

SUPPORTING INFORMATION FOR

Exploiting a multicomponent domino reaction strategy for the tailoring of versatile environmentally sensitive fluorophore-based nicotinonitriles incorporating pyrene and fluorene moieties

Essam M. Hussein^{a,b}, Nizar El Guesmi^{a,c} and Saleh A. Ahmed^{a,b}

^a *Department of Chemistry, Faculty of Applied Science, Umm Al-Qura University, 21955*

Makkah, Saudi Arabia

^b *Department of Chemistry, Faculty of Science, Assiut university, 71516 Assiut, Egypt*

^c *Département de chimie, Faculté des Sciences de Monastir, Avenue de l'Environnement,*

5019 Monastir, Tunisia

Correspondence may be addressed to:

Saleh A. Ahmed: E-mail addresses: *E-mail: saahmed@uqu.edu.sa, saleh.a.ahmed@aun.edu.eg,
saleh_63@hotmail.com

Tel./Fax: + 966 530435760

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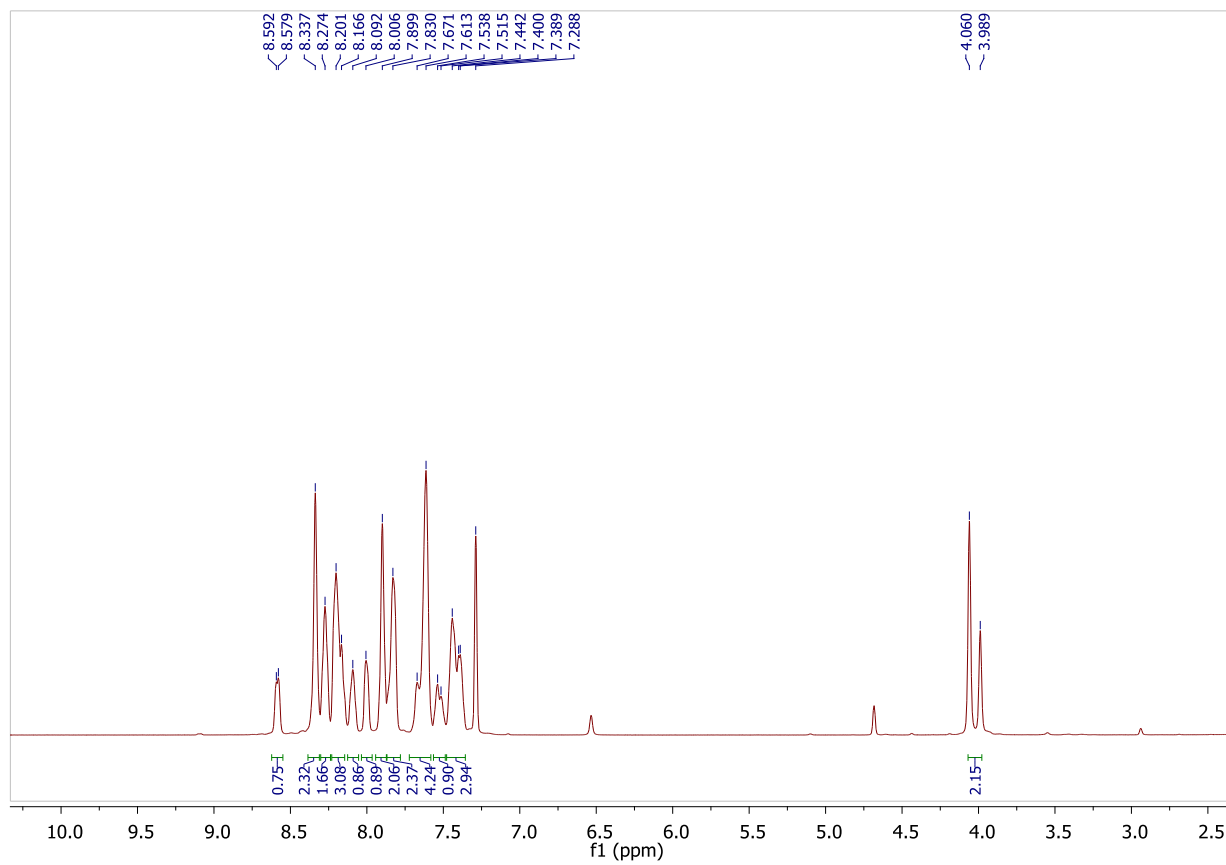
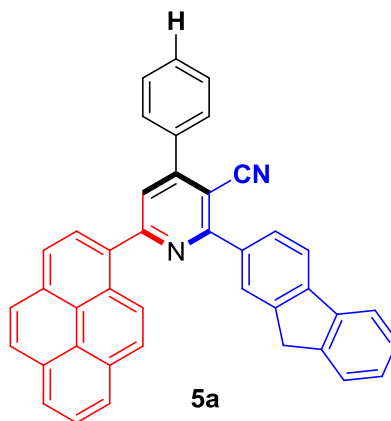
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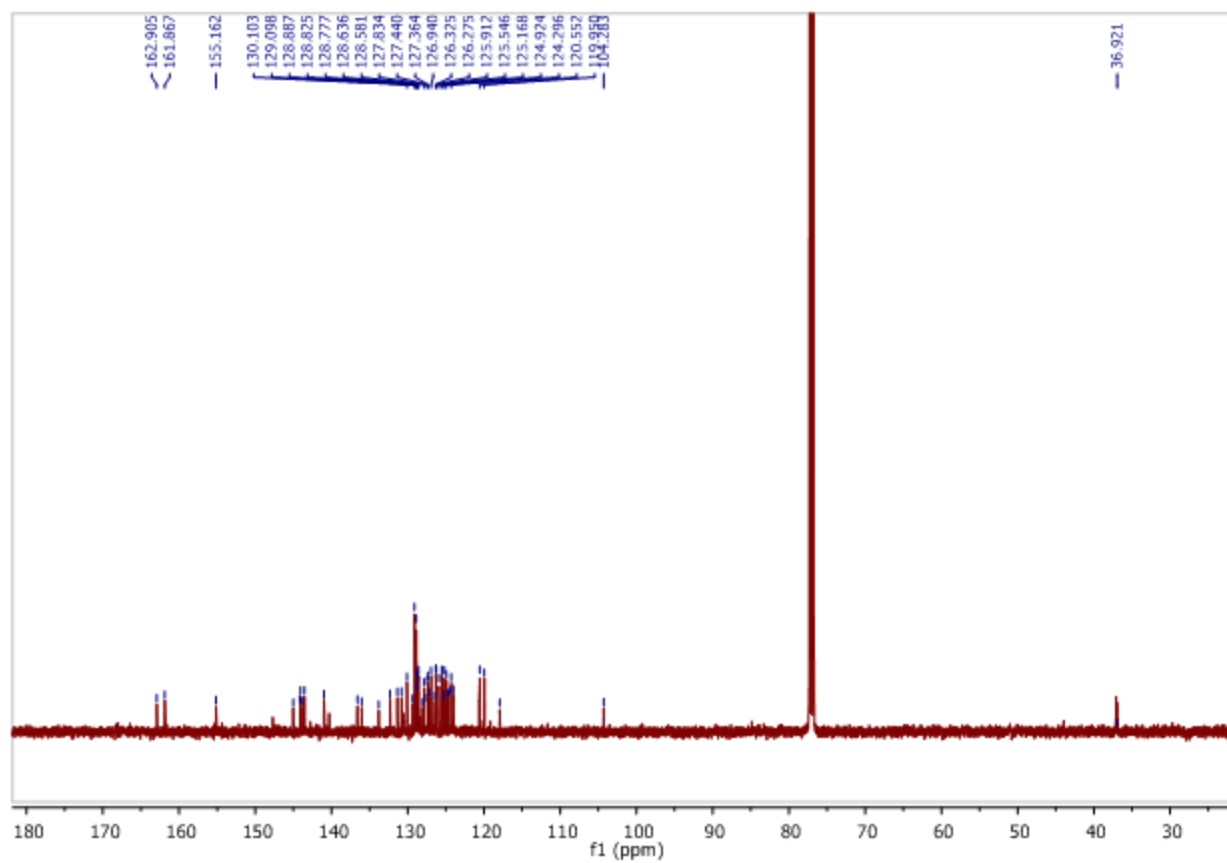
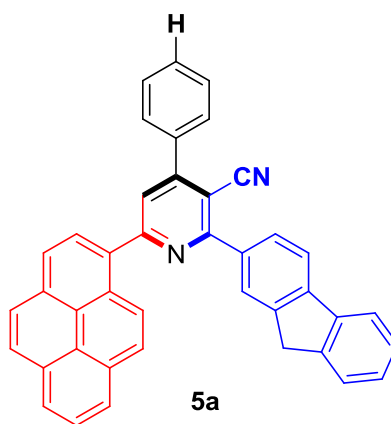
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¹H NMR spectrum of 2-(9H-fluoren-2-yl)-4-phenyl-6-(pyren-1-yl)nicotinonitrile (5a)

