Electronic Supplementary Material (ESI) for RSC Advances.

Supplementary Material

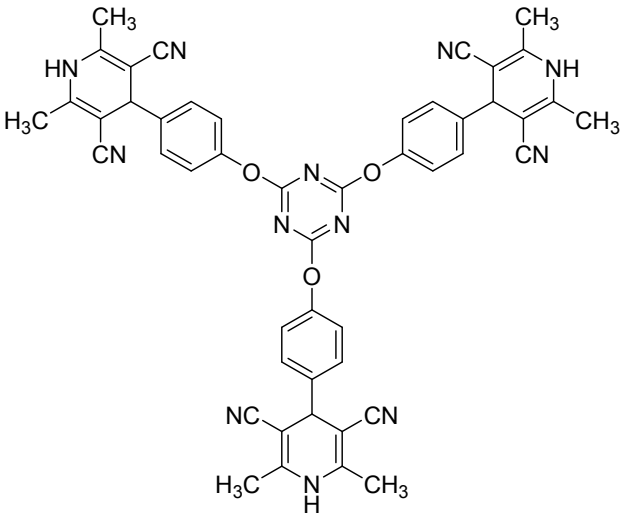
Synthesis of novel star-shaped molecules based on 1,3,5-triazine core linked to different heterocyclic systems as novel hybrid molecules

Hadeer M. Diab, Mostafa E. Salem, Ismail A. Abdelhamid* and Ahmed H. M. Elwahy*

Department of Chemistry, Faculty of Science, Cairo University, Giza 12613, Egypt

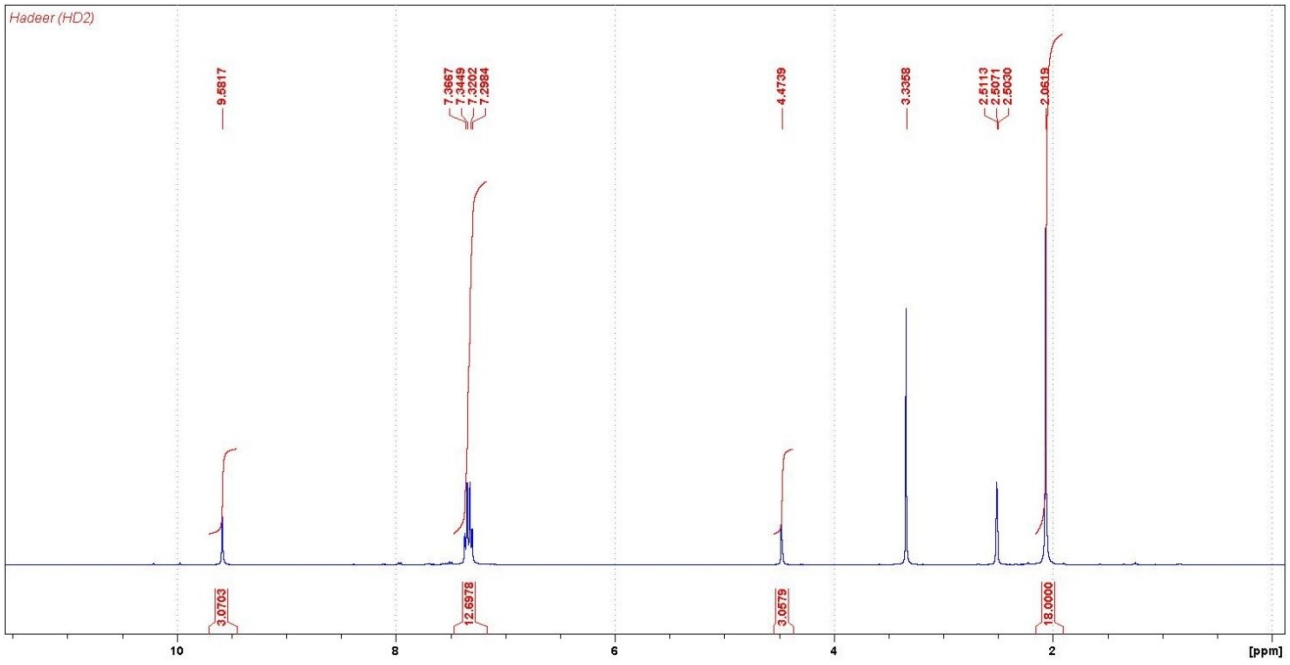
Email: ismail_shafy@yahoo.com, aelwahy@hotmail.com

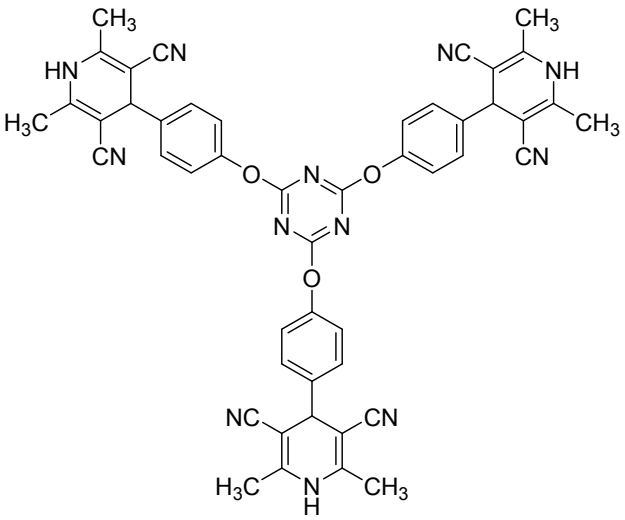
Table of Contents



5

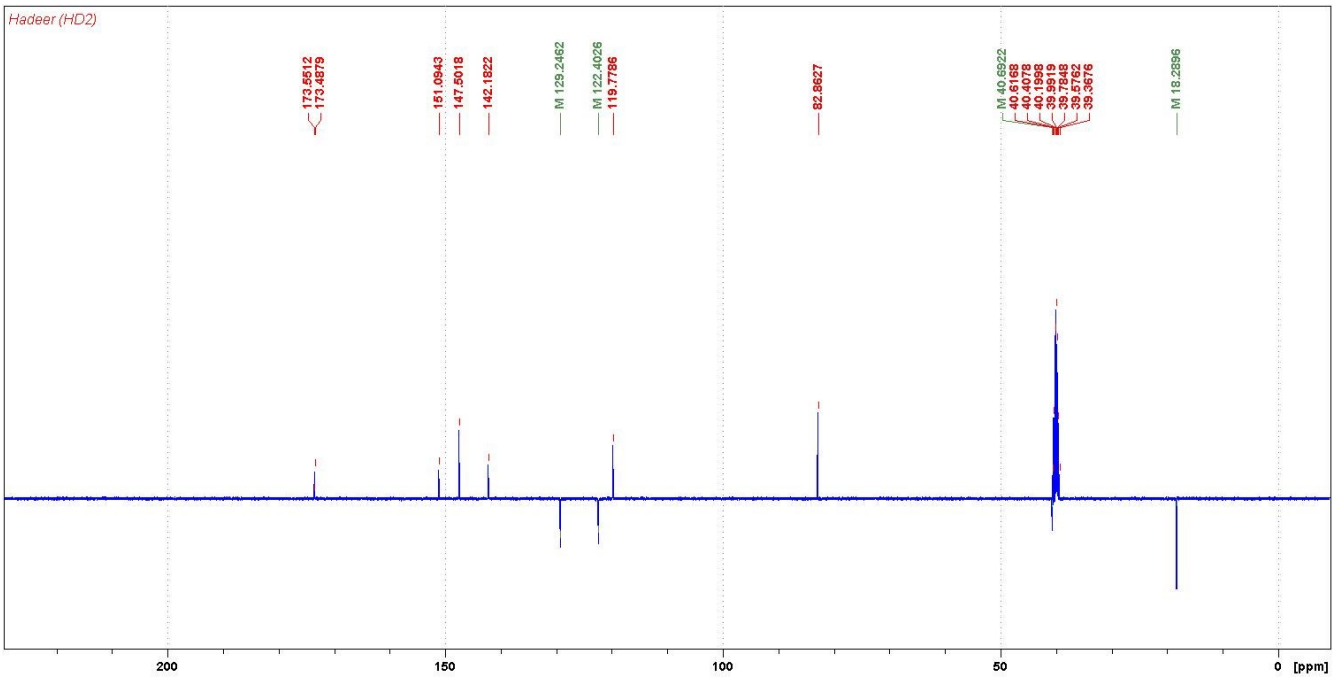
The ^{1}H NMR (400 MHz, DMSO-d_6) of compound 5

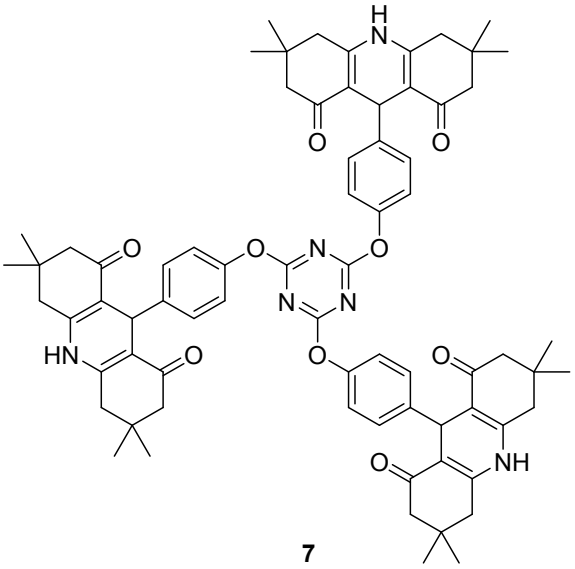




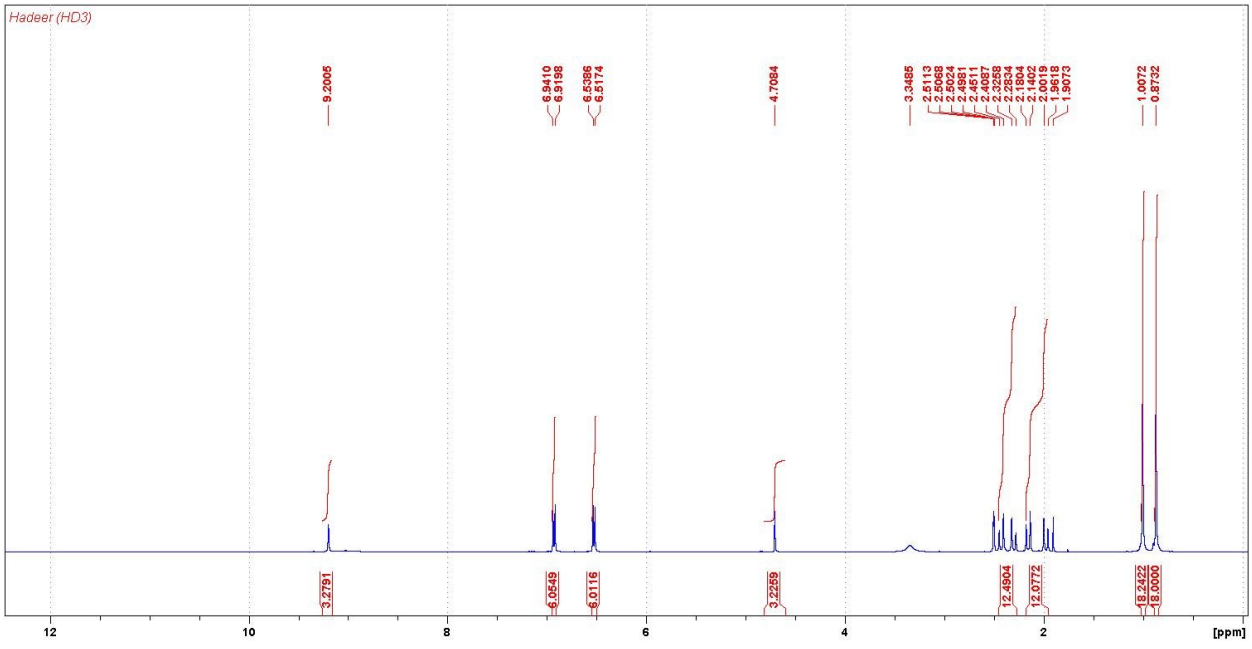
5

^{13}C NMR (100 MHz, DMSO-d_6) of compound 5

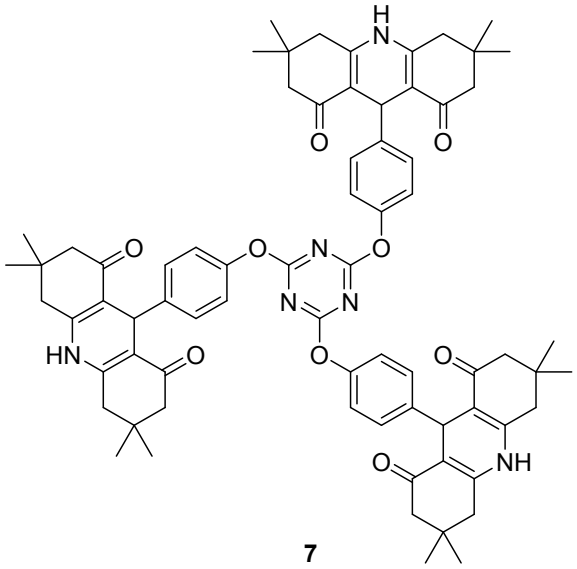




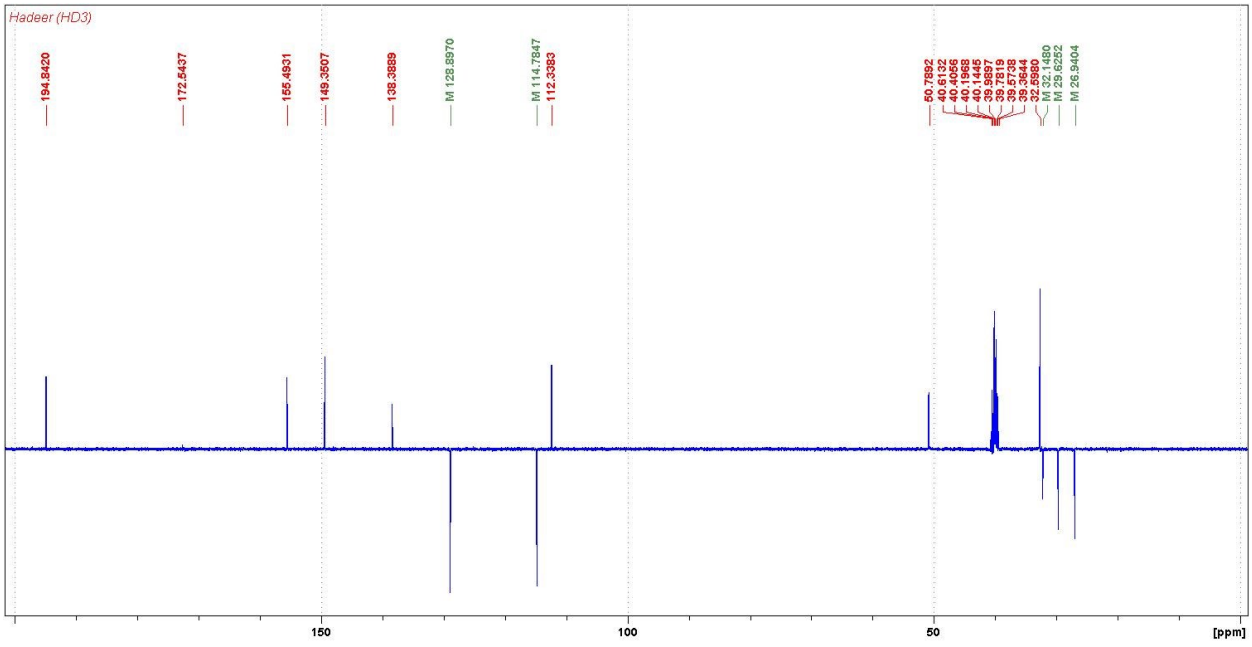
7



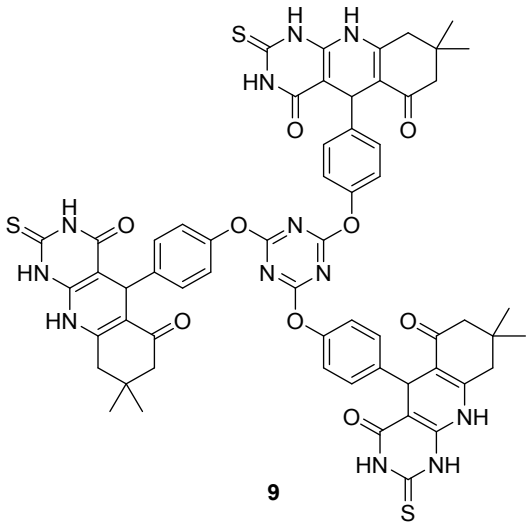
The ^{1}H NMR (400 MHz, DMSO-d_6) of compound 7



