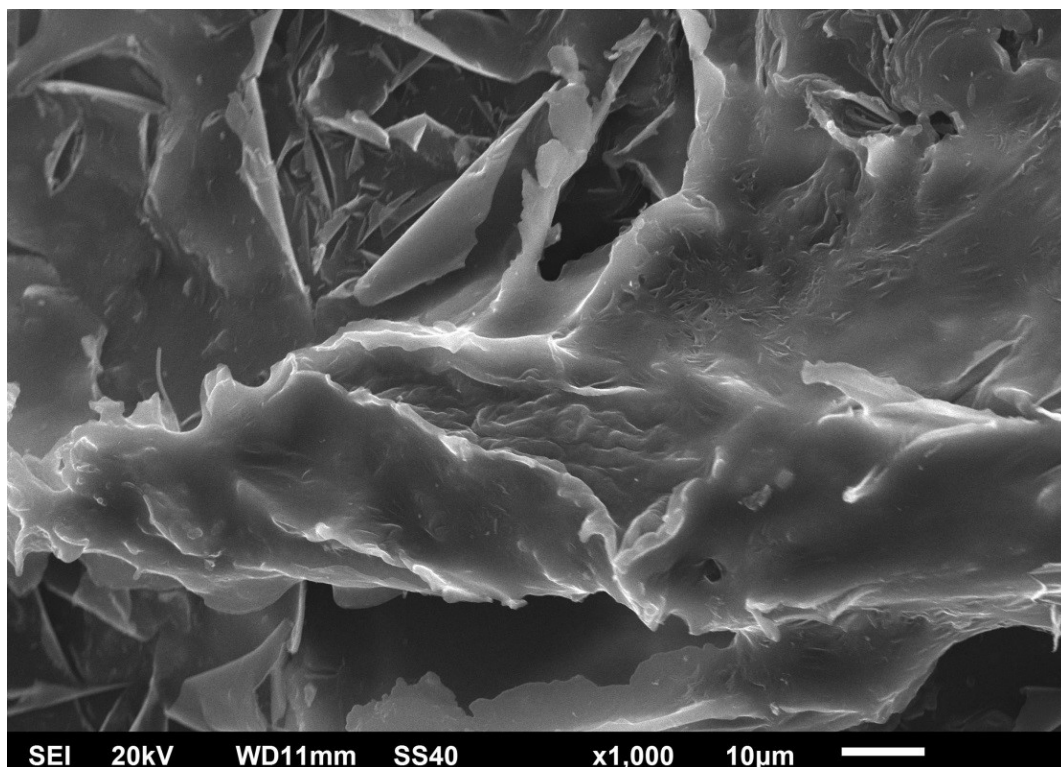


Figure 19 – SEM image of compound **16a**.

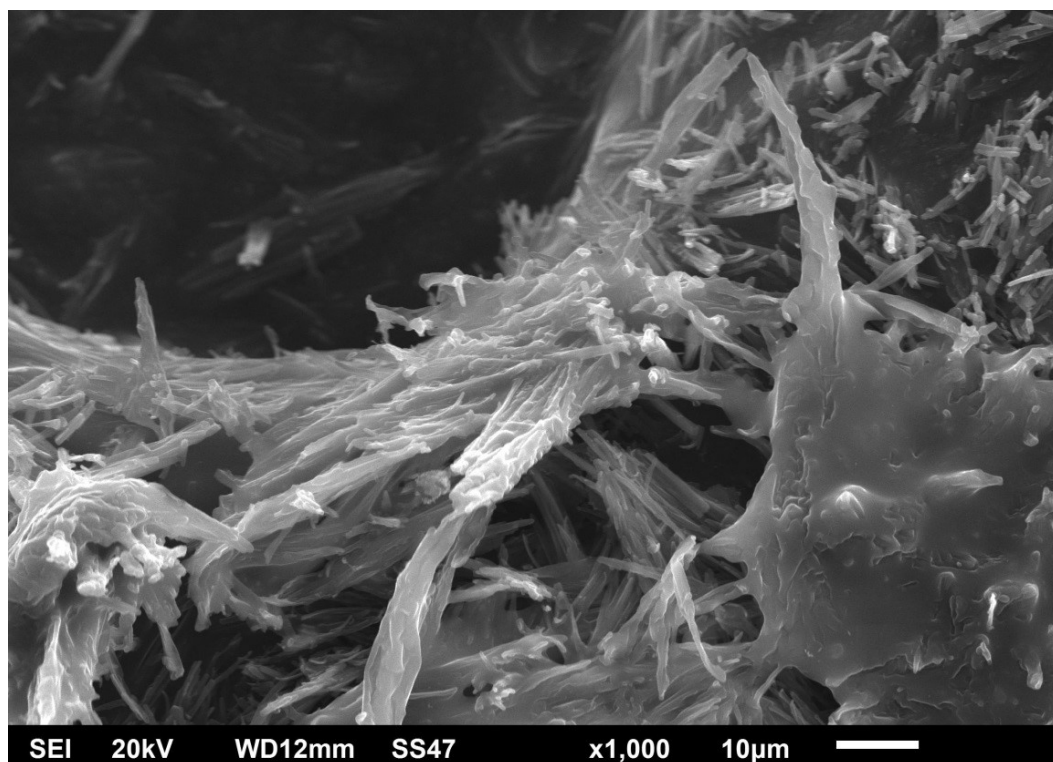


Figure 20 – SEM image of air-dried organogel in toluene obtained from **17a**.

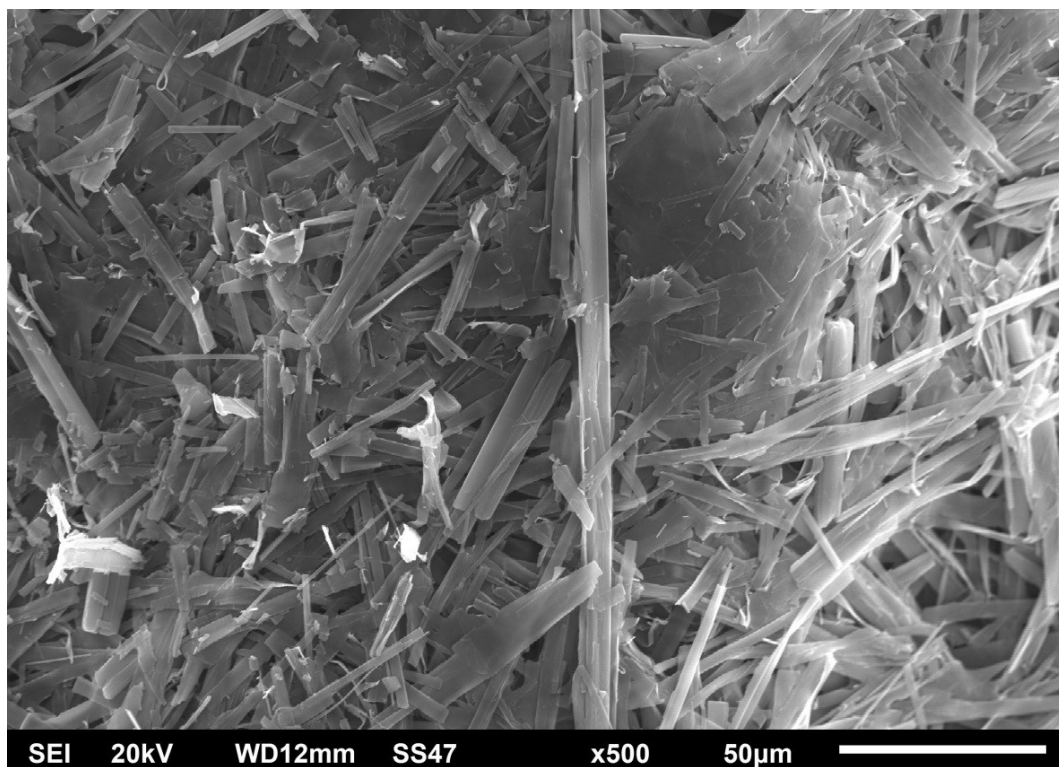


Figure 21 – SEM images of air-dried organogels in toluene with the nanoparticles of gold **17a**.

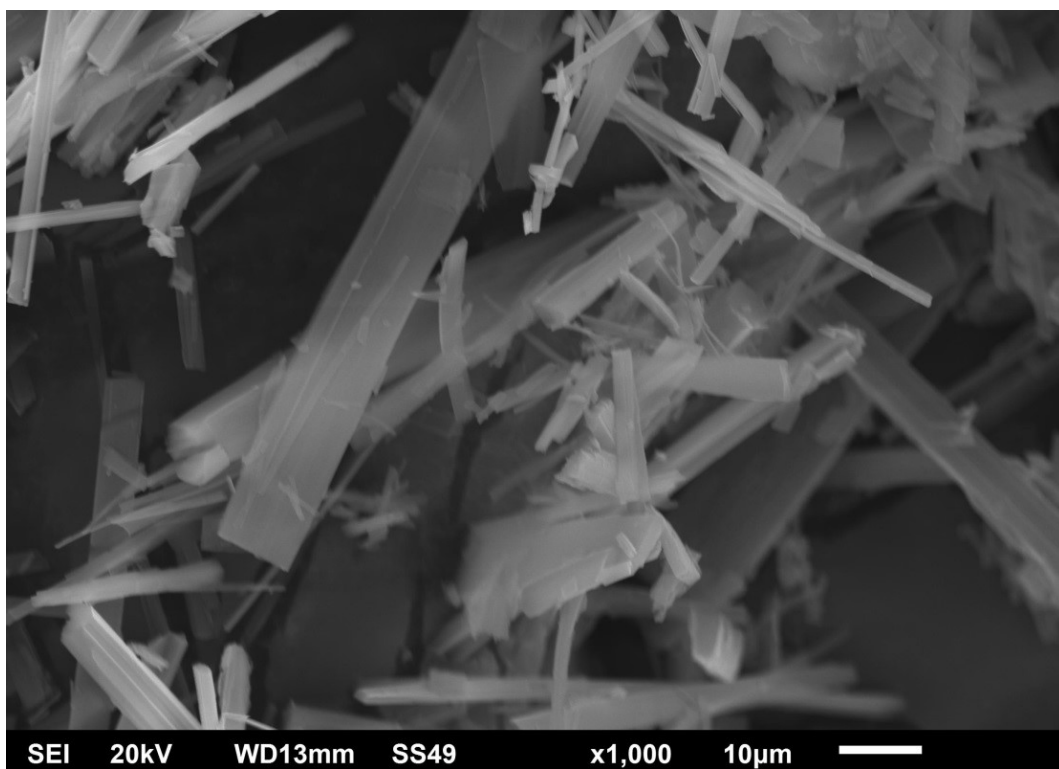


Figure 22 – SEM image of compound **17b**.

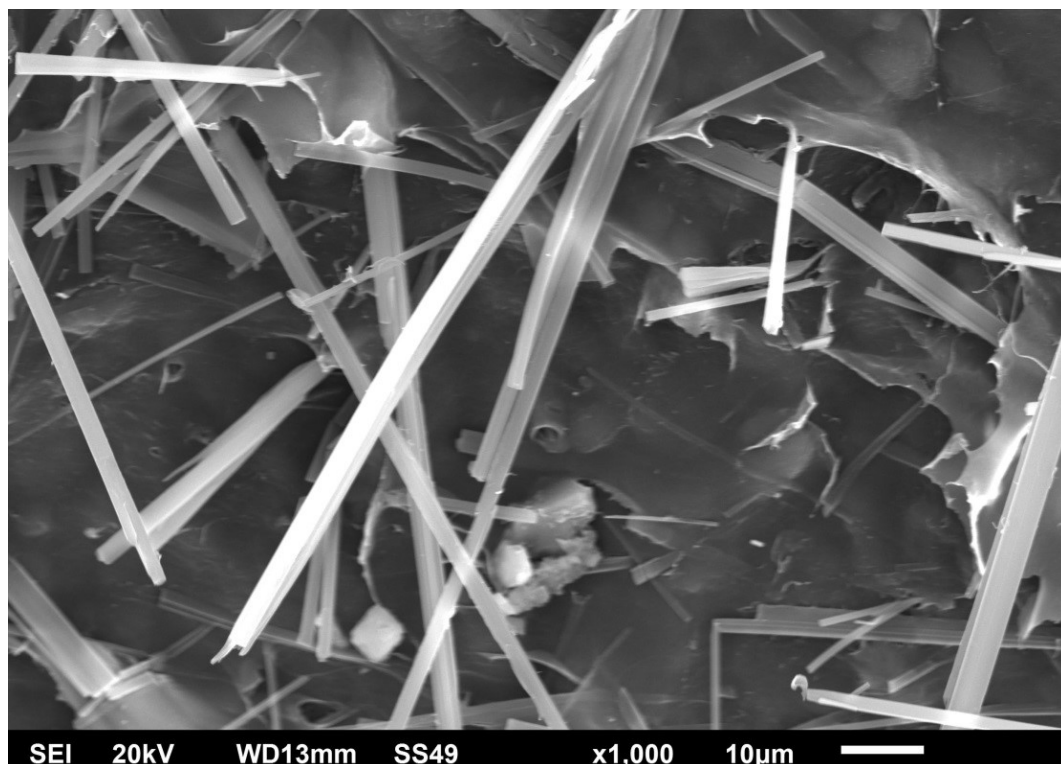


Figure 23 – SEM image of air-dried organogel in toluene obtained from **17b**.