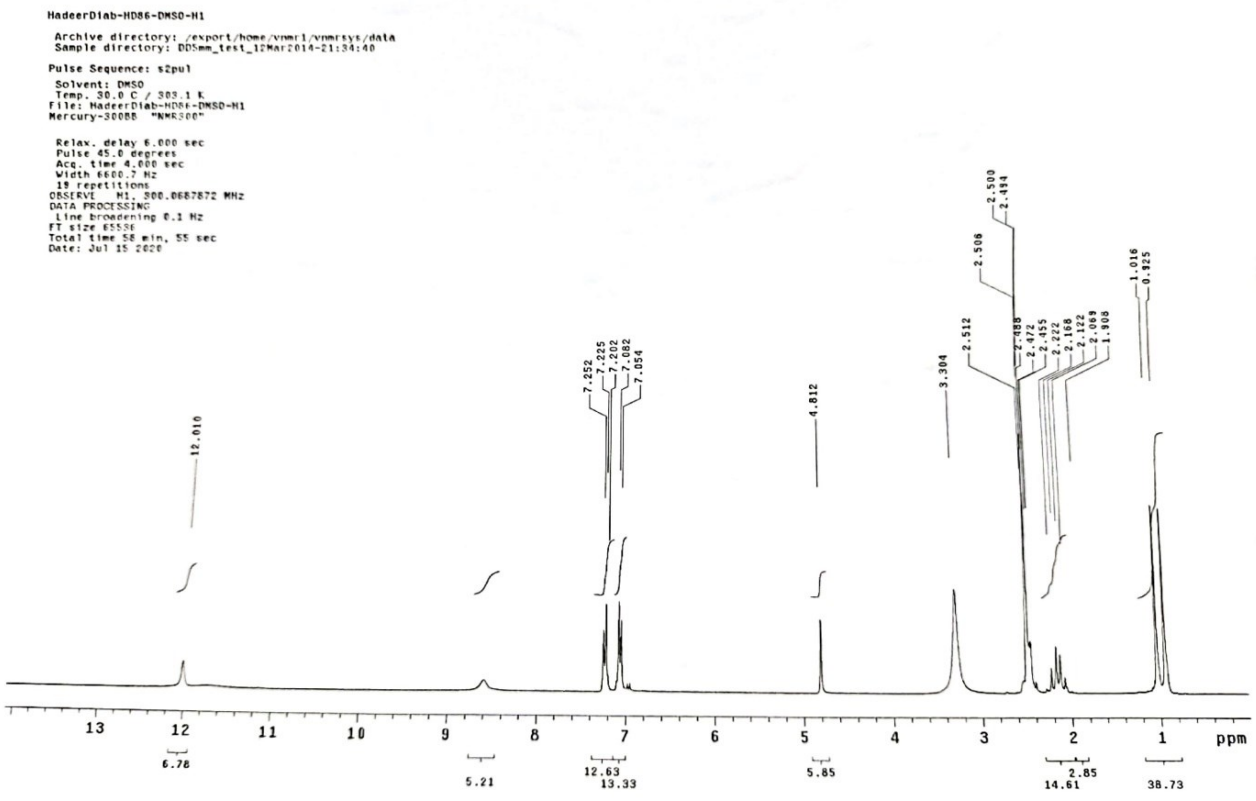
7



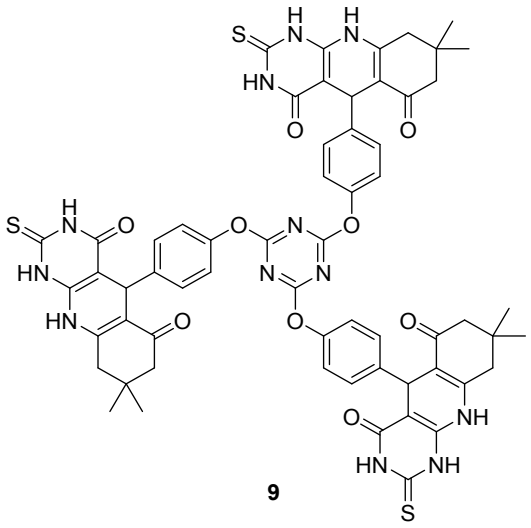
^{13}C NMR (100 MHz, DMSO-d_6) of compound 7



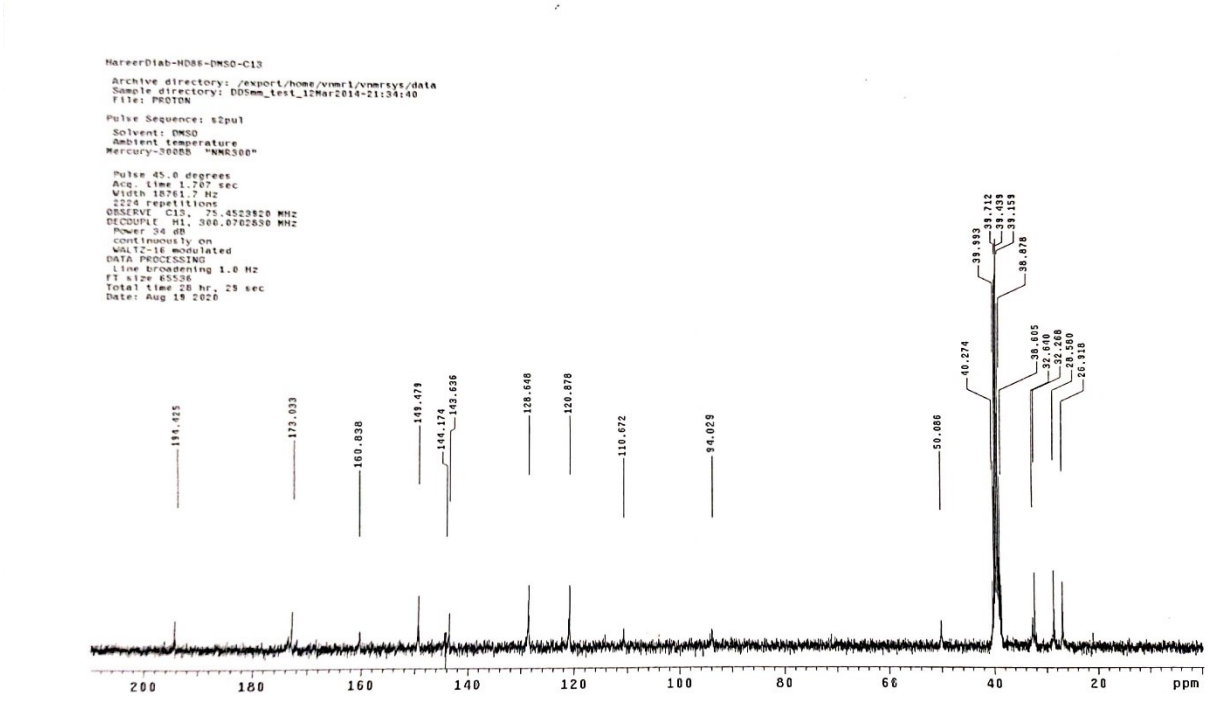
9



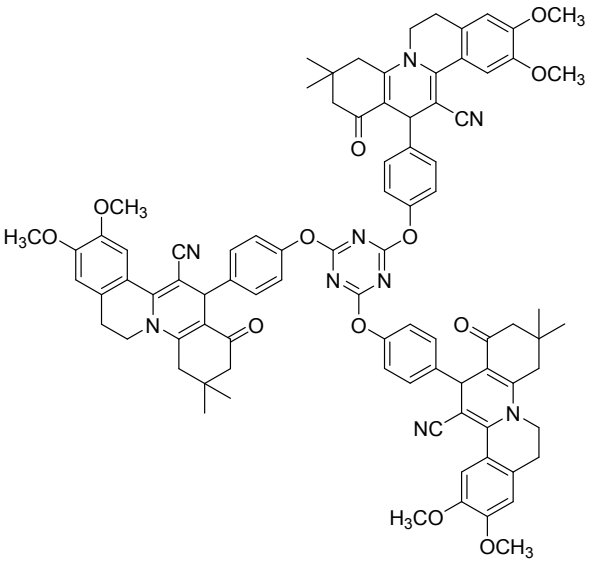
The ^{1}H NMR (300 MHz, DMSO-d_6) of compound 9



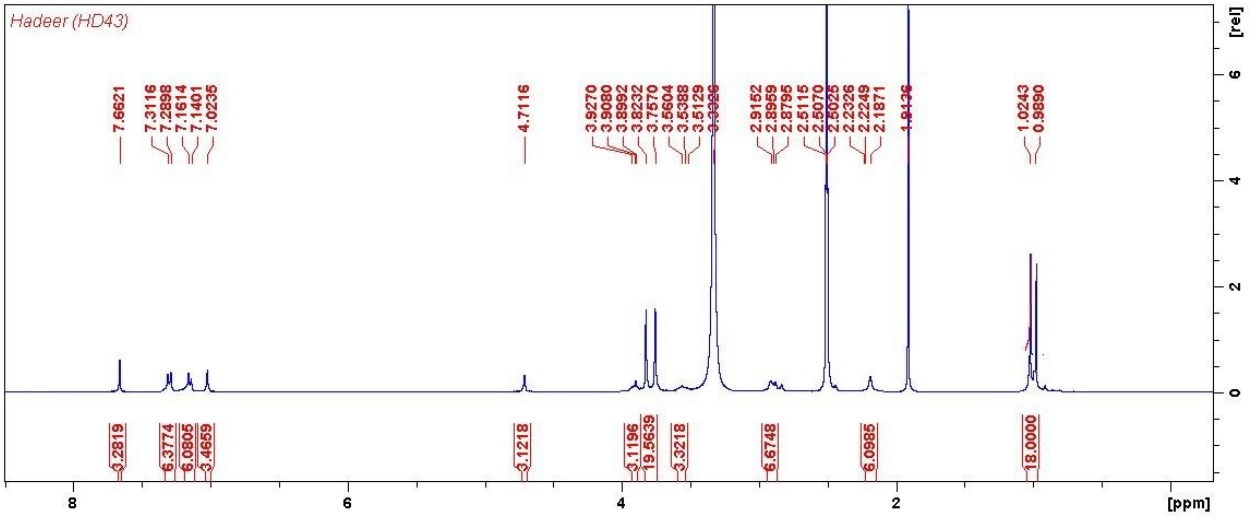
9



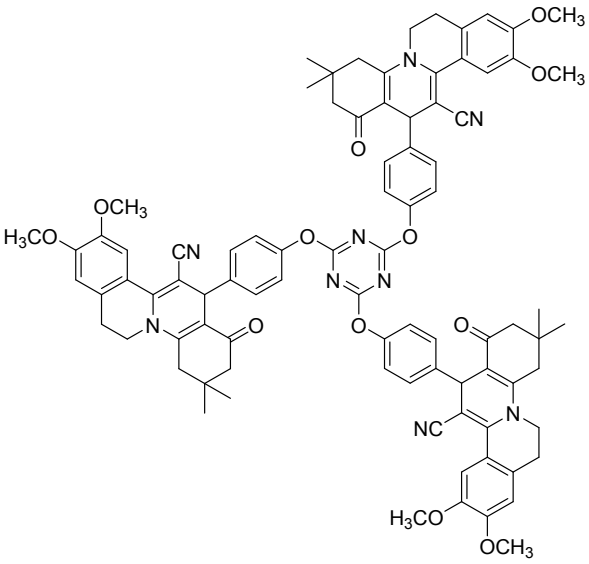
^{13}C NMR (75 MHz, DMSO-d_6) of compound 9



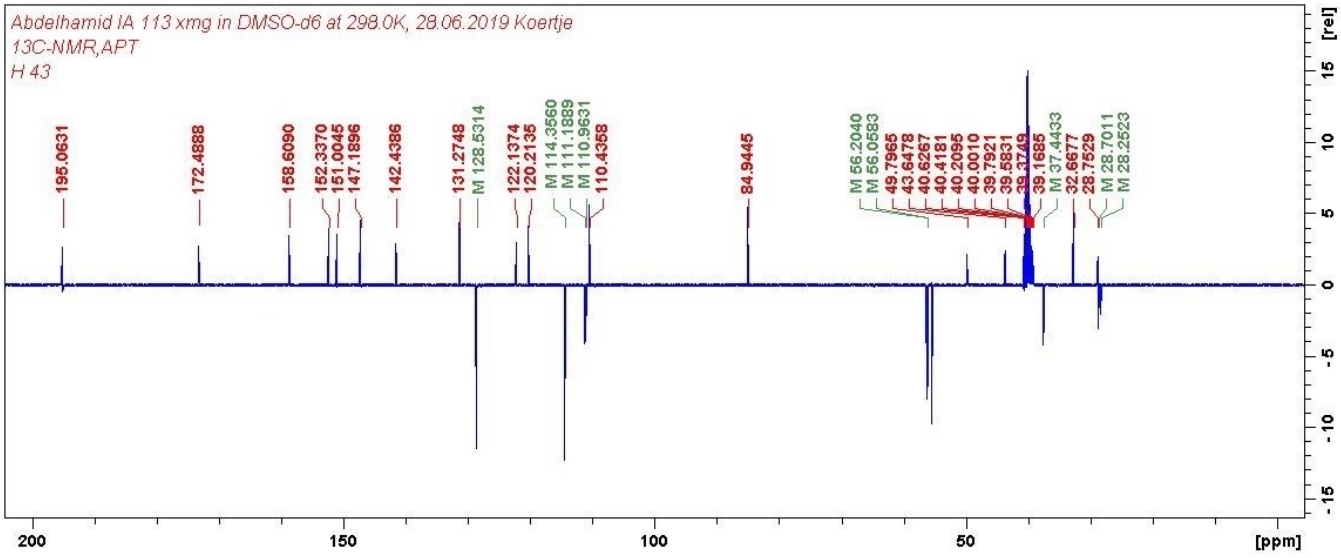
12



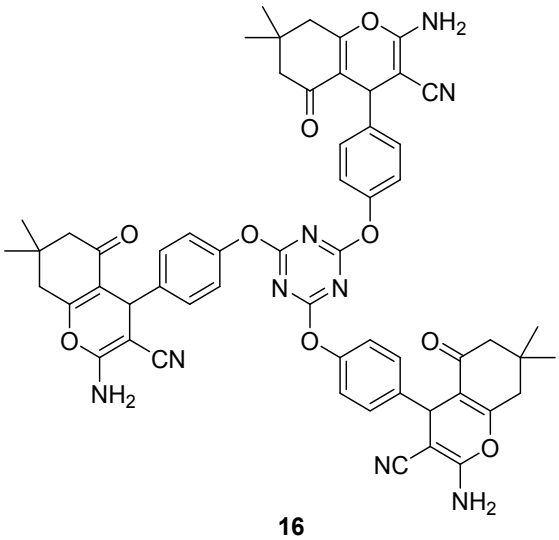
The ^{1}H NMR (400 MHz, DMSO-d_6) of compound 12



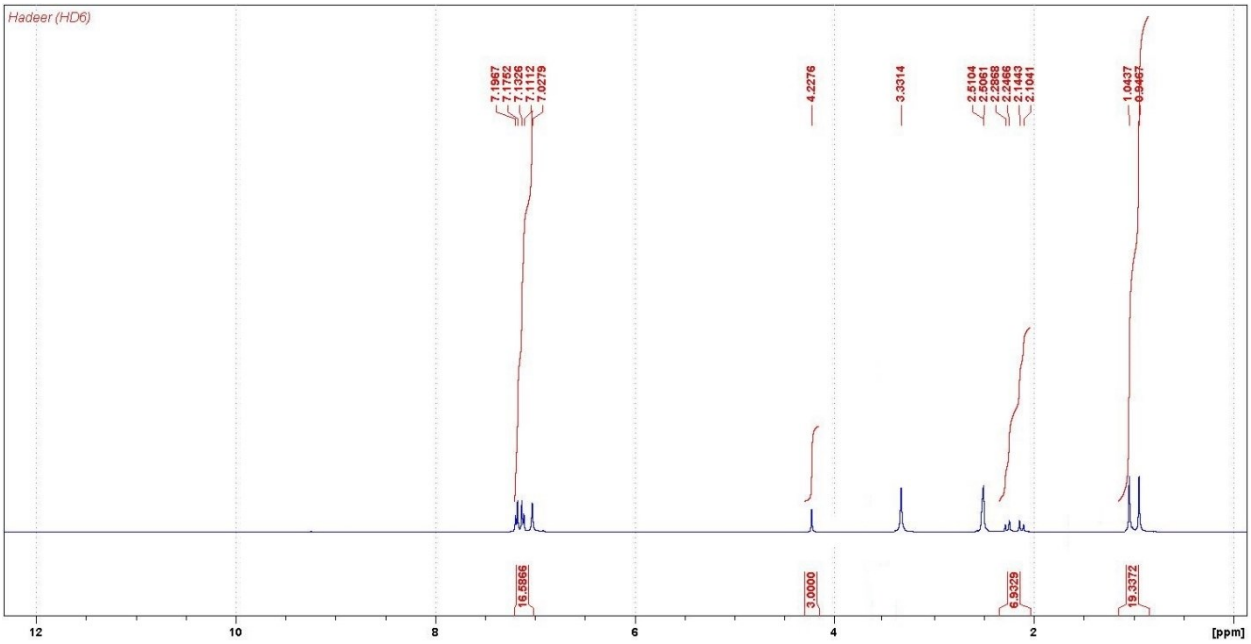
12



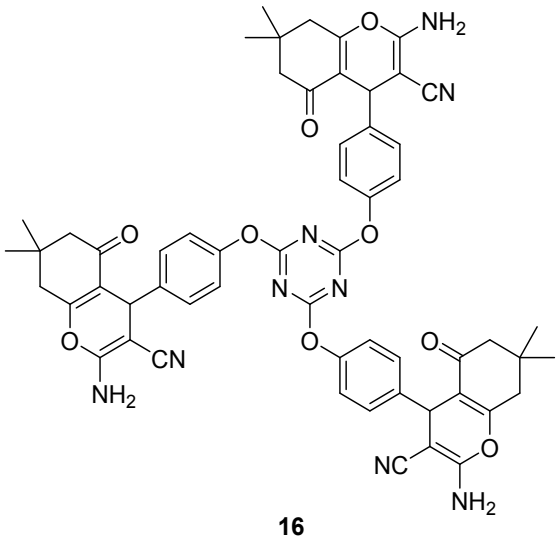
^{13}C NMR (100 MHz, DMSO-d_6) of compound 12