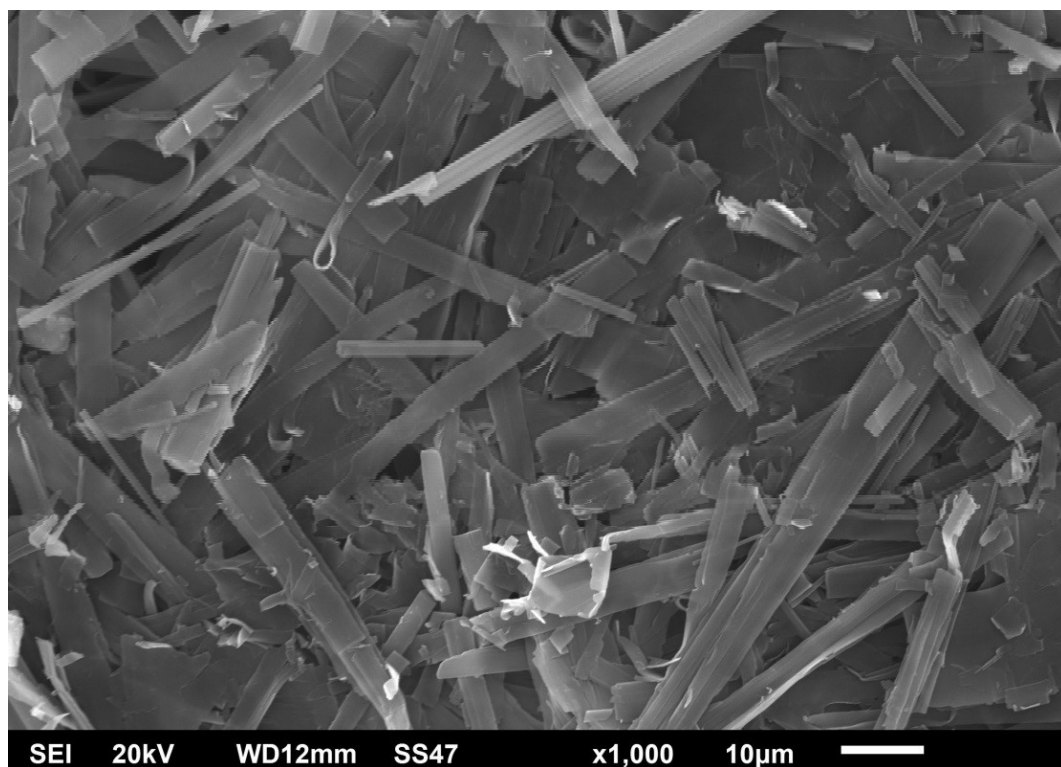


Figure 24 – SEM images of air-dried organogels in toluene with the nanoparticles of gold **17b**.

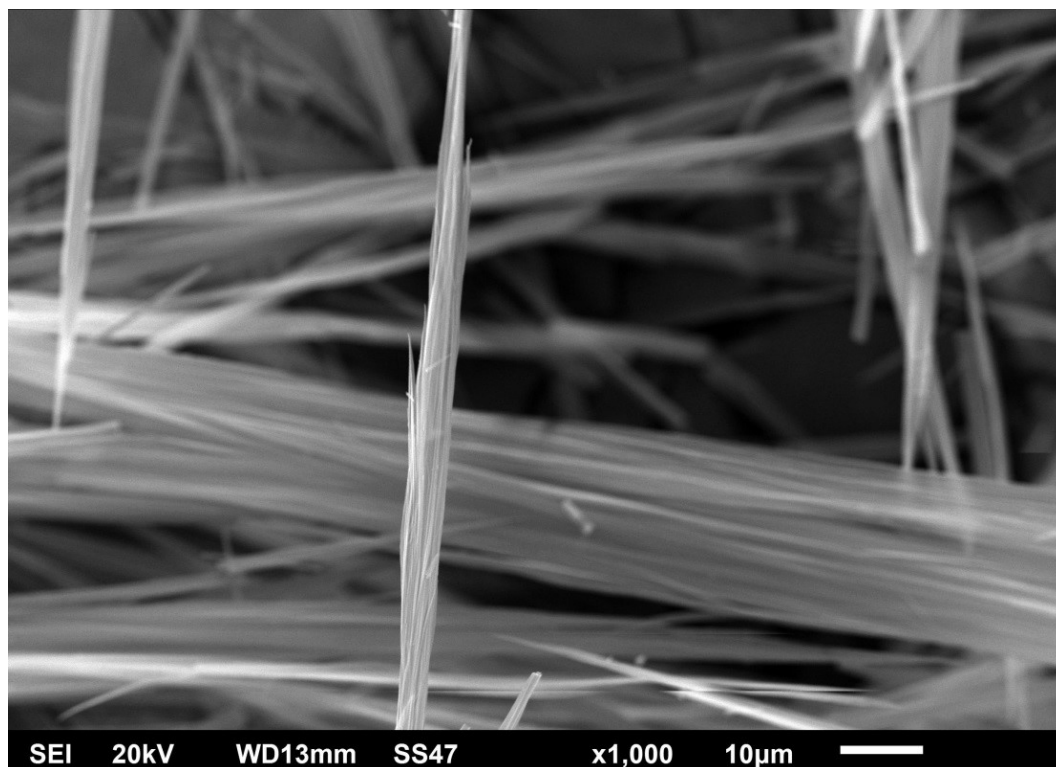


Figure 25 – SEM image of compound **18a**.

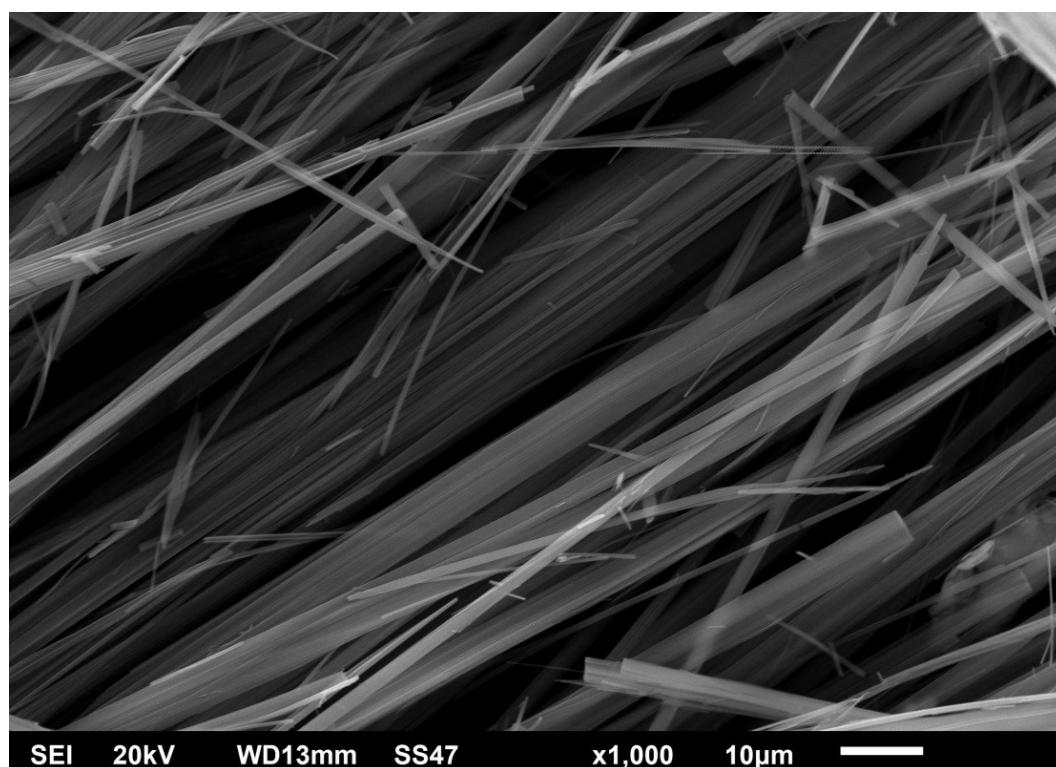


Figure 26 – SEM image of air-dried organogel in toluene obtained from **18a**.

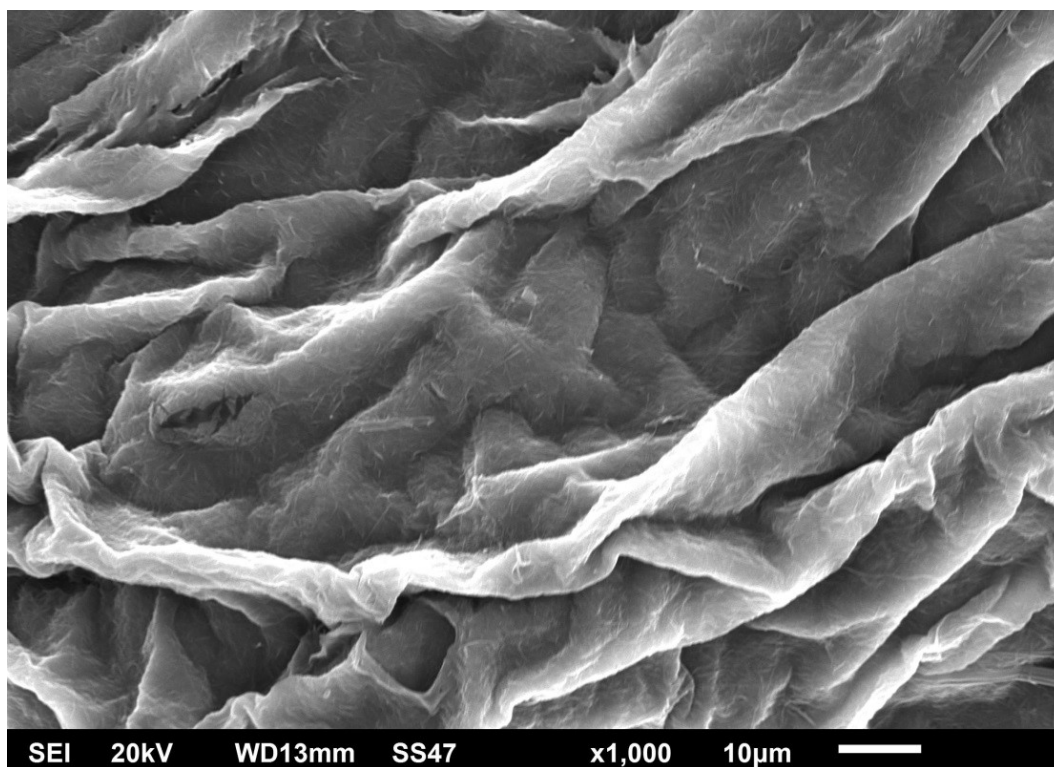


Figure 27 – SEM images of air-dried organogels in toluene with the nanoparticles of gold **18a**.

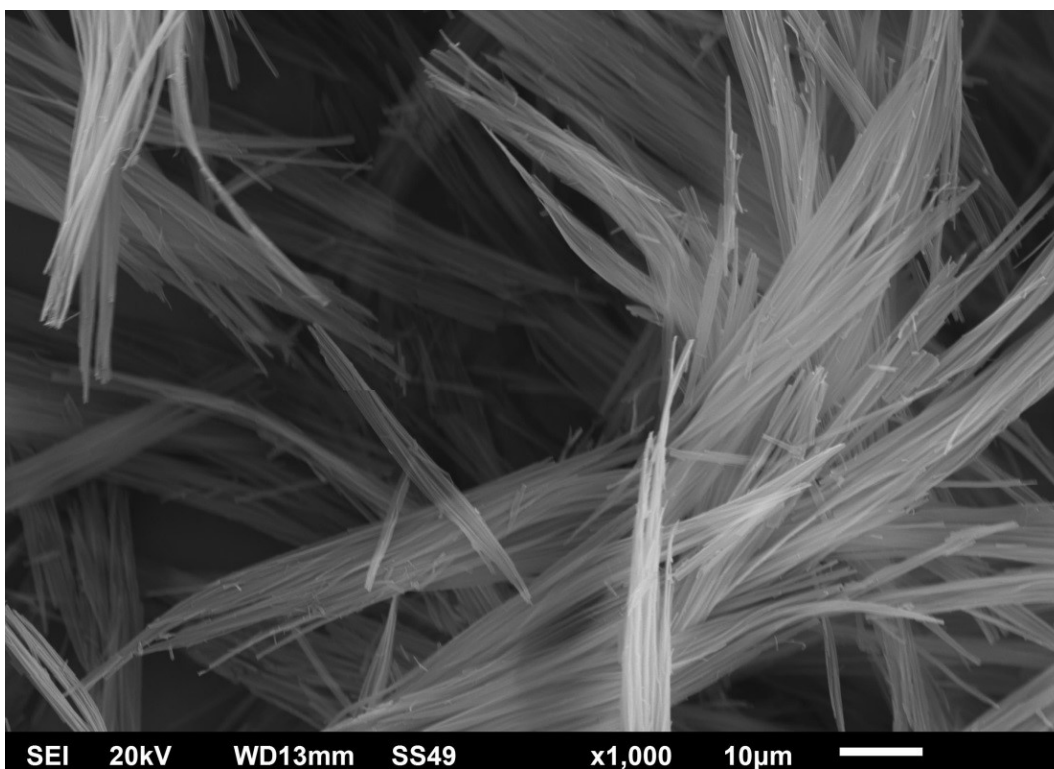


Figure 28 – SEM image of compound **18b**.

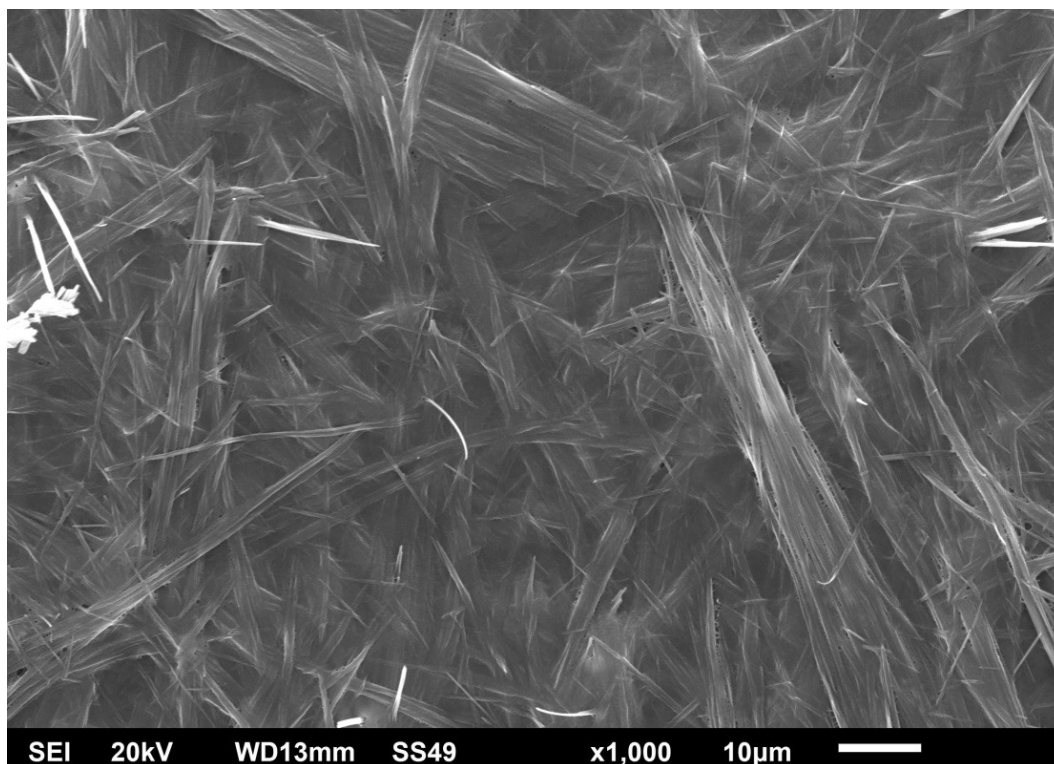


Figure 29 – SEM image of air-dried organogel in toluene obtained from **18b**.