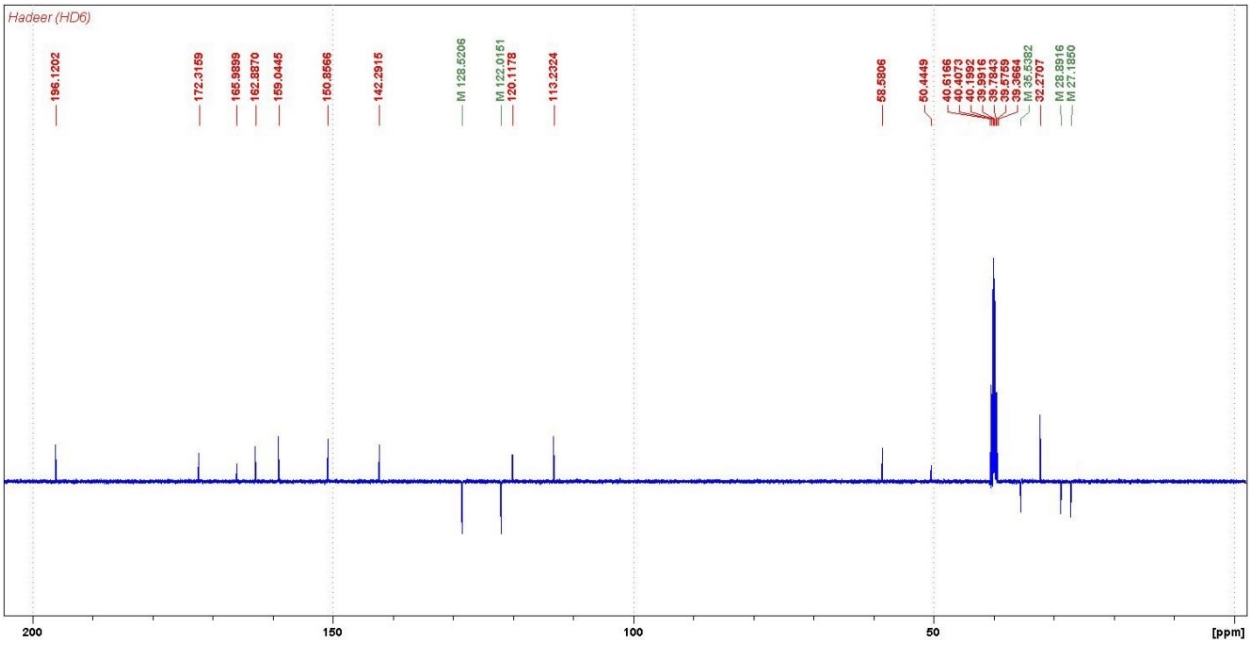
16



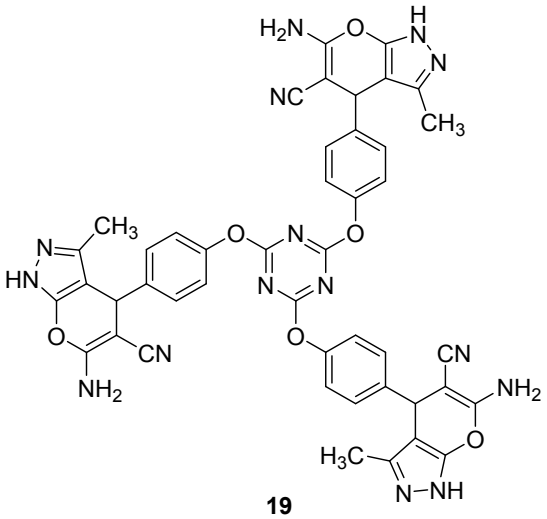
The ^{1}H NMR (400 MHz, DMSO-d_6) of compound 16



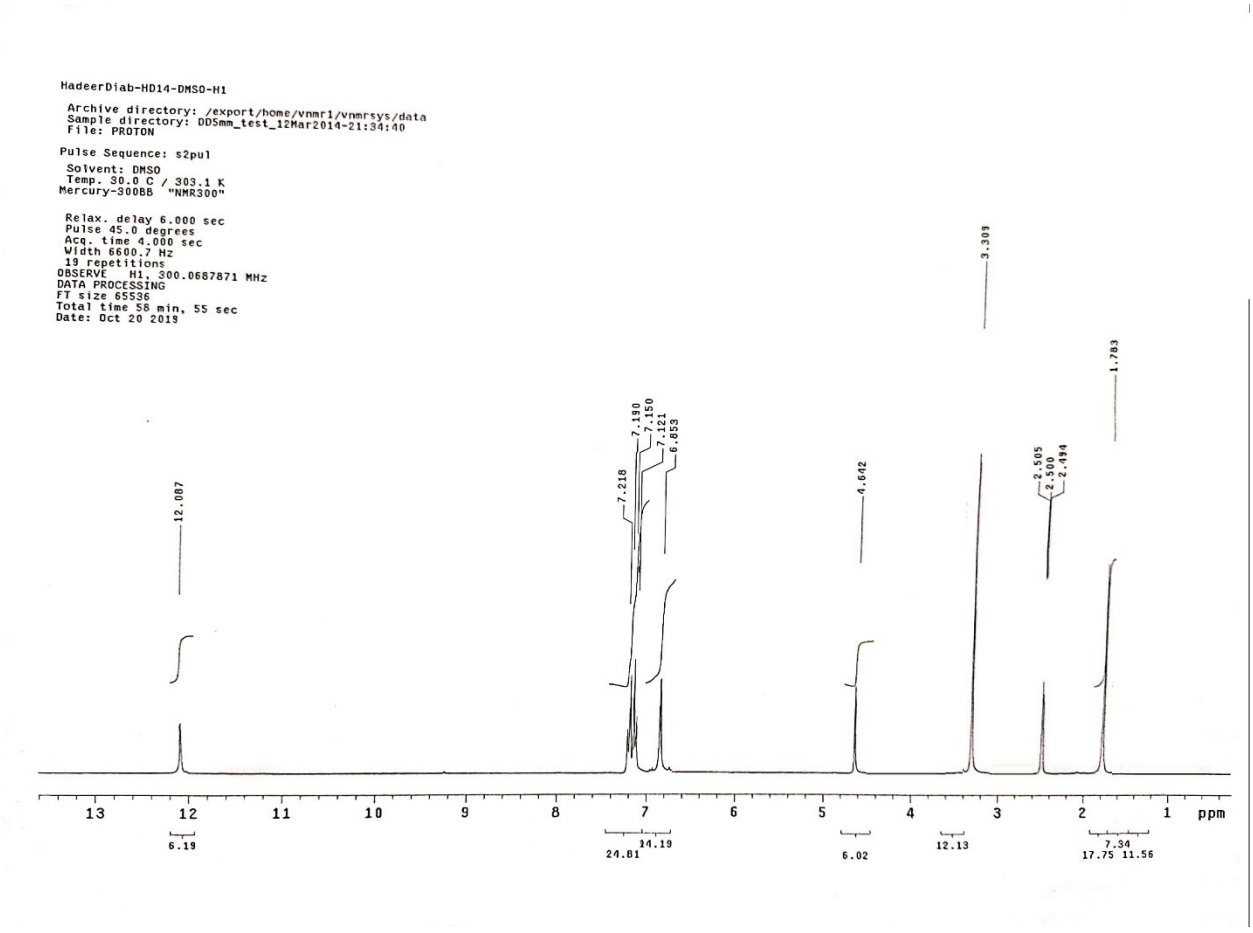
16



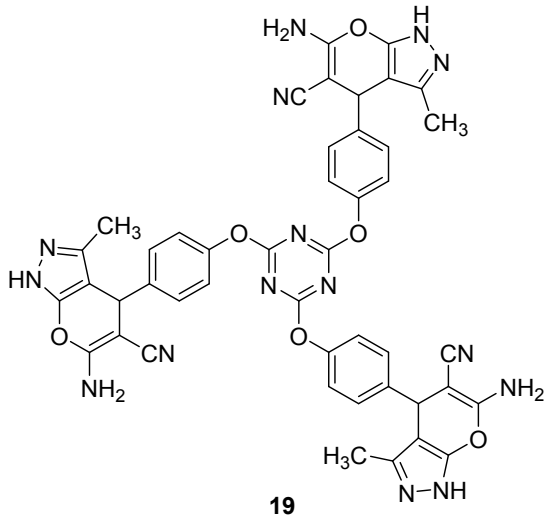
^{13}C NMR (100 MHz, DMSO-d_6) of compound 16



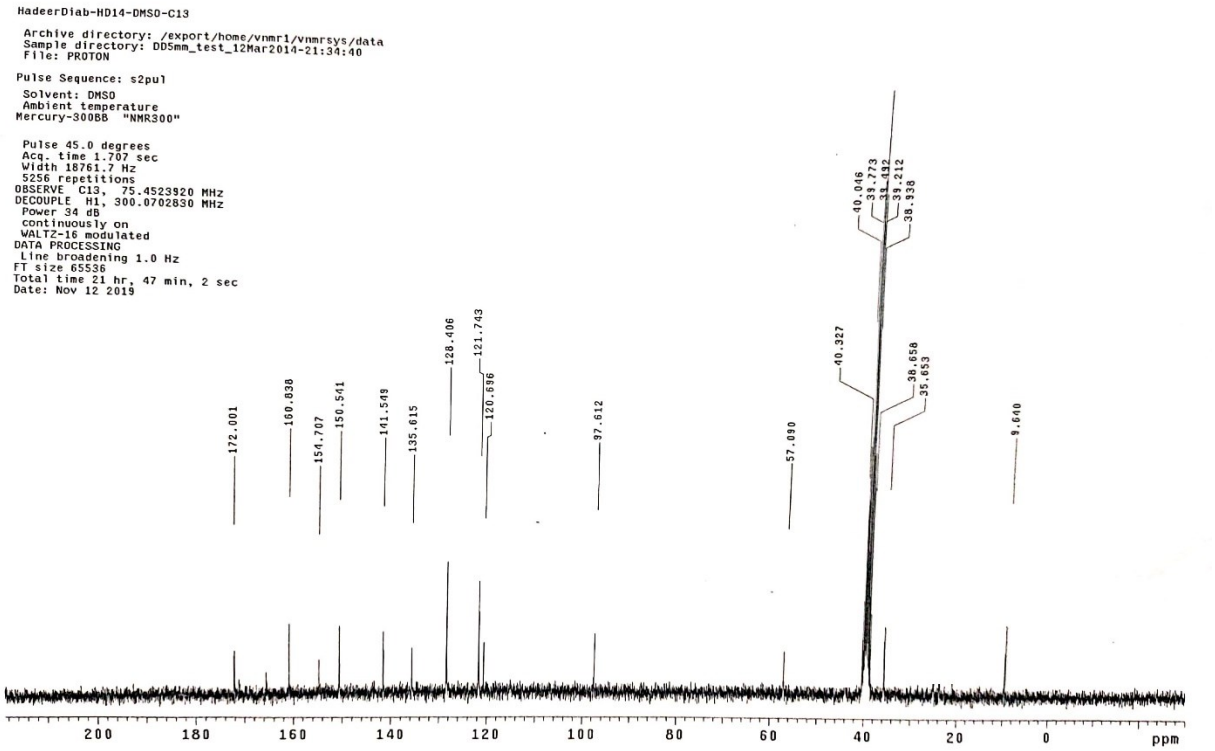
19



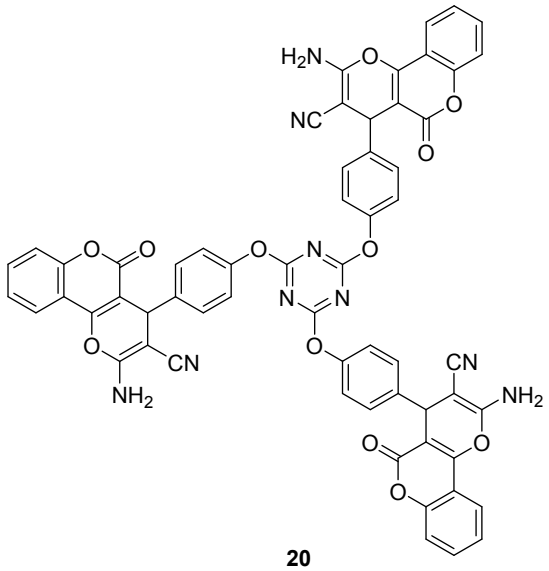
The ^{1}H NMR (300 MHz, DMSO-d_6) of compound 19



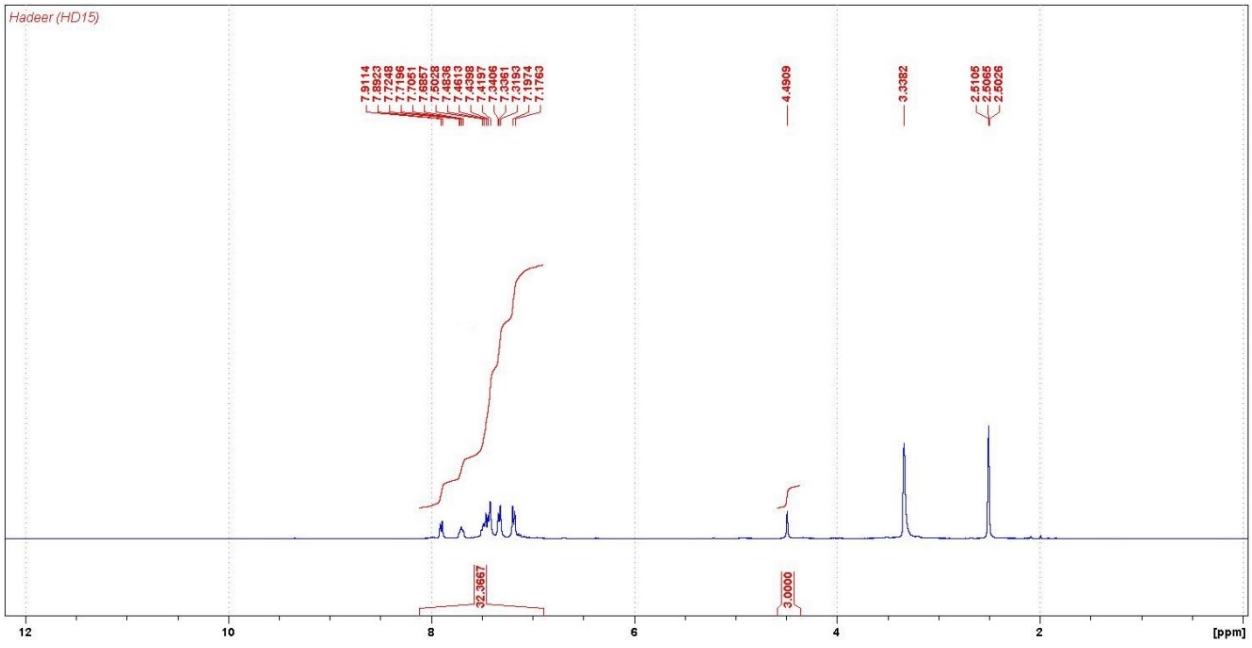
19



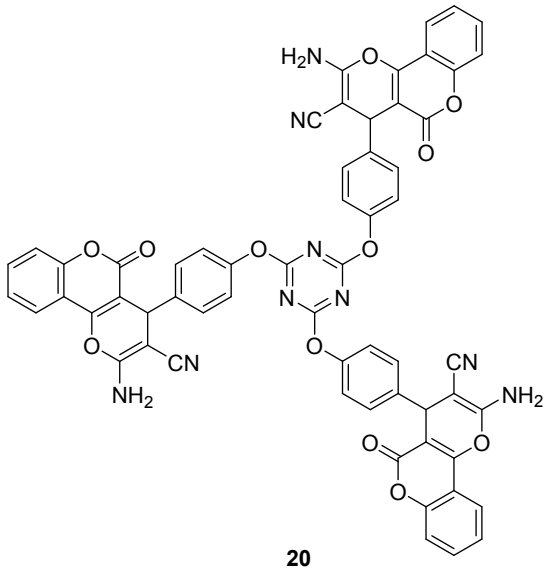
^{13}C NMR (75 MHz, DMSO-d_6) of compound 19



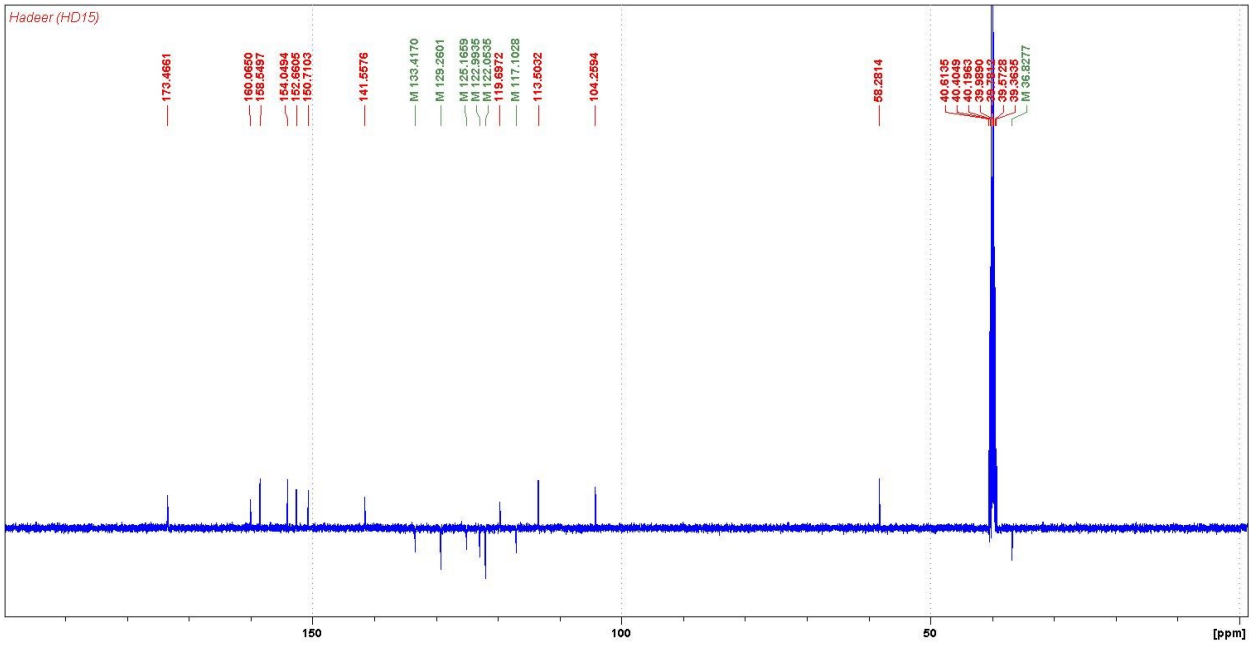
20



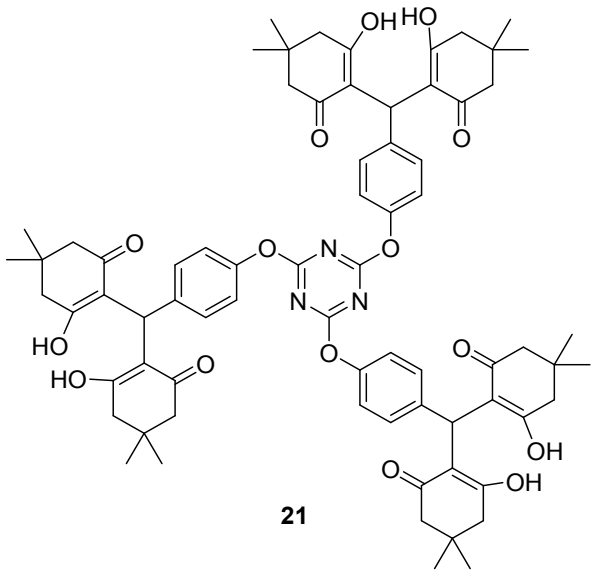
The ^{1}H NMR (400 MHz, DMSO-d_6) of compound 20