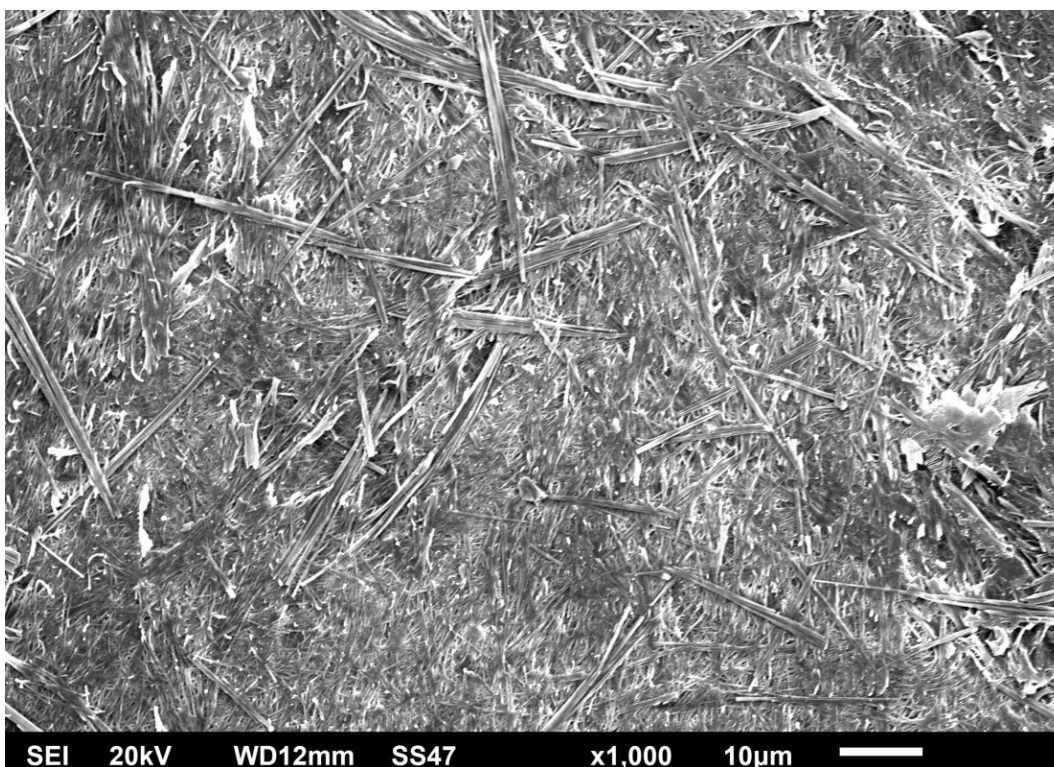


Figure 30 – SEM images of air-dried organogels in toluene with the nanoparticles of gold **18b**.

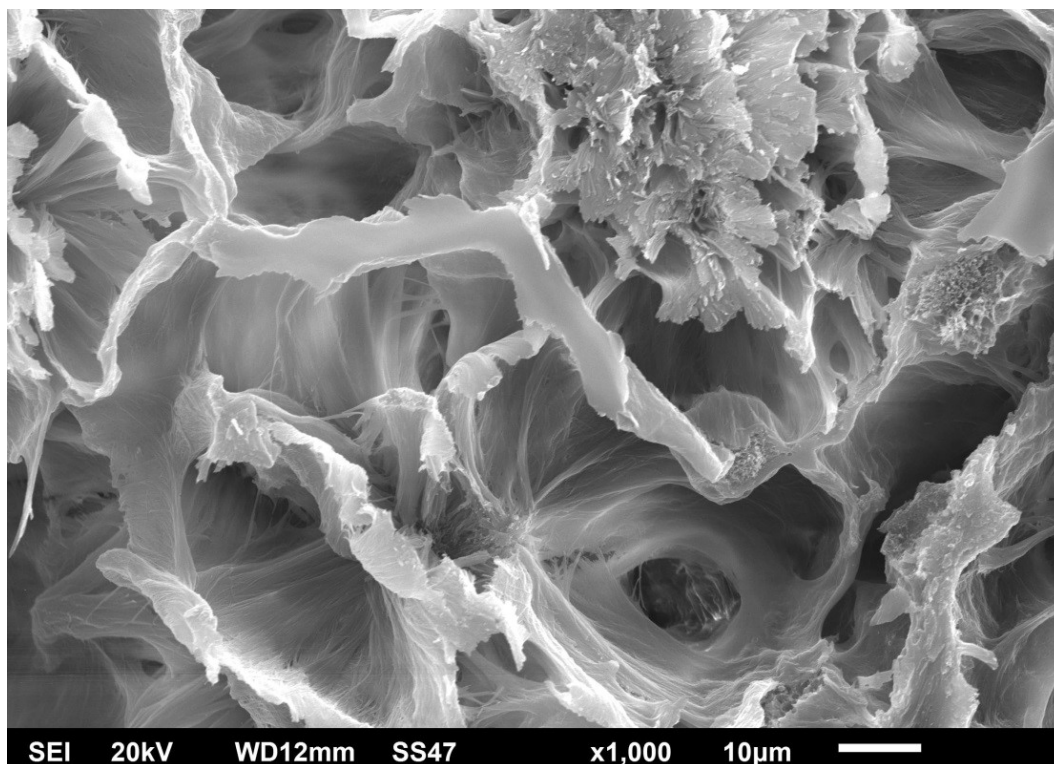


Figure 31 – SEM image of compound **19a**.

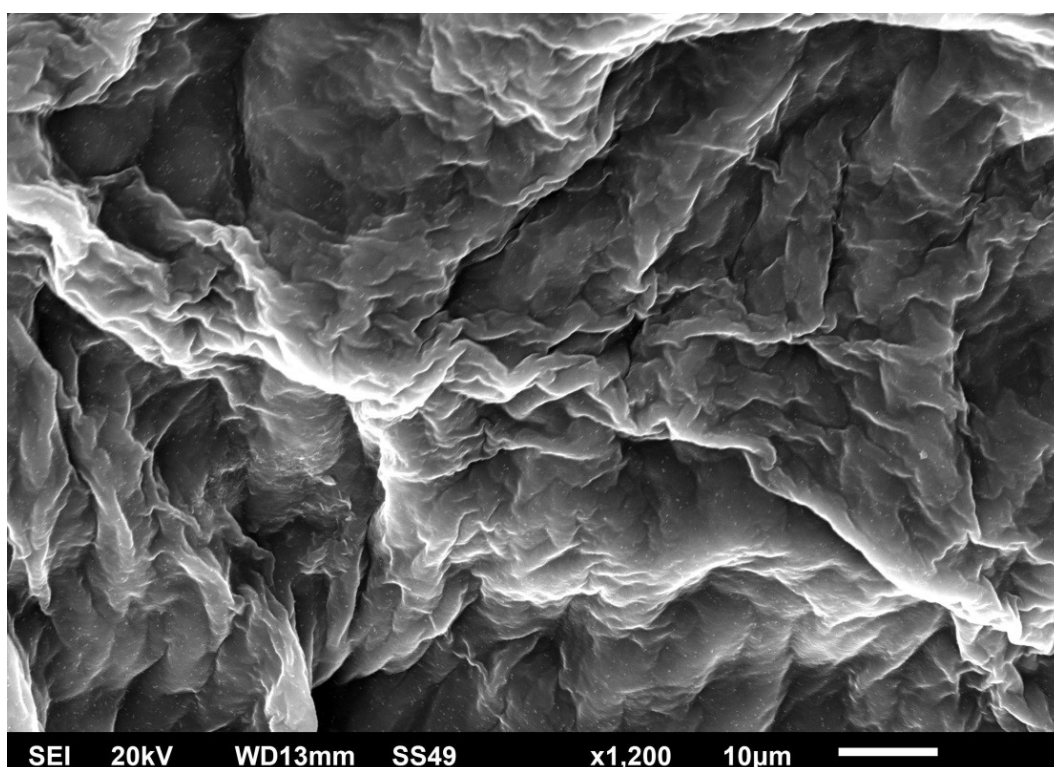


Figure 32 – SEM image of air-dried organogel in toluene obtained from **19a**.

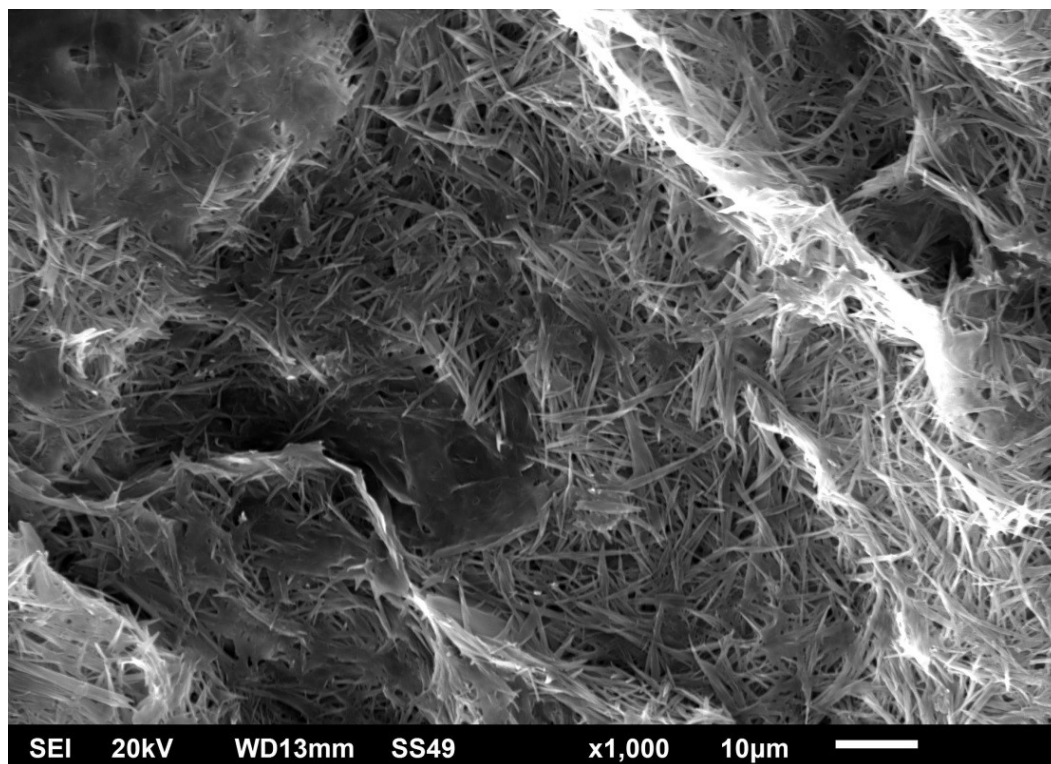


Figure 33 – SEM images of air-dried organogels in toluene with the nanoparticles of gold **19a**.

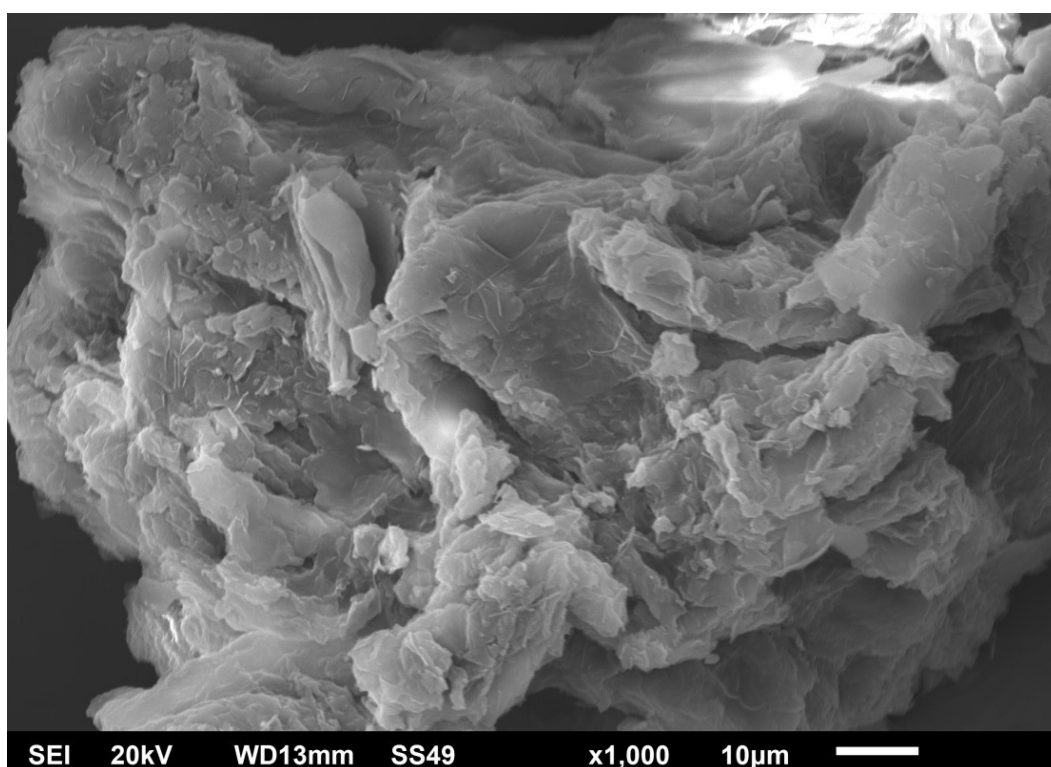


Figure 34 – SEM image of compound **19b**.