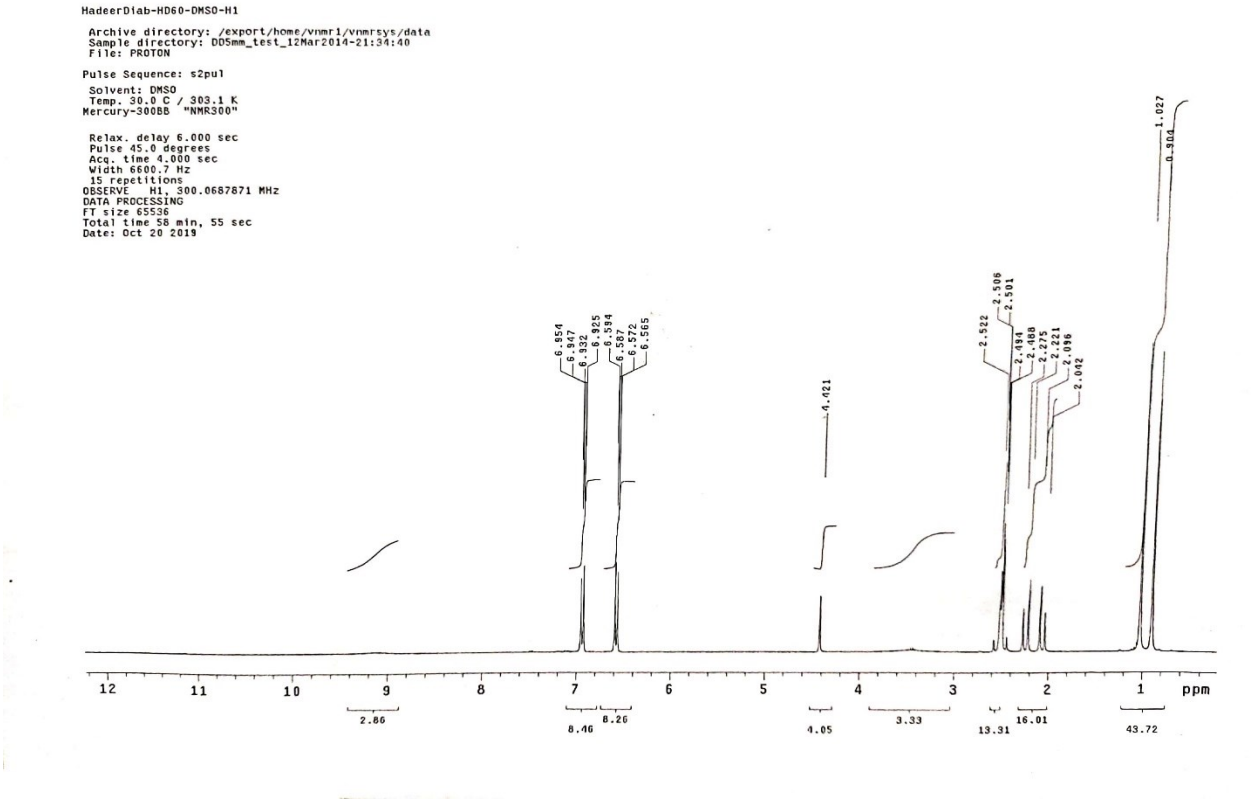
20



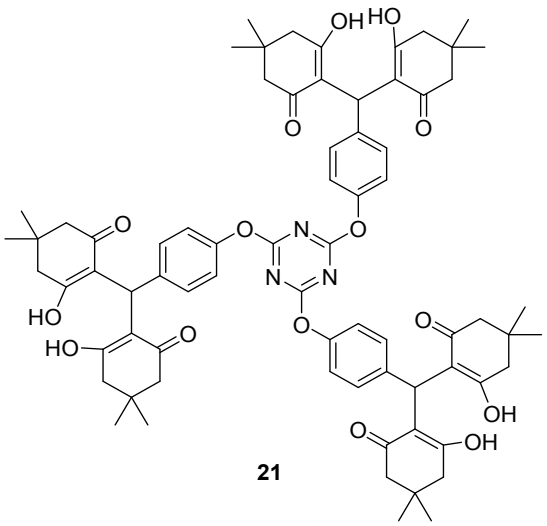
^{13}C NMR (100 MHz, DMSO-d_6) of compound 20



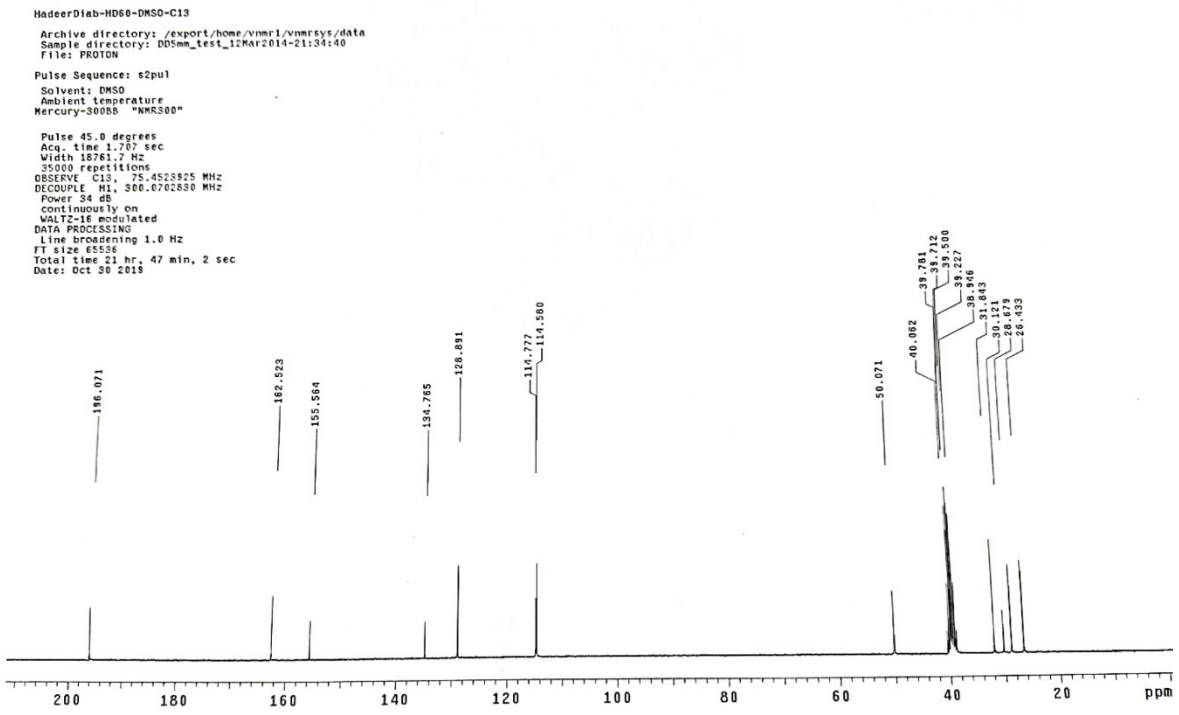
21



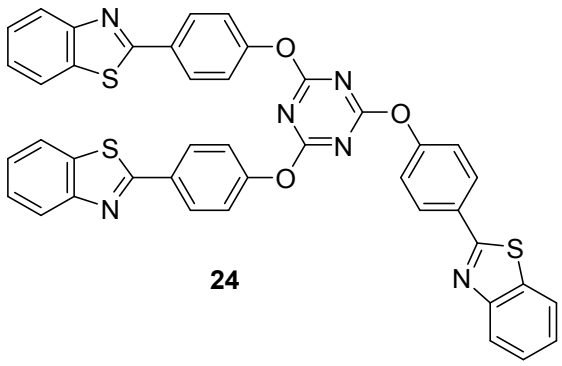
The ^{1}H NMR (300 MHz, DMSO-d_6) of compound 21



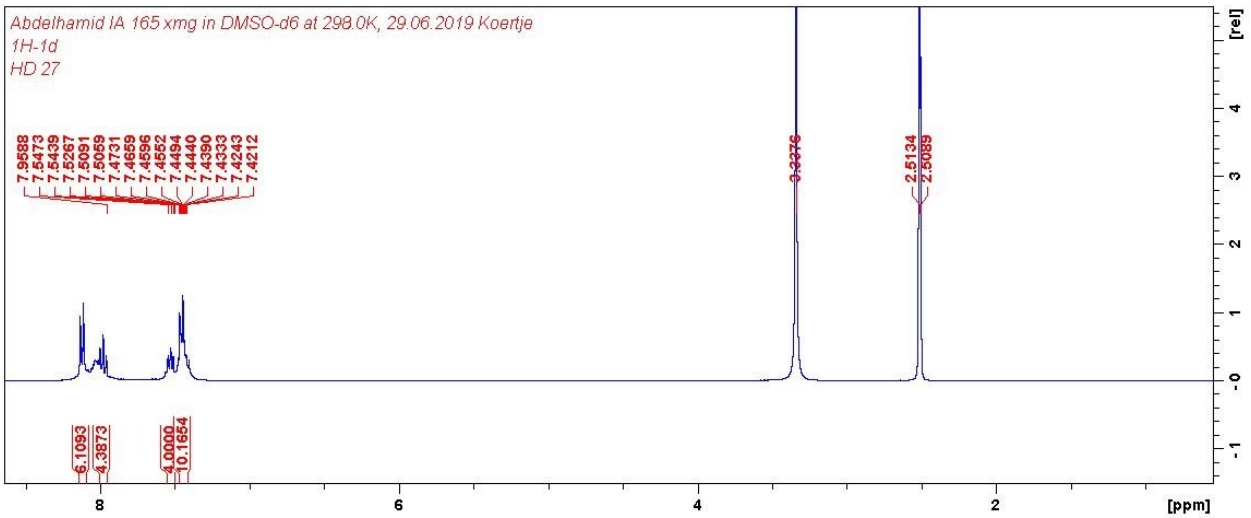
21



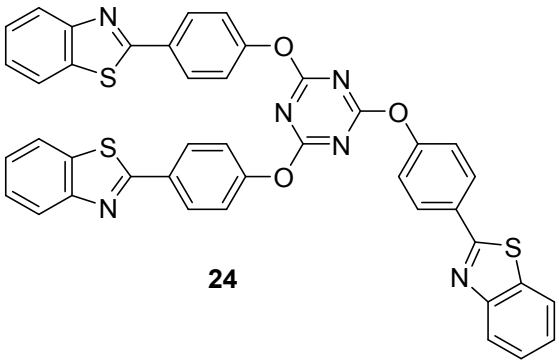
^{13}C NMR (75 MHz, DMSO-d_6) of compound 21



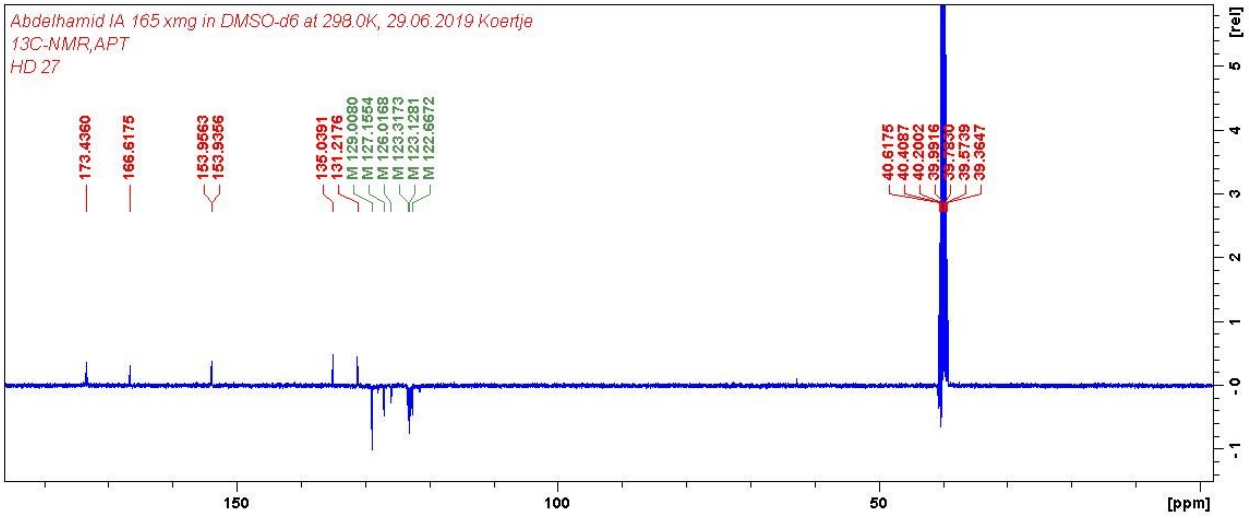
24



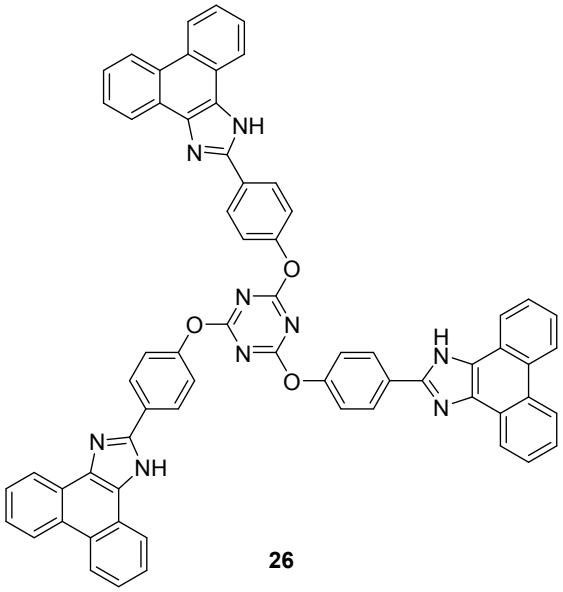
The ^{1}H NMR (400 MHz, DMSO-d_6) of compound 24



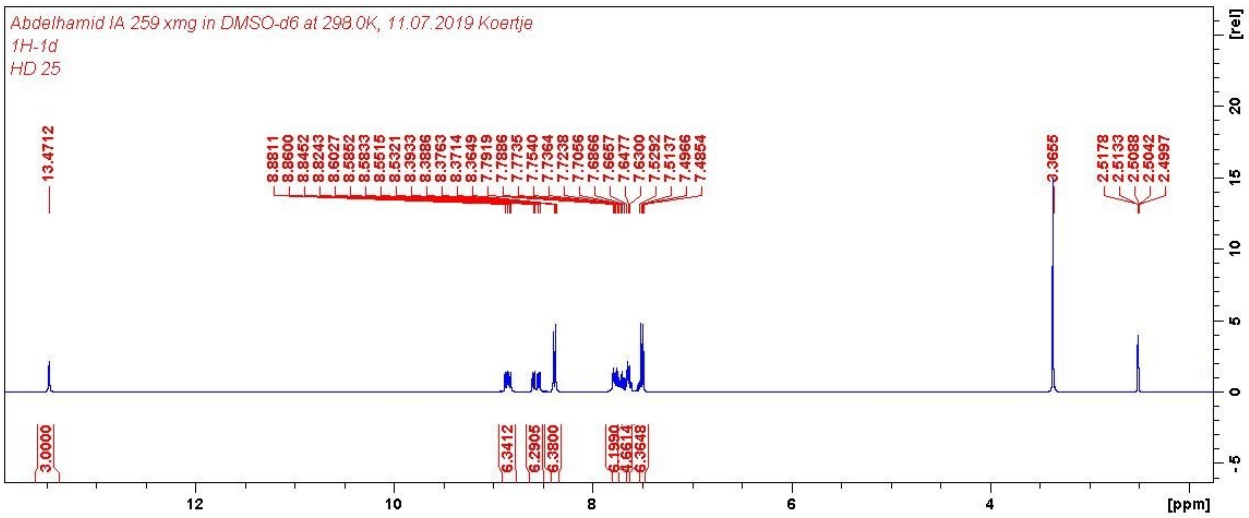
24



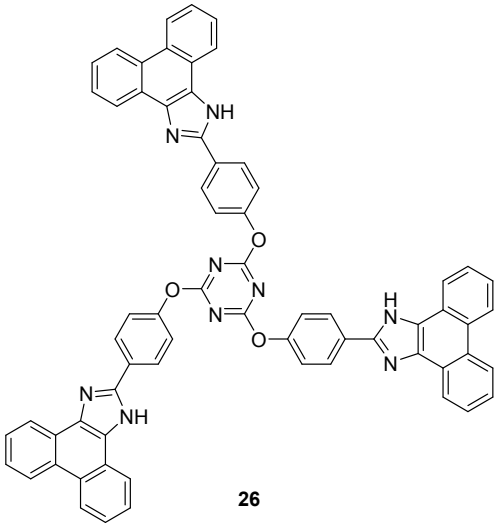
^{13}C NMR (100 MHz, DMSO-d_6) of compound 24



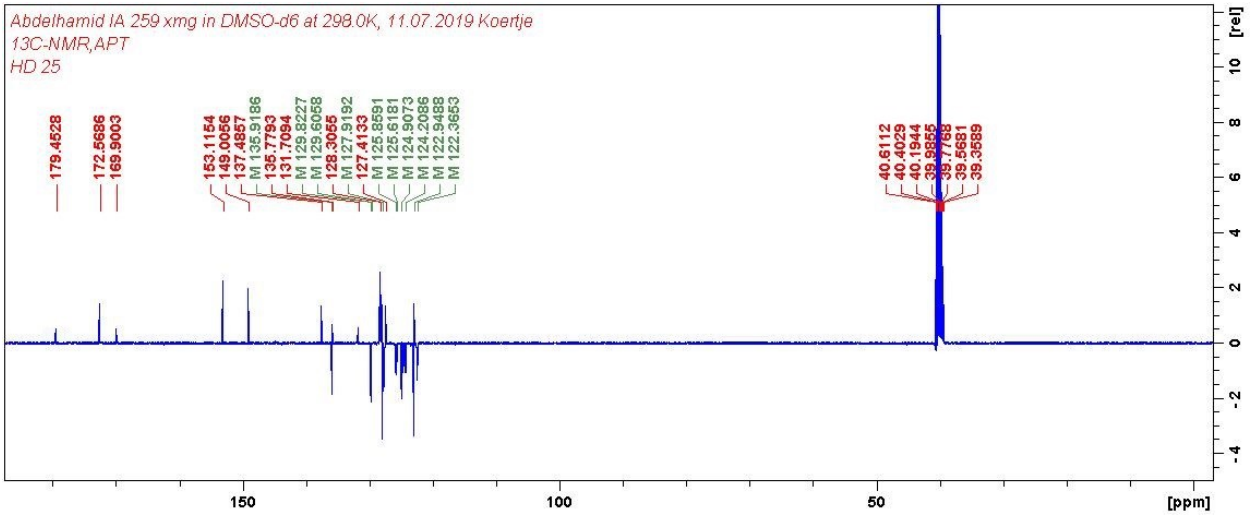
26



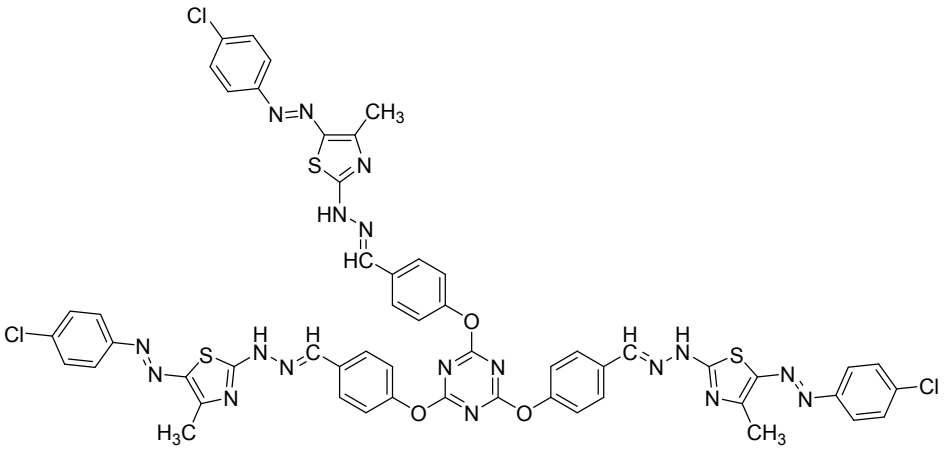
The ^{1}H NMR (400 MHz, DMSO-d_6) of compound 26



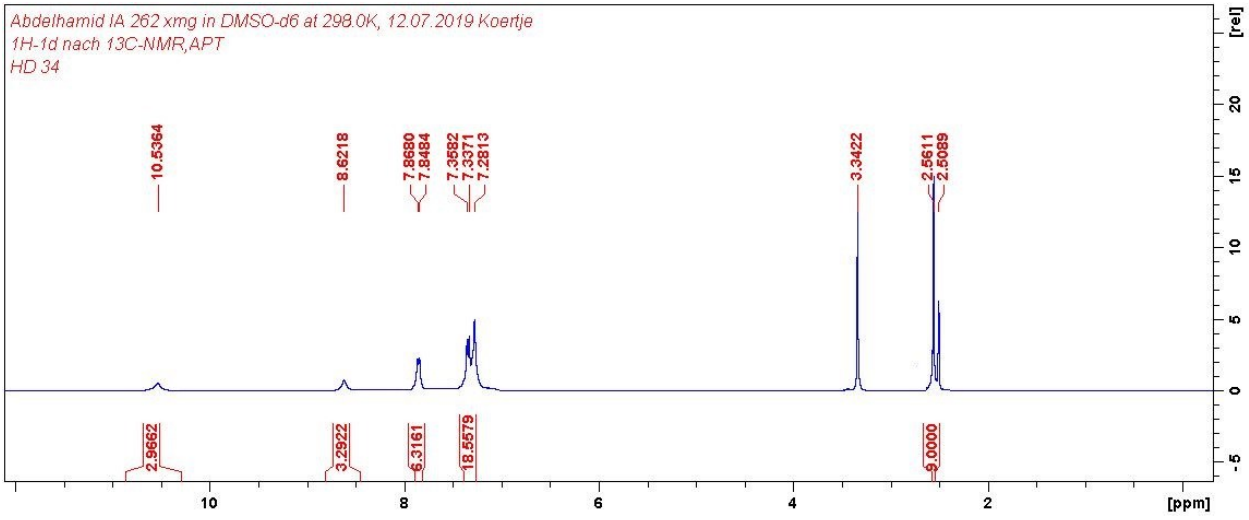
26



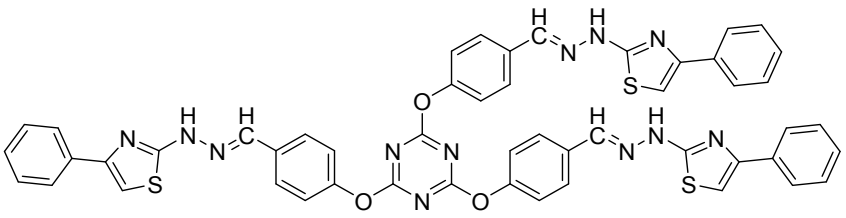
^{13}C NMR (100 MHz, DMSO-d_6) of compound 26



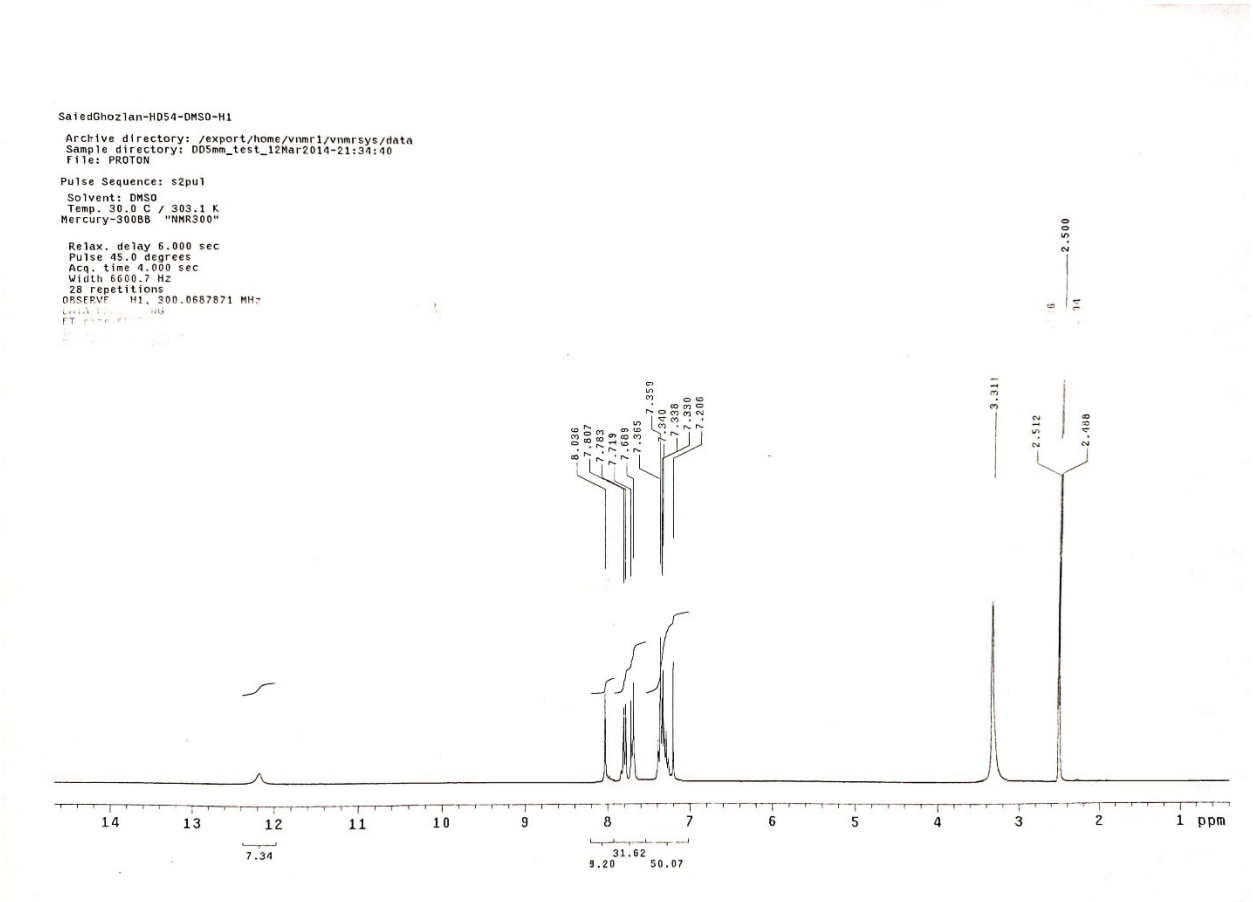
30



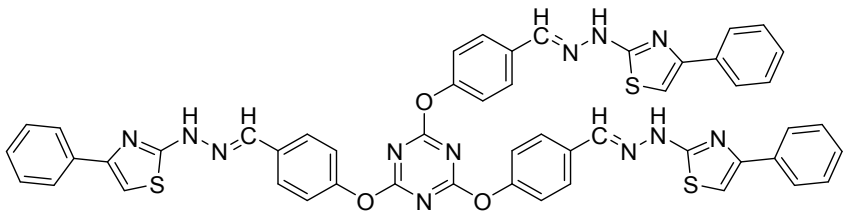
The ^{1}H NMR (400 MHz, DMSO-d_6) of compound 30



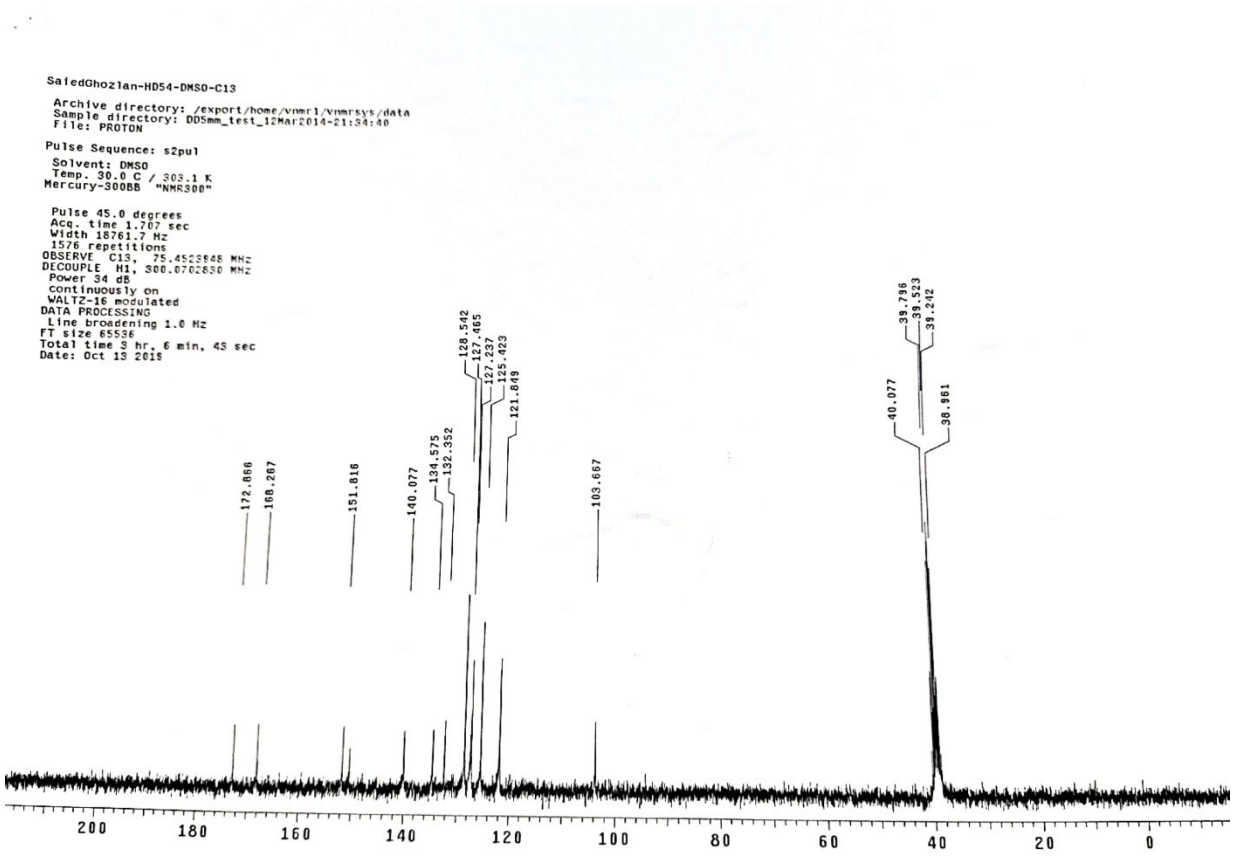
33



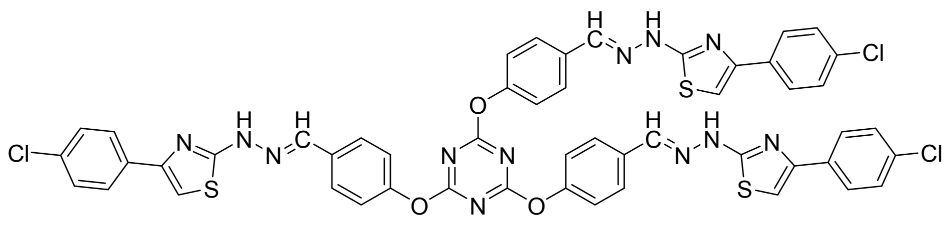
The ^{1}H NMR (300 MHz, DMSO-d_6) of compound 33



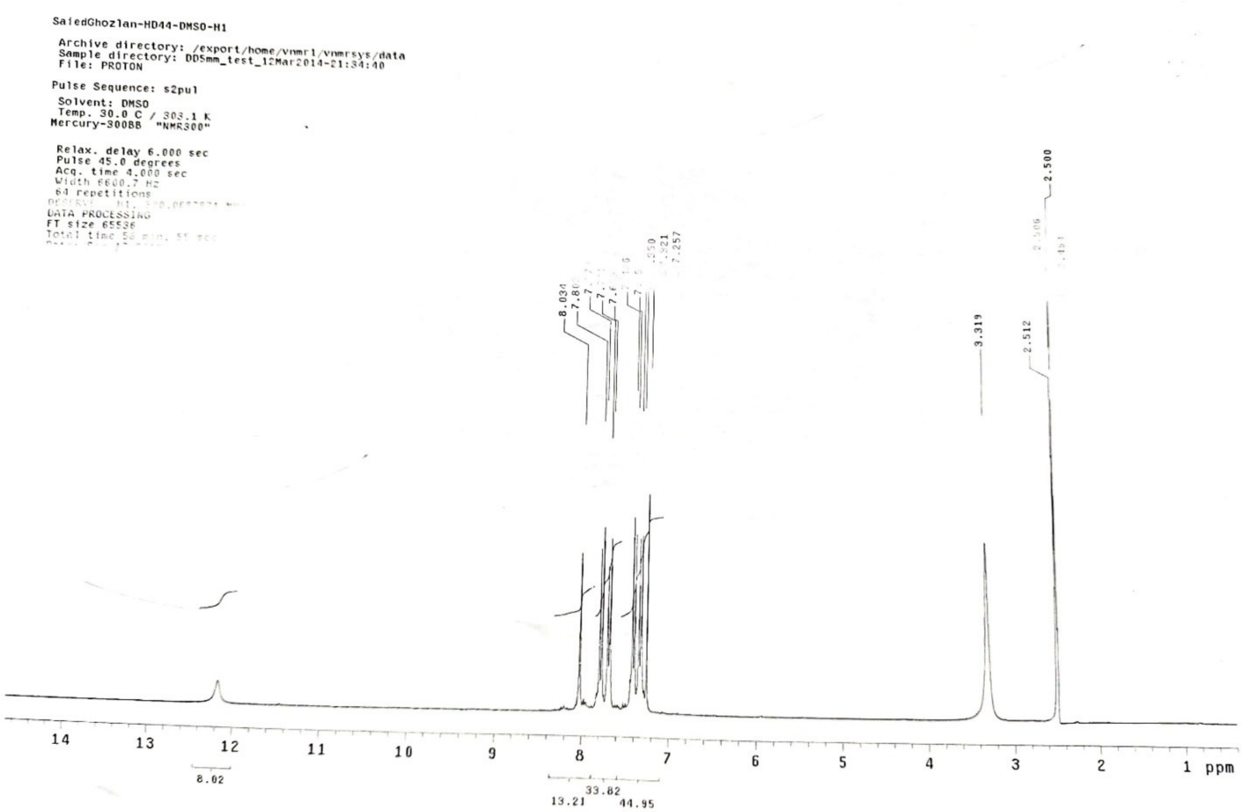
33



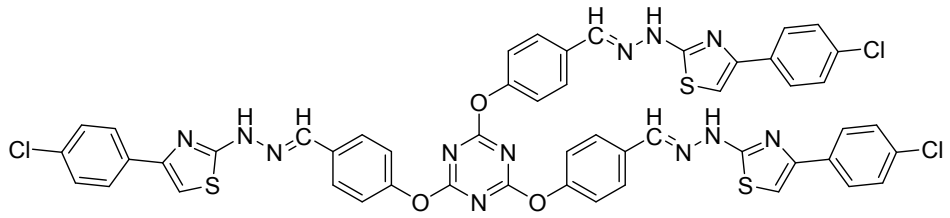
^{13}C NMR (75 MHz, DMSO-d_6) of compound 33



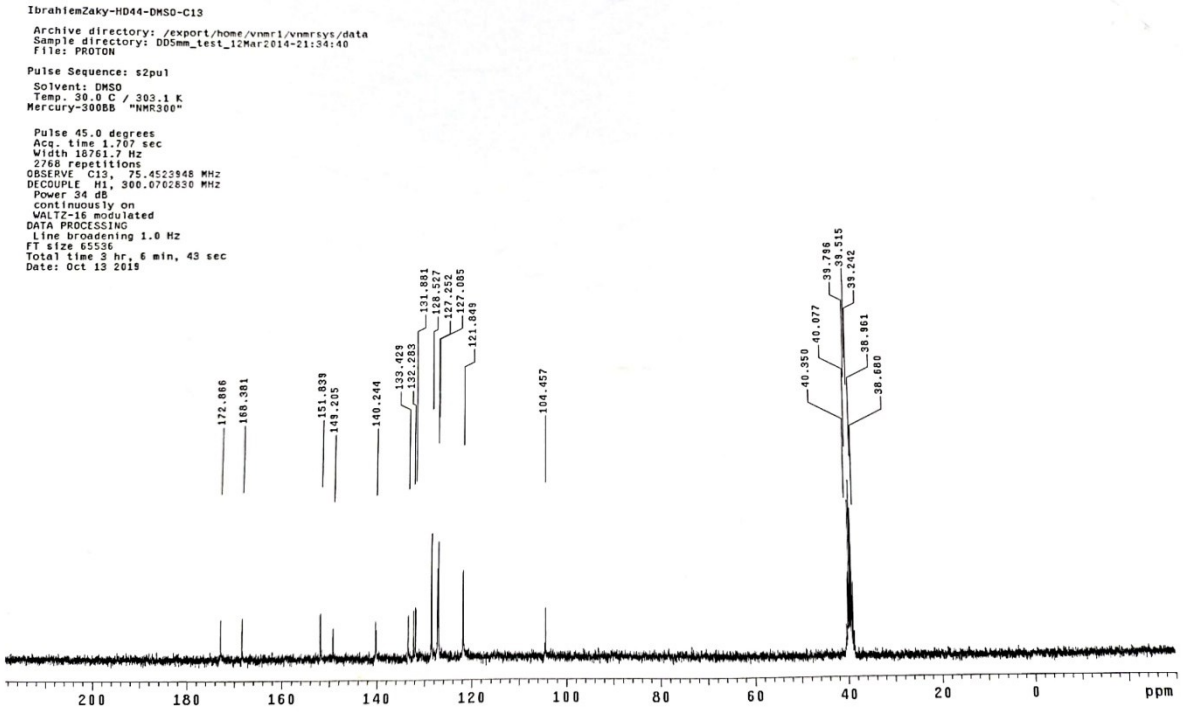
34



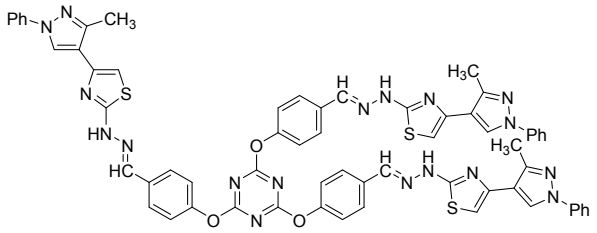
The [1]H NMR (300 MHz, DMSO-d_6) of compound 34