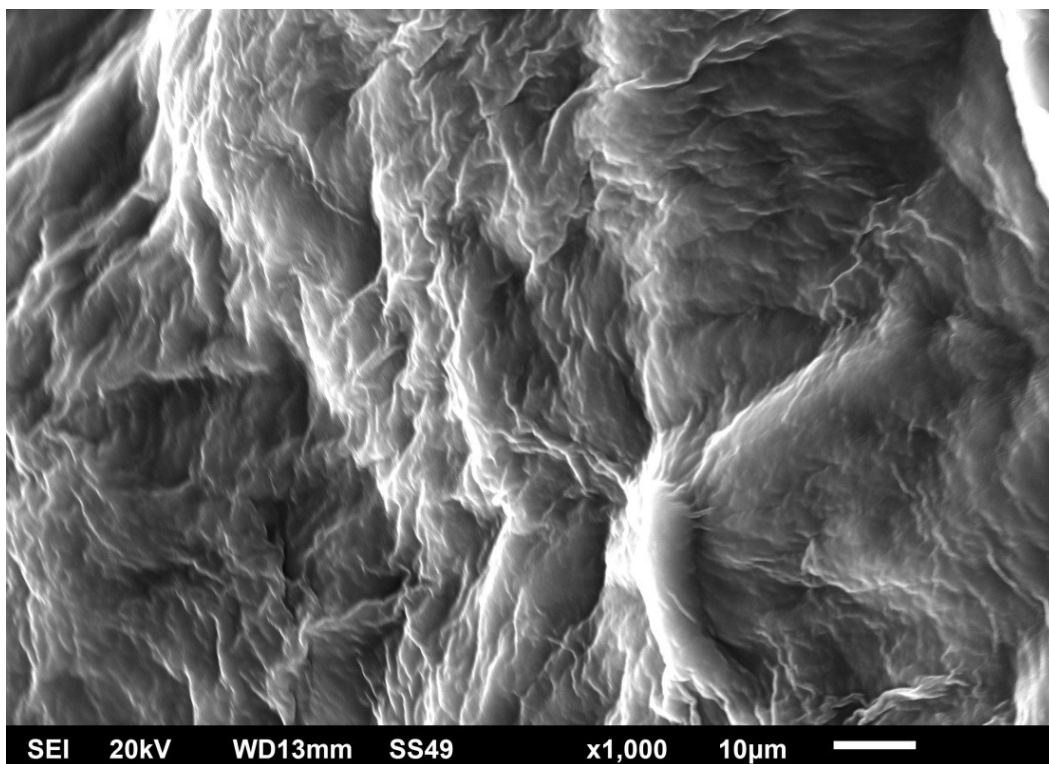


Figure 35 – SEM image of air-dried organogel in toluene obtained from **19b**.

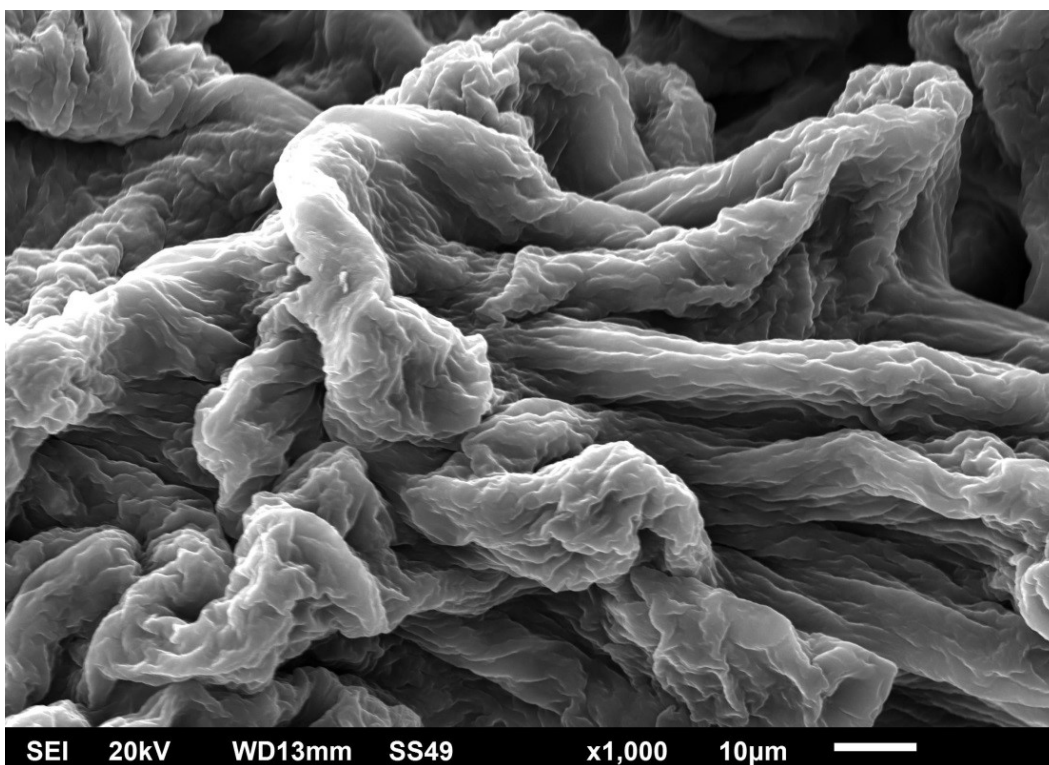


Figure 36 – SEM images of air-dried organogels in toluene with the nanoparticles of gold **19b**.

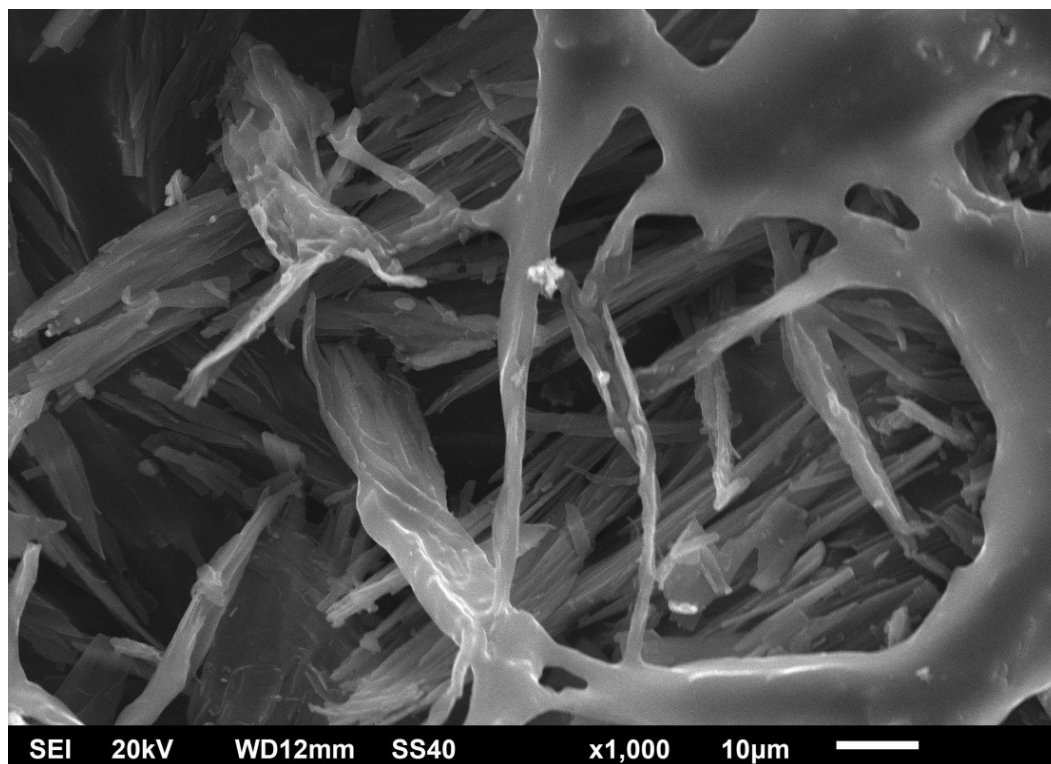


Figure 37 – SEM image of air-dried organogel in toluene obtained from **20a**.