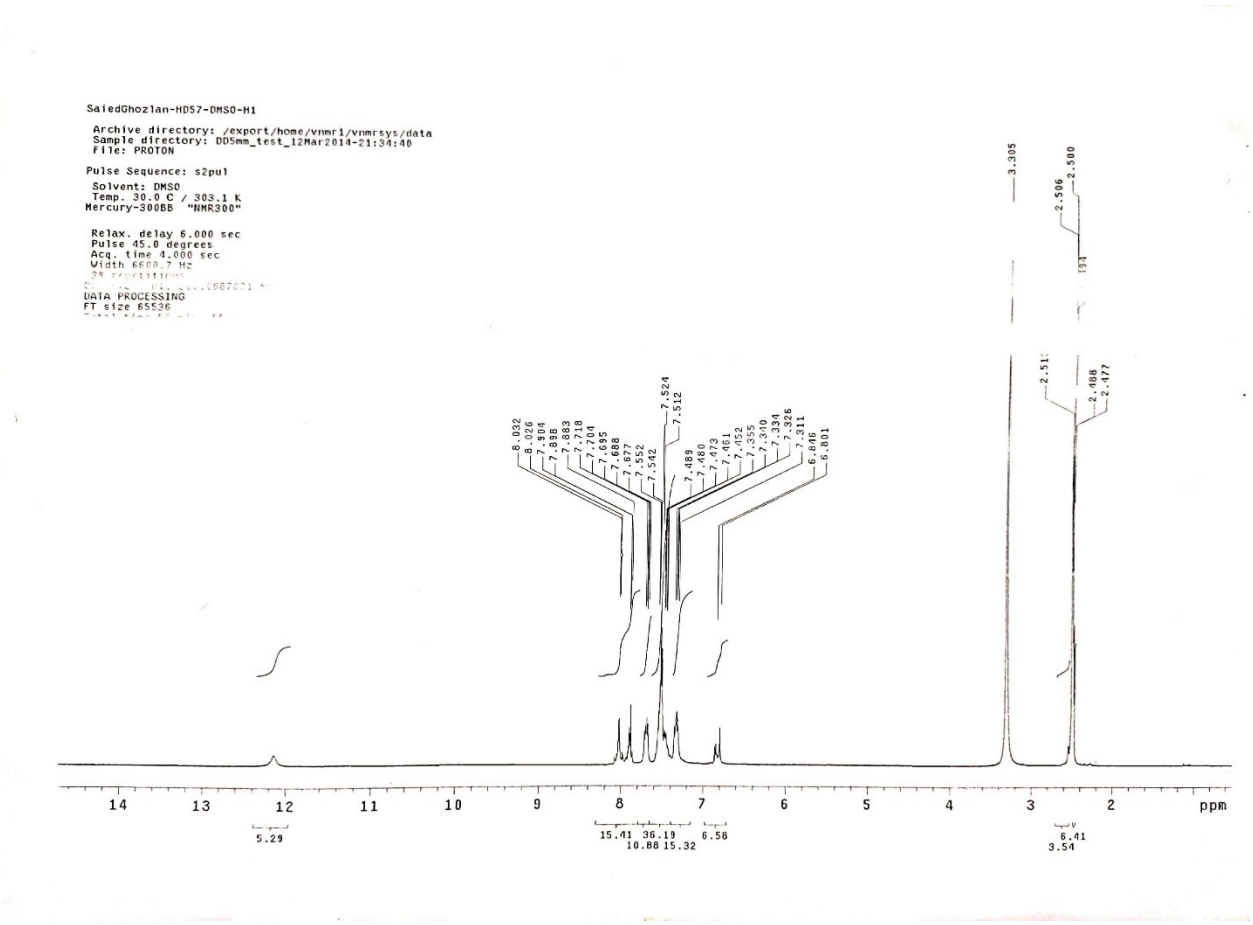
34



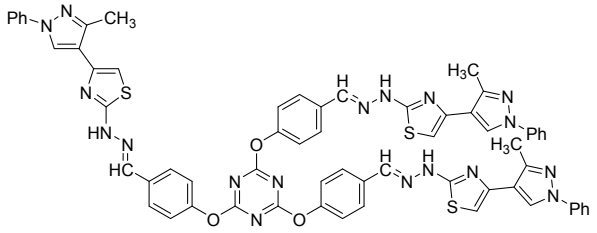
^{13}C NMR (75 MHz, DMSO-d_6) of compound 34



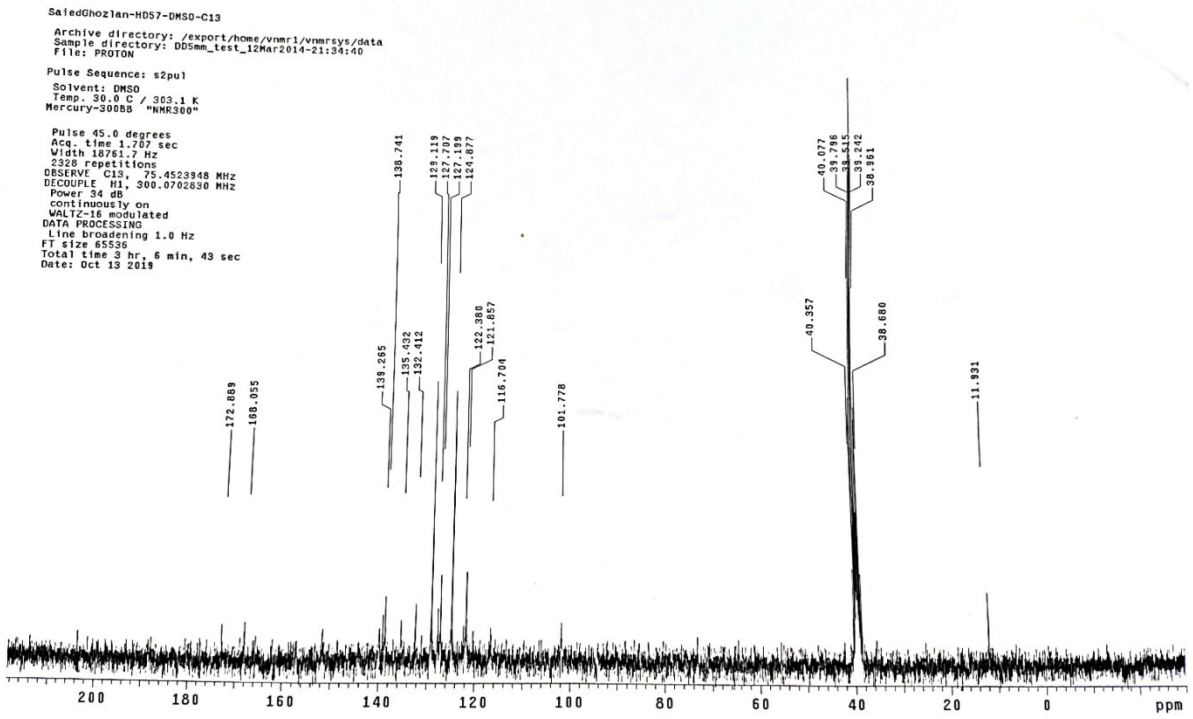
36



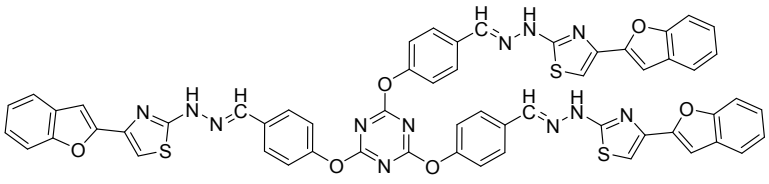
The ^{1}H NMR (300 MHz, DMSO-d_6) of compound 36



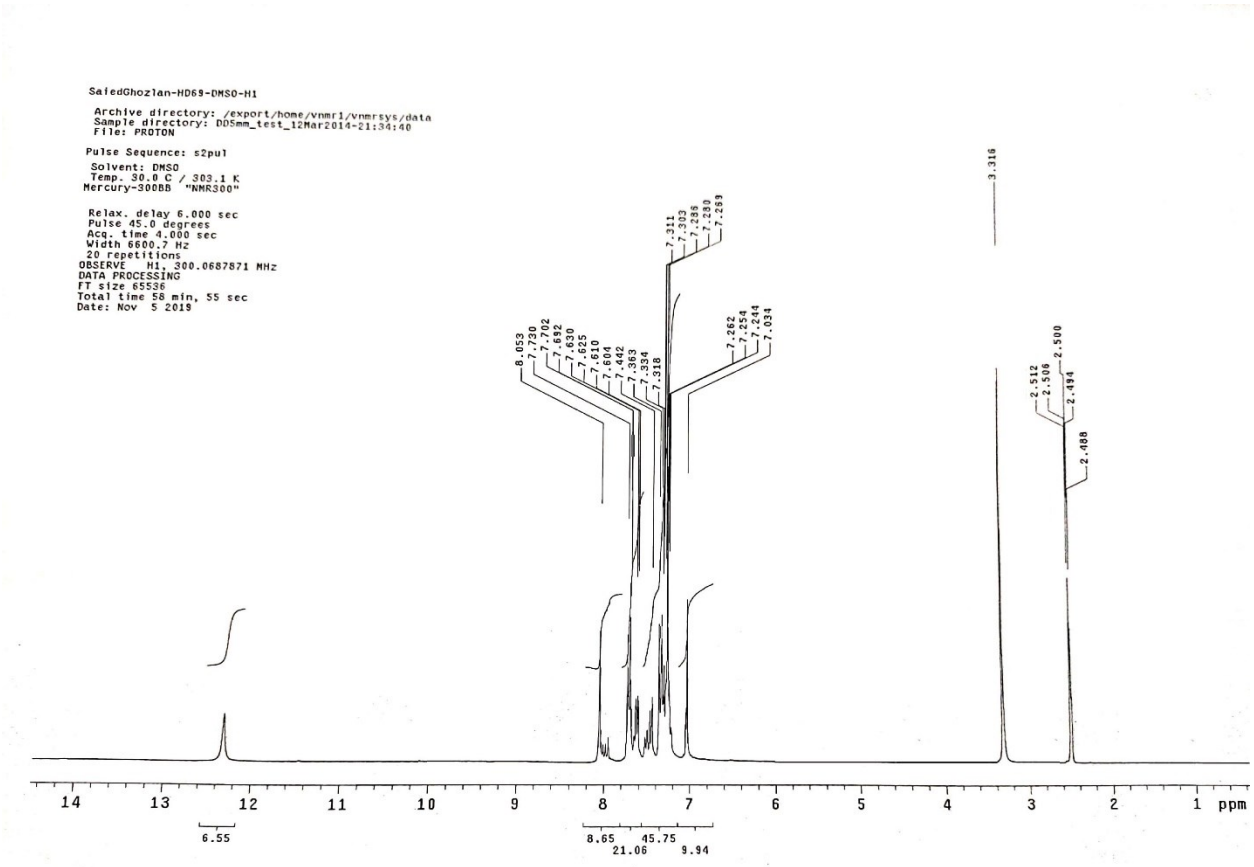
36



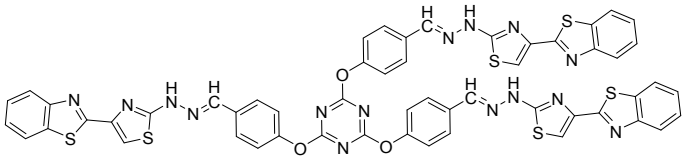
^{13}C NMR (75 MHz, DMSO-d_6) of compound 36



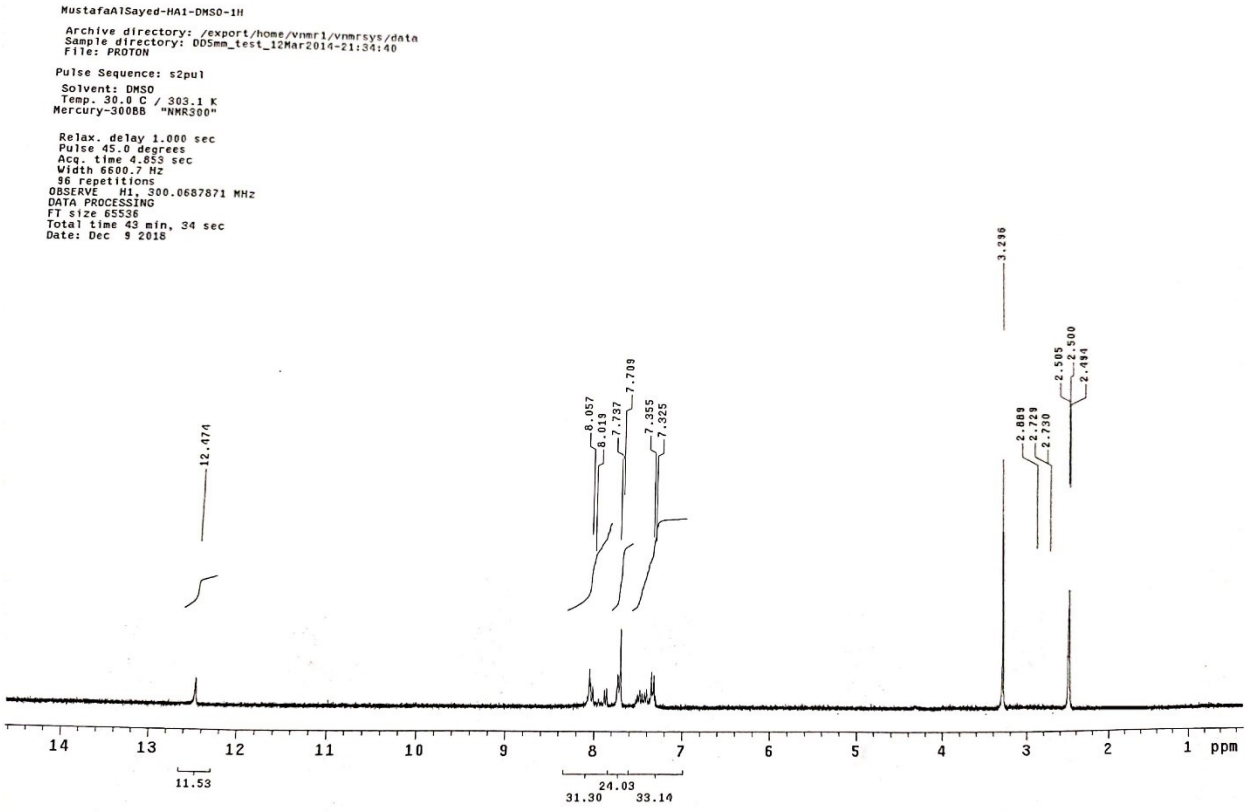
38



The ^{1}H NMR (300 MHz, DMSO-d_6) of compound 38



40



The ^{1}H NMR (300 MHz, DMSO-d_6) of compound 40

IR Spectra

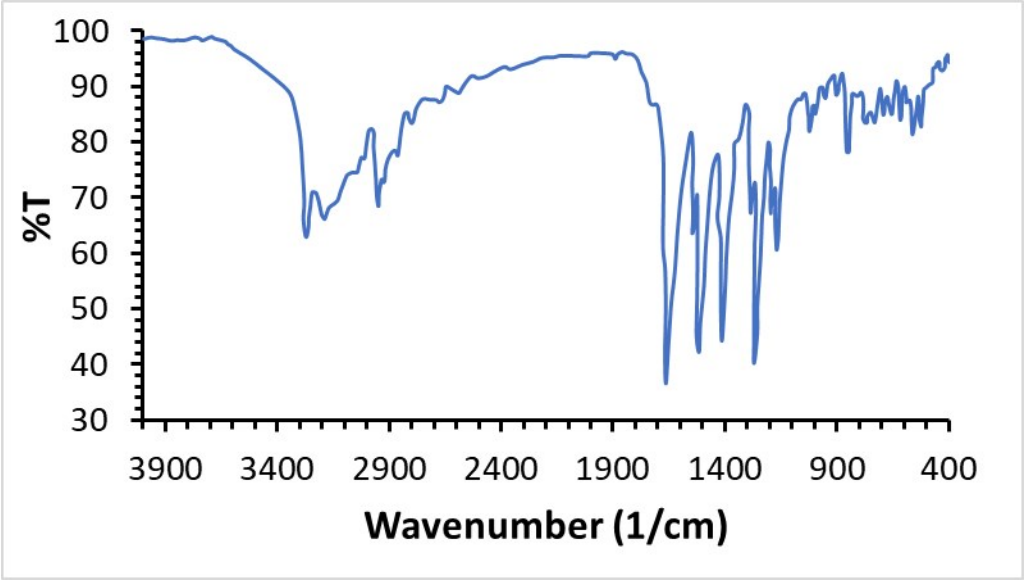


Figure 1. IR spectrum of compound **7**

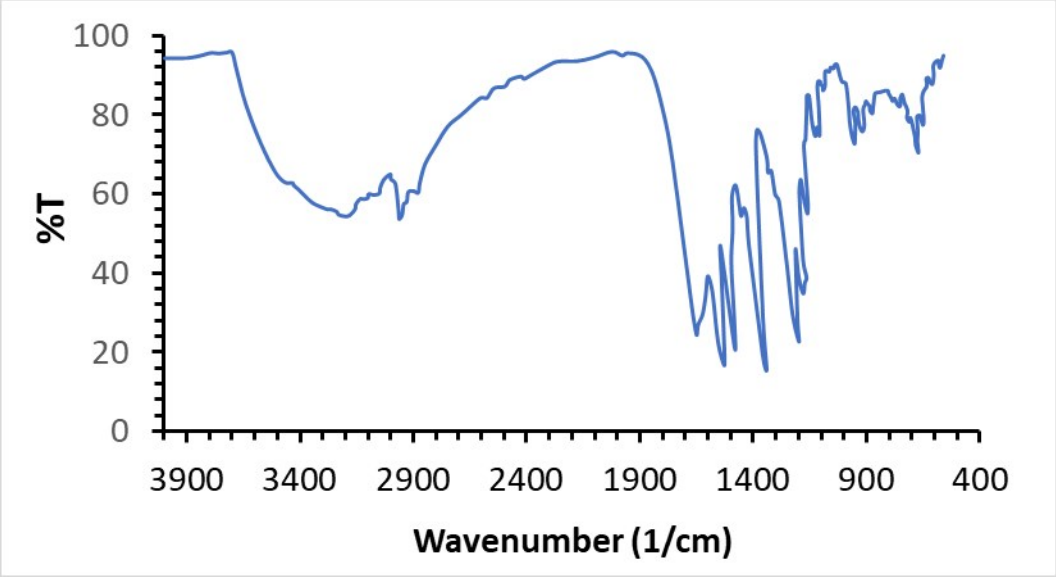


Figure 2. IR spectrum of compound **9**

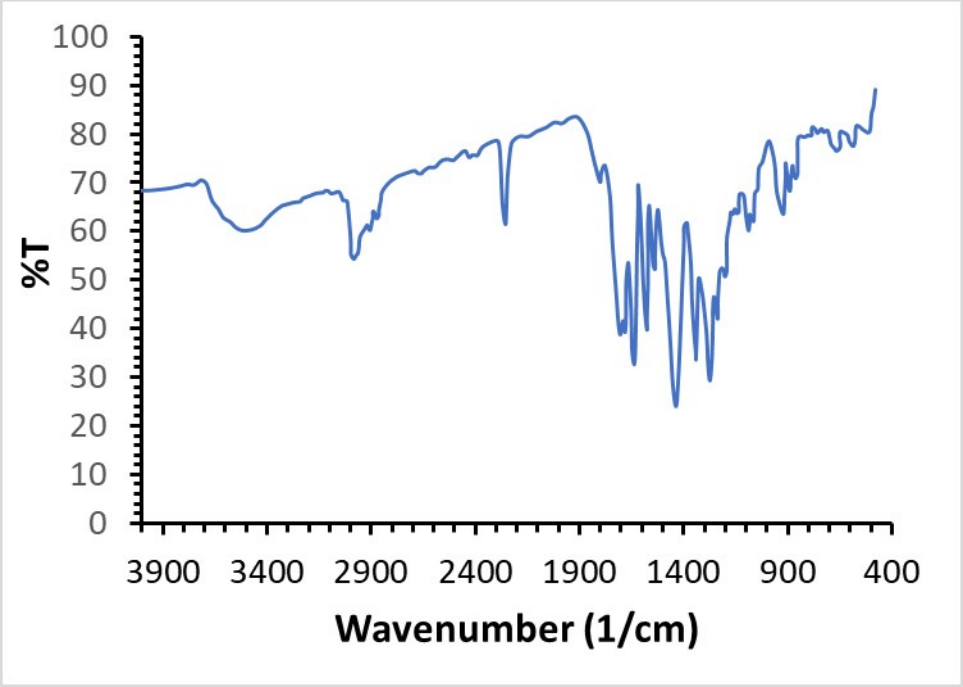


Figure 3. IR spectrum of compound **12**

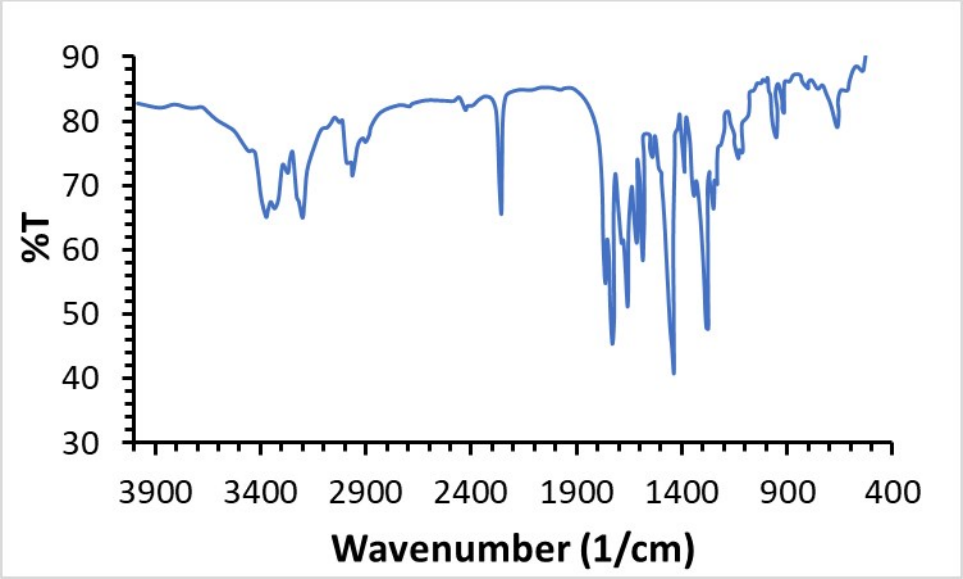


Figure 4. IR spectrum of compound **16**

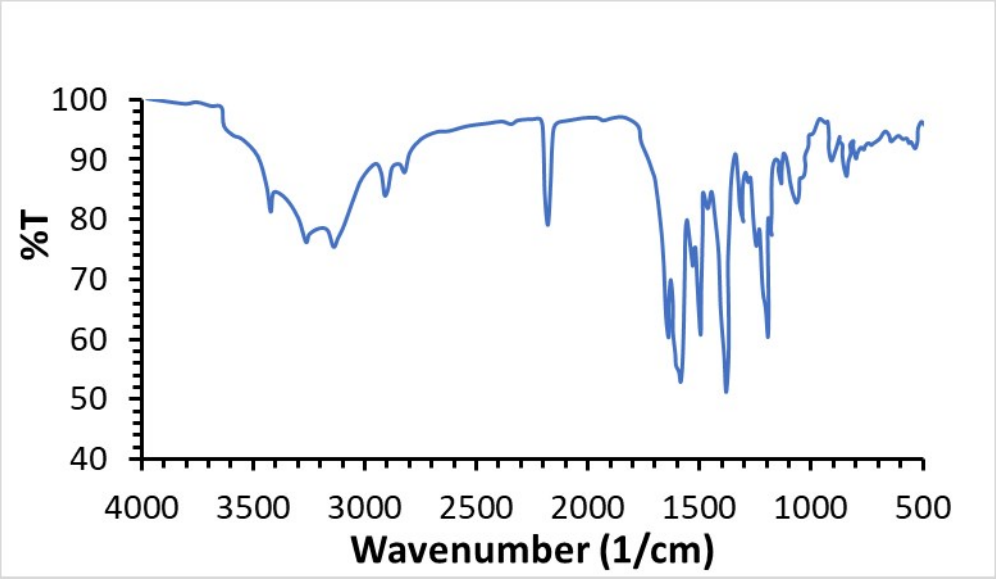


Figure 5. IR spectrum of compound **19**

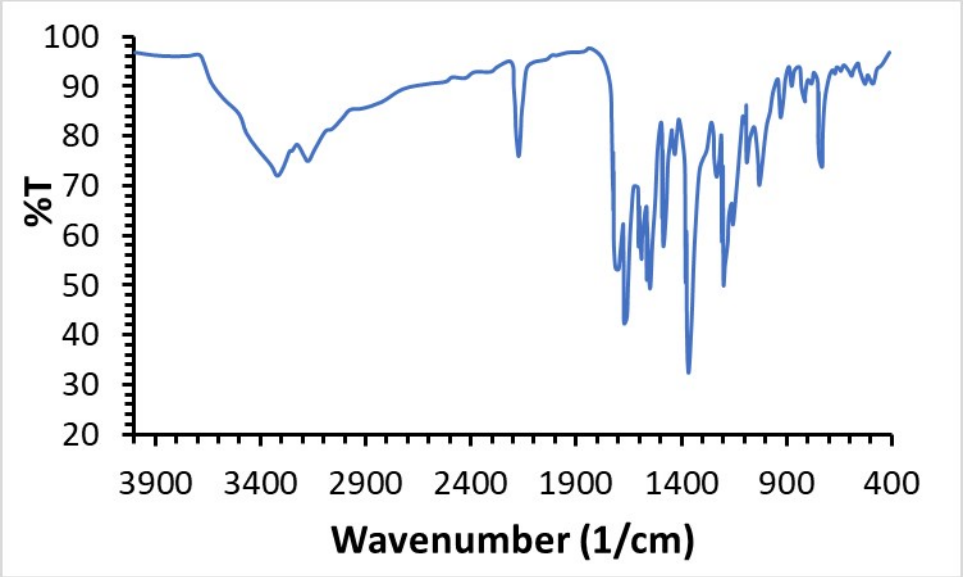


Figure 6. IR spectrum of compound **20**

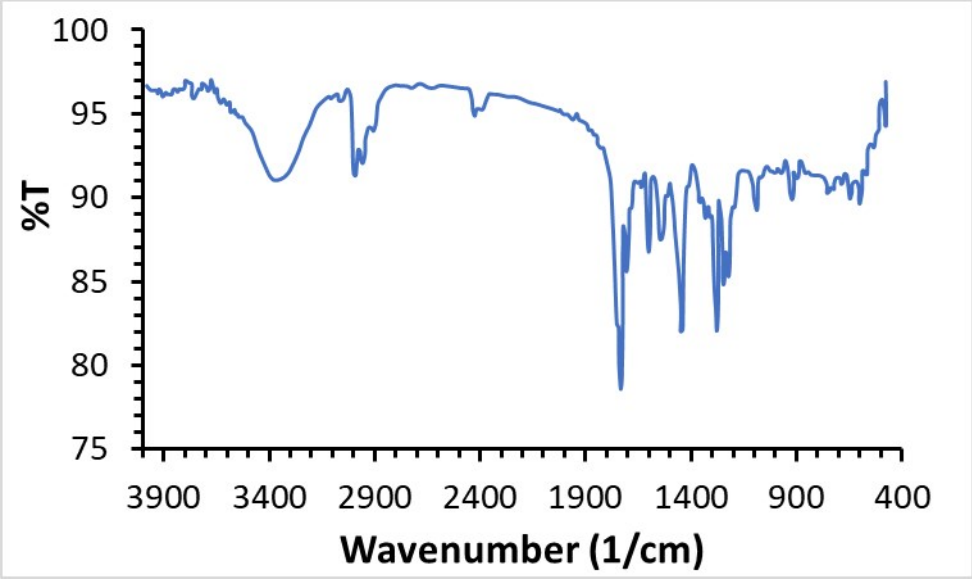


Figure 7. IR spectrum of compound **21**

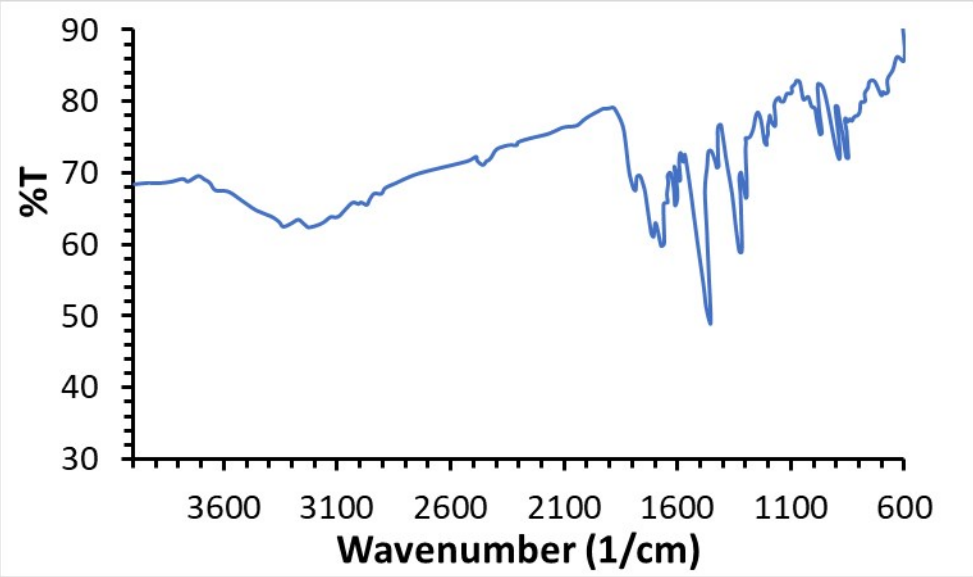


Figure 8. IR spectrum of compound **24**

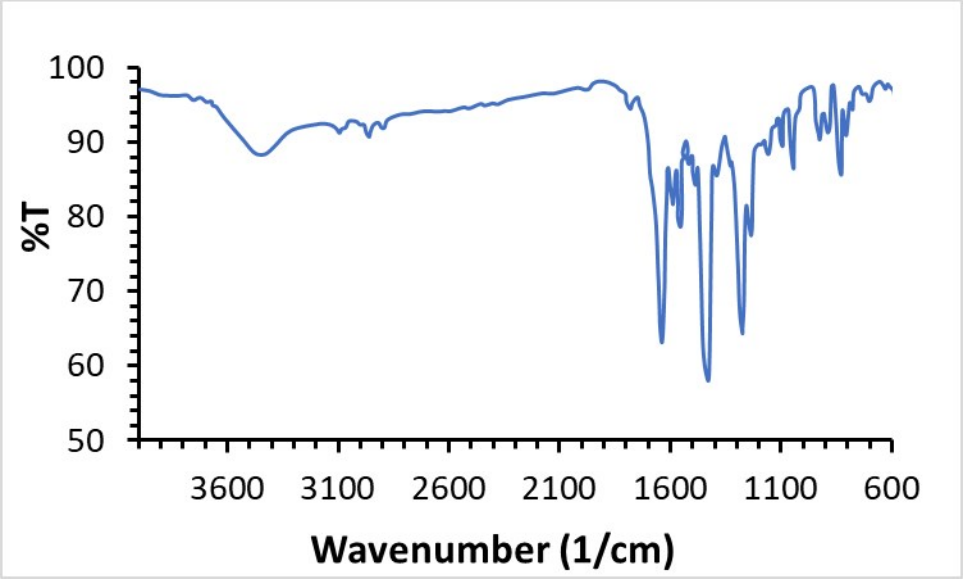


Figure 9. IR spectrum of compound **26**

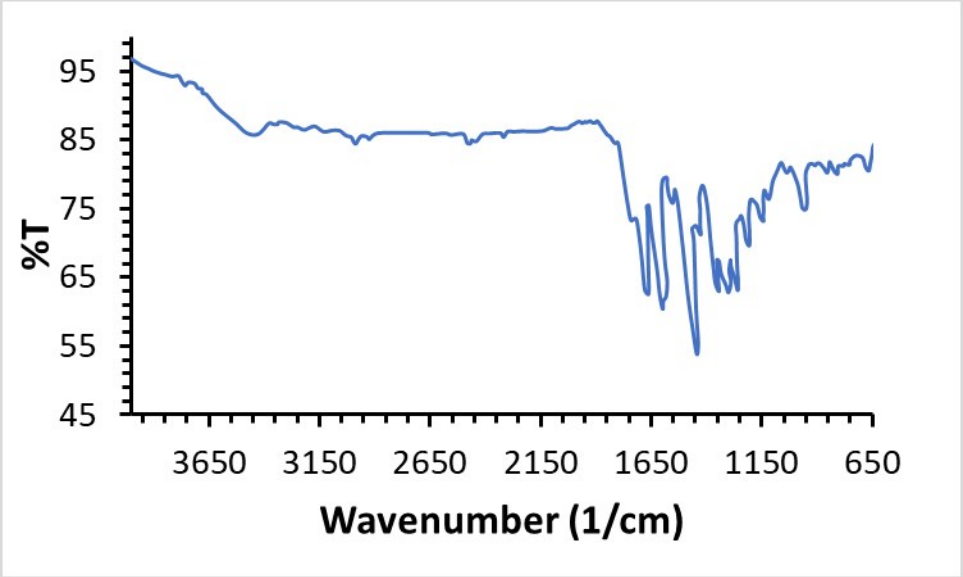