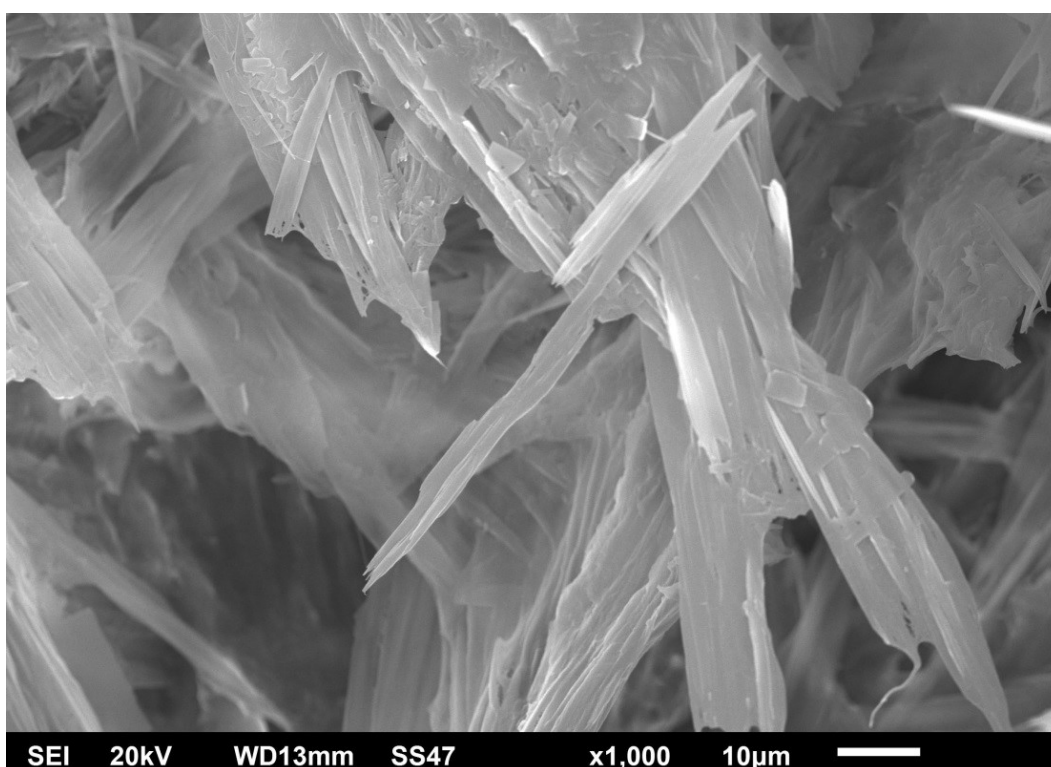


Figure 38 – SEM images of air-dried organogels in toluene with the nanoparticles of gold **20a**.

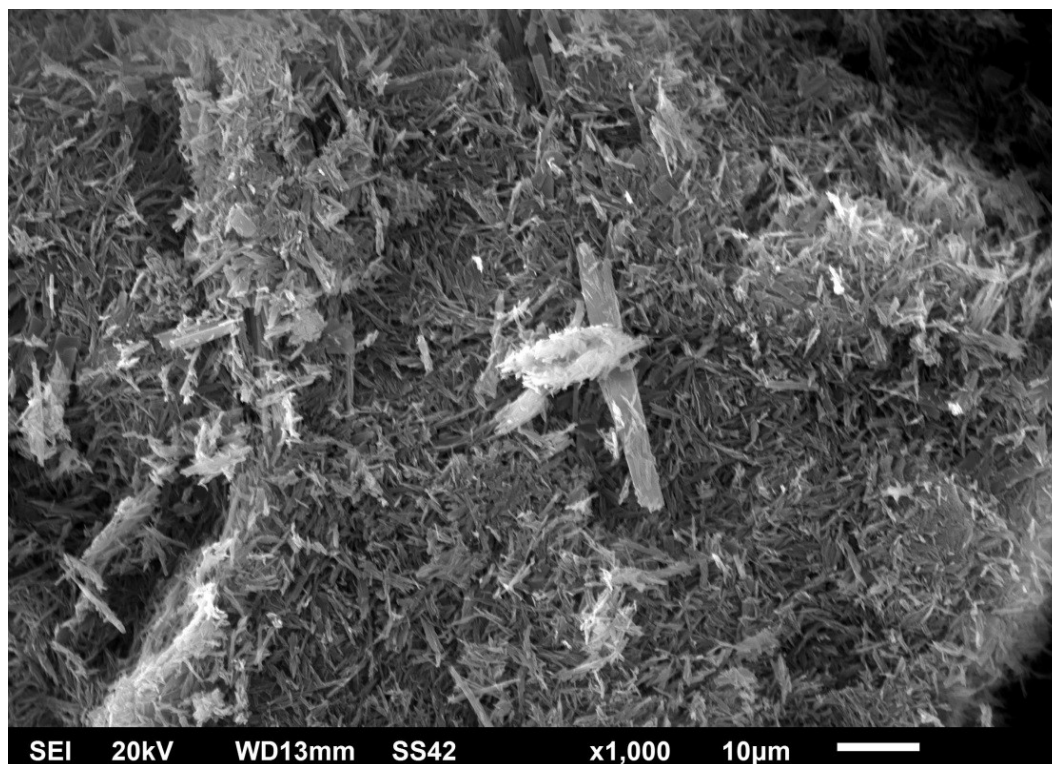


Figure 39 – SEM image of air-dried organogel in toluene obtained from **20b**.

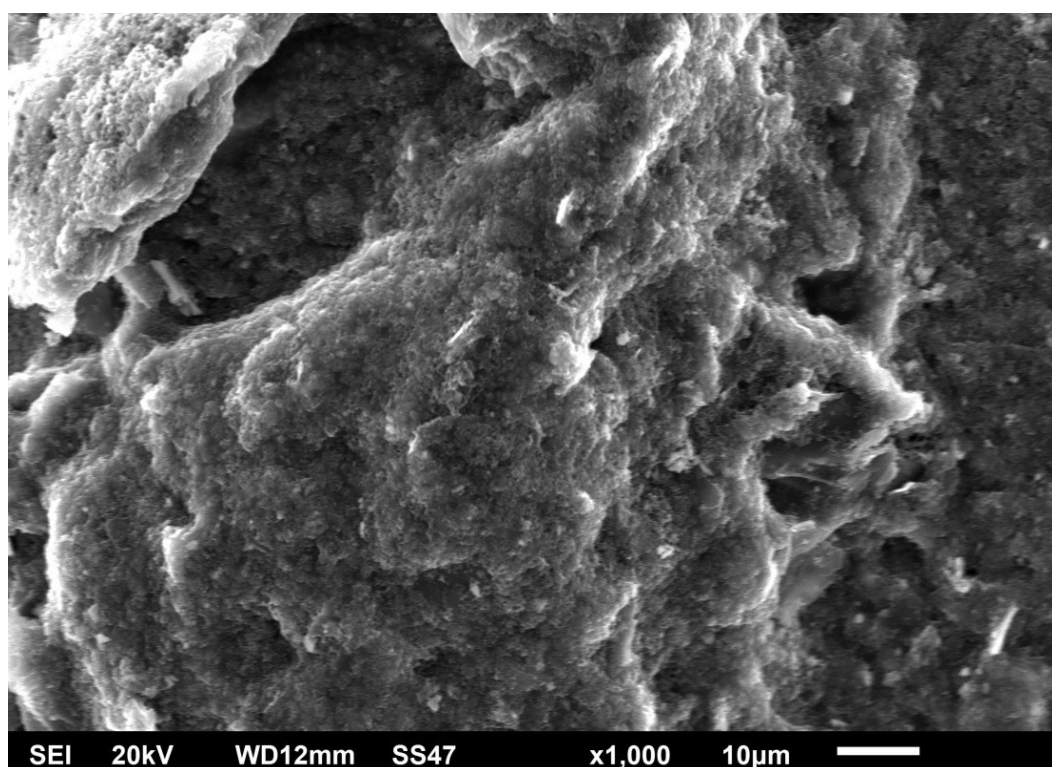


Figure 40 – SEM images of air-dried organogels in toluene with the nanoparticles of gold **20b**.