Figure 10. IR spectrum of compound **30**

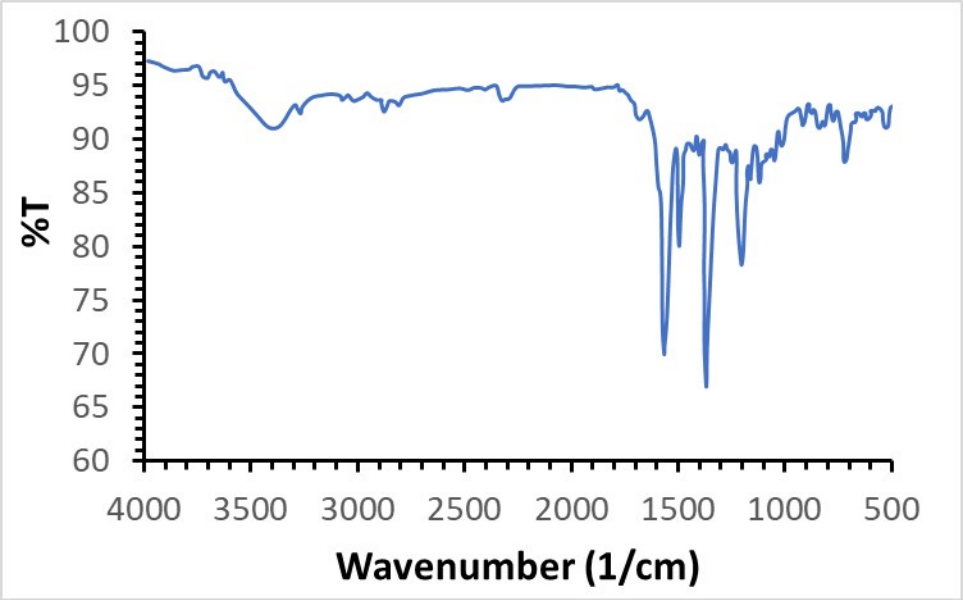


Figure 11. IR spectrum of compound **33**

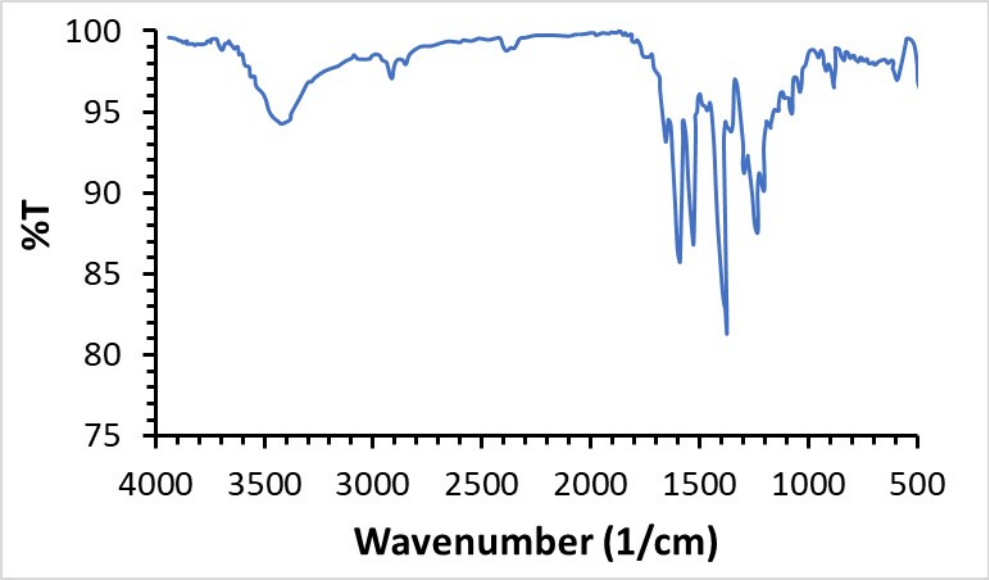


Figure 12. IR spectrum of compound **34**

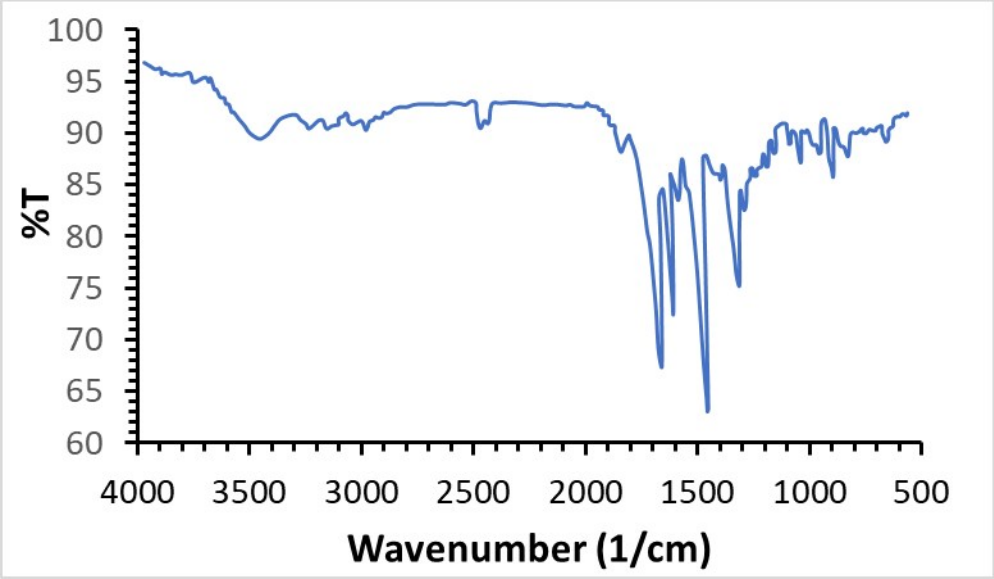


Figure 13. IR spectrum of compound **36**

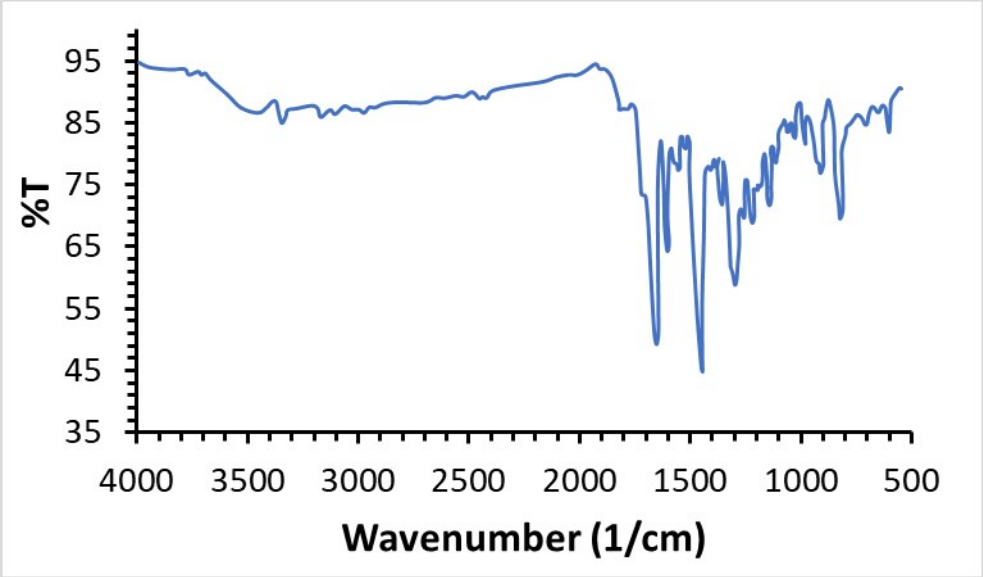


Figure 14. IR spectrum of compound **38**

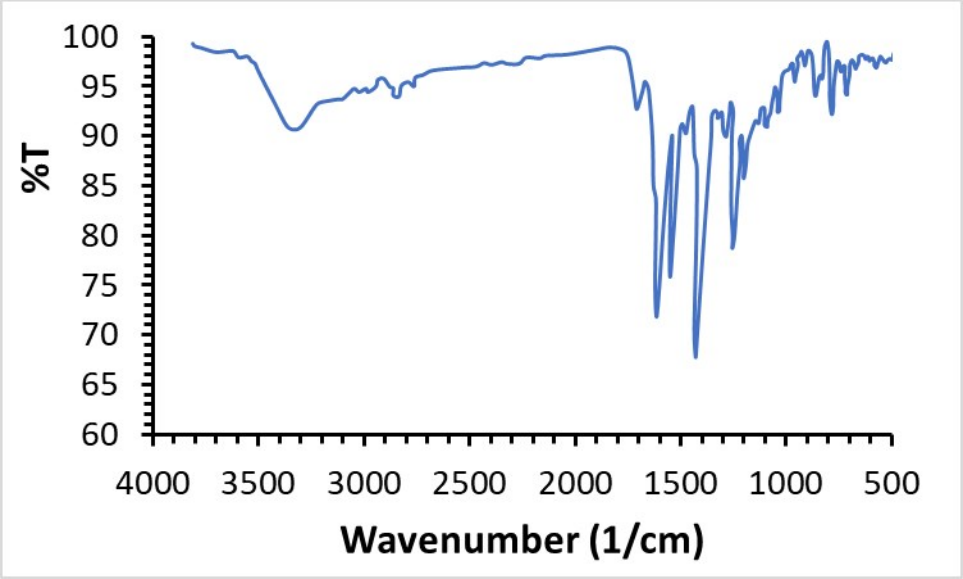


Figure 15. IR spectrum of compound **40**

Combined IR spectra

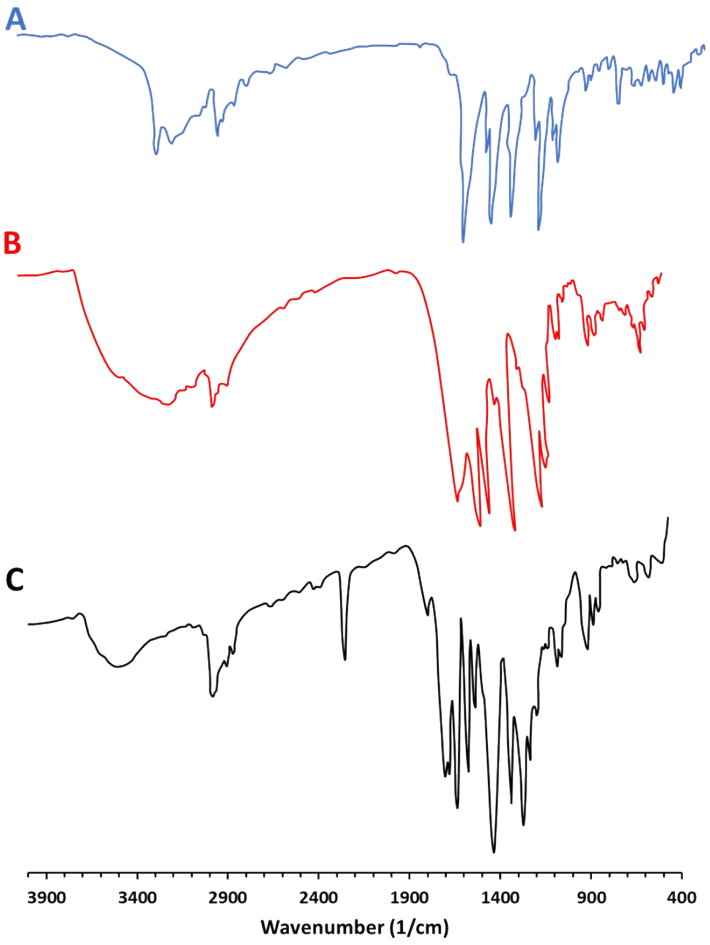


Figure 1. IR spectra of compounds **7 (A) , 12 (B)** and **9 (C)**

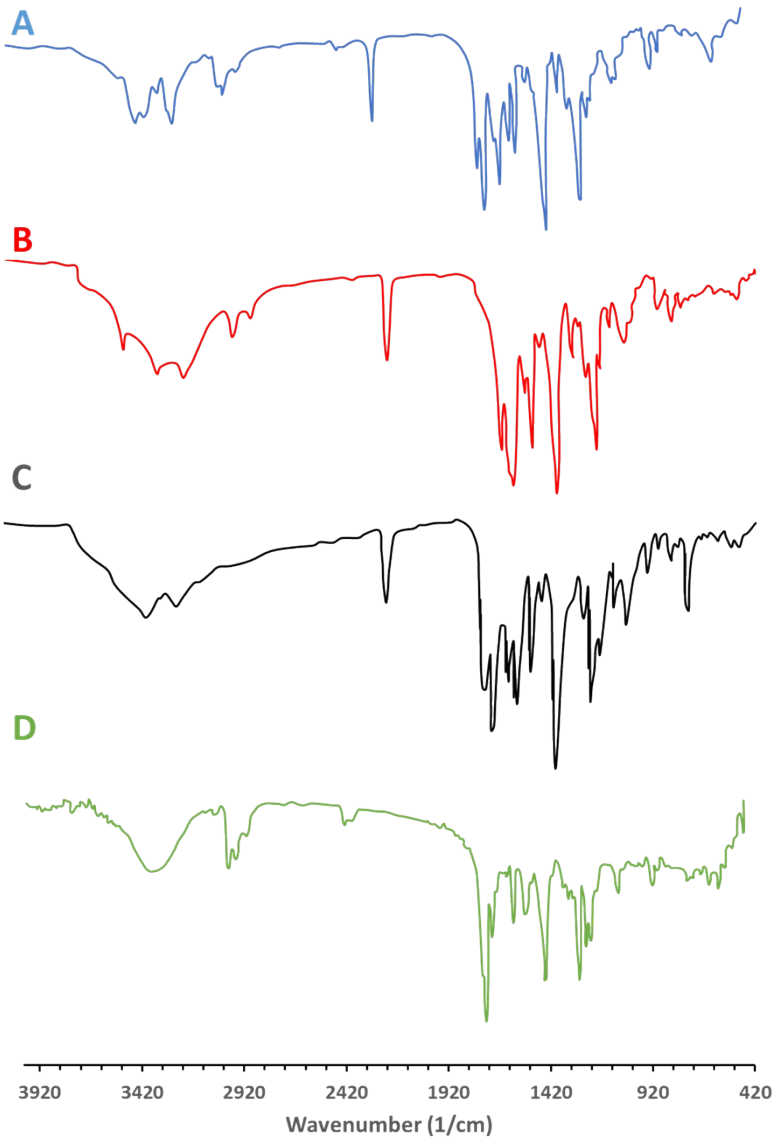


Figure 2. IR spectra of compounds **16 (A), 19 (B), 20 (C)** and **9 (D)**

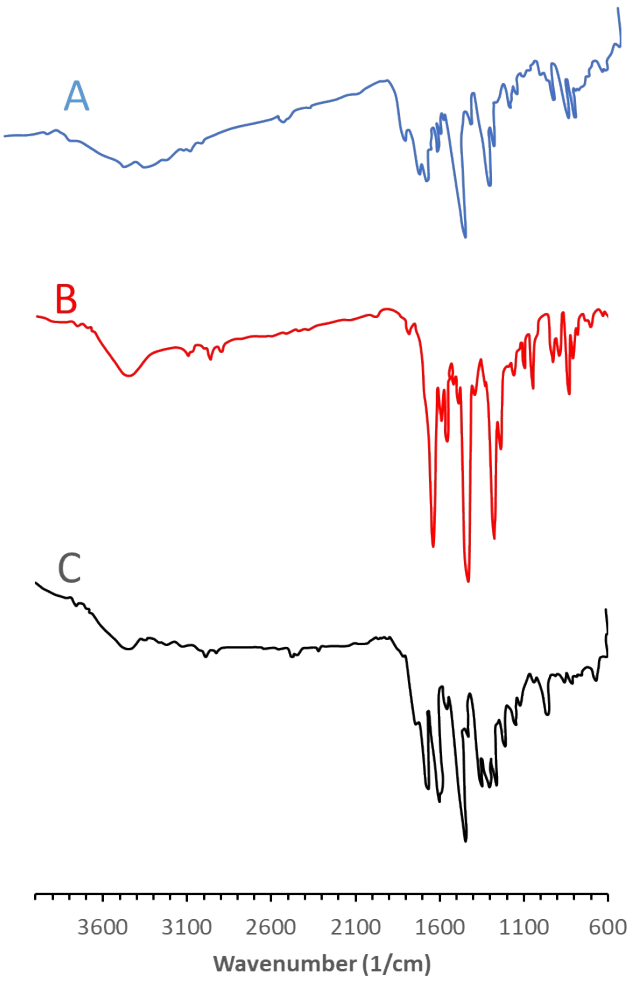


Figure 3. IR spectra of compounds **26 (A), 24 (B),** and **30 (C)**

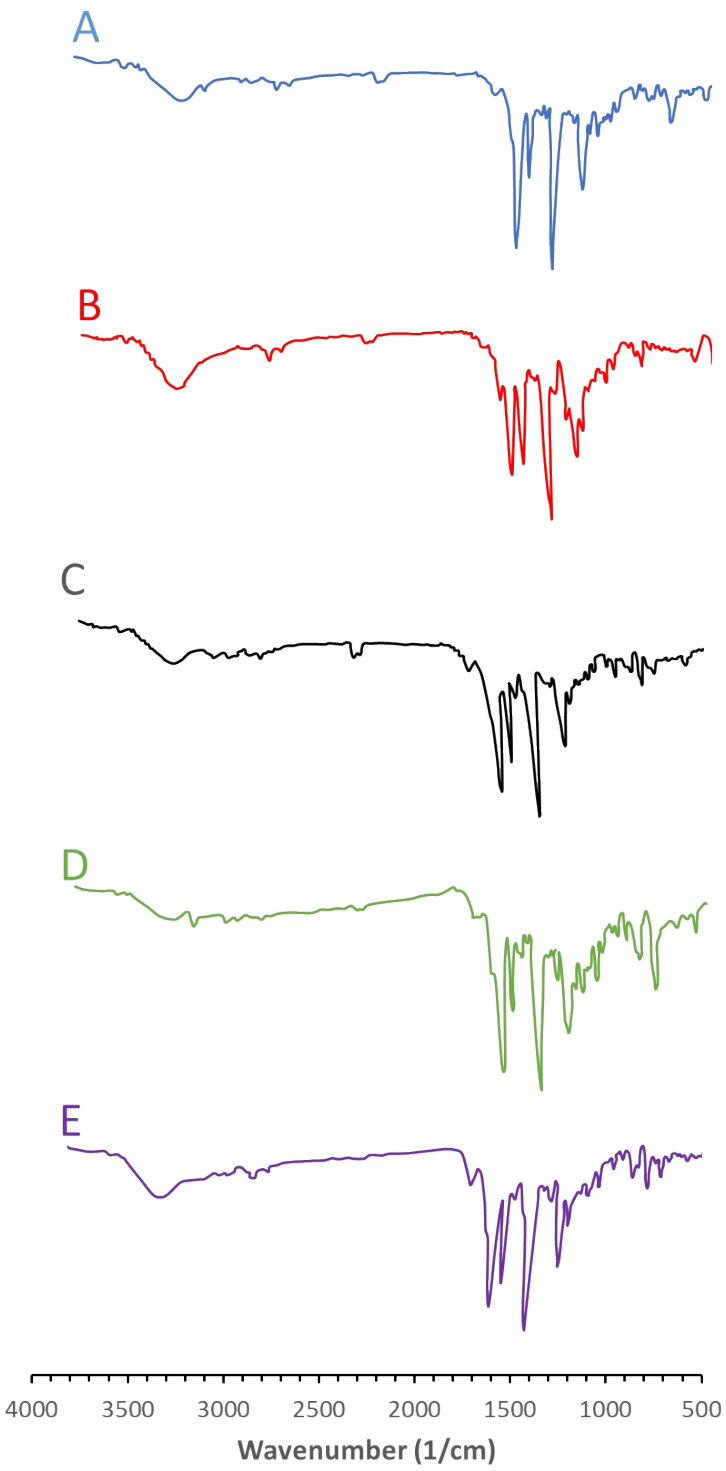


Figure 4. IR spectra of compounds **33 (A), 34 (B), 36 (C), 38 (D)** and **9 (E)**