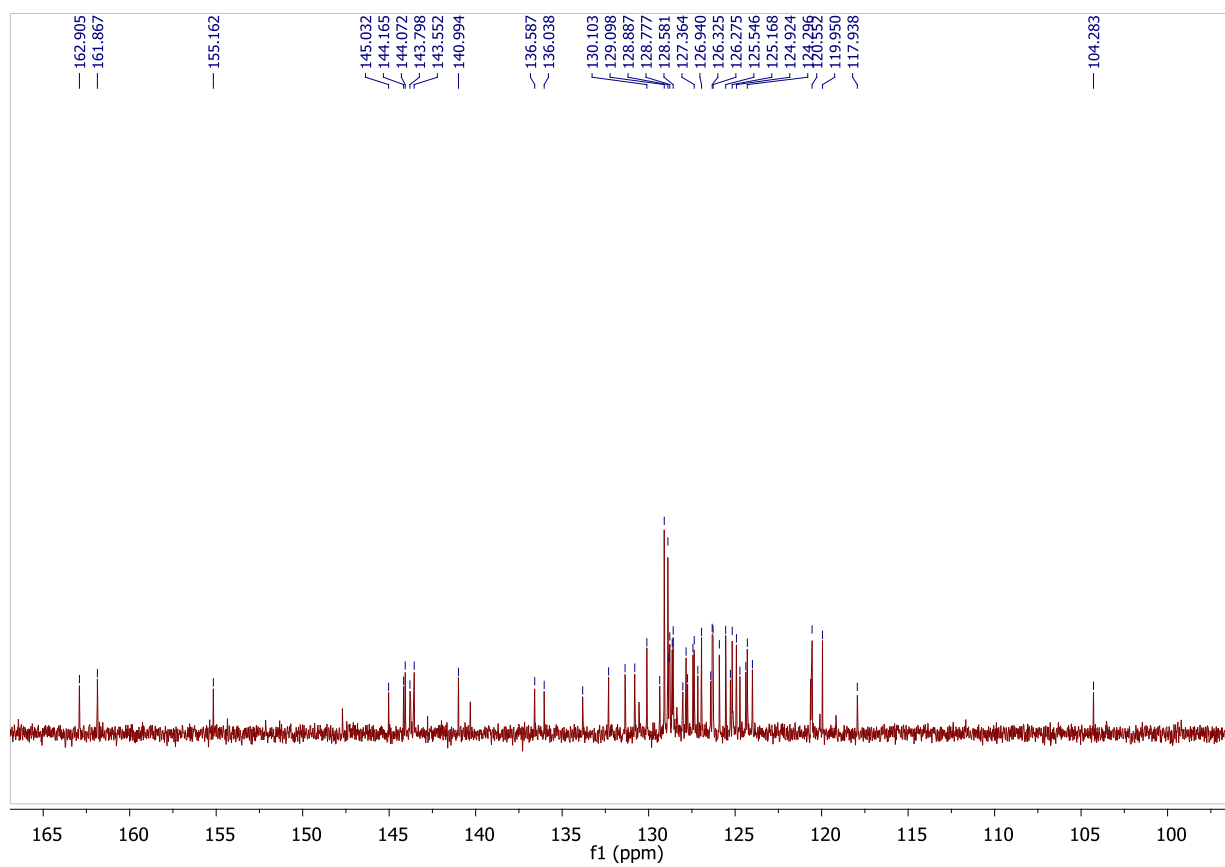
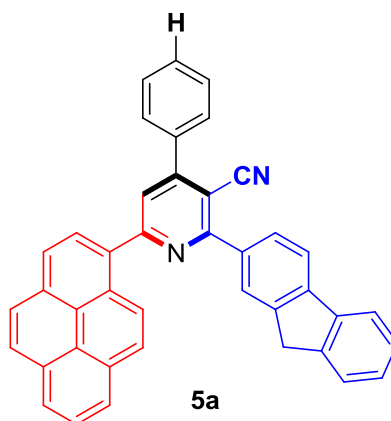


¹³C NMR spectrum of 2-(9H-fluoren-2-yl)-4-phenyl-6-(pyren-1-yl)nicotinonitrile (5a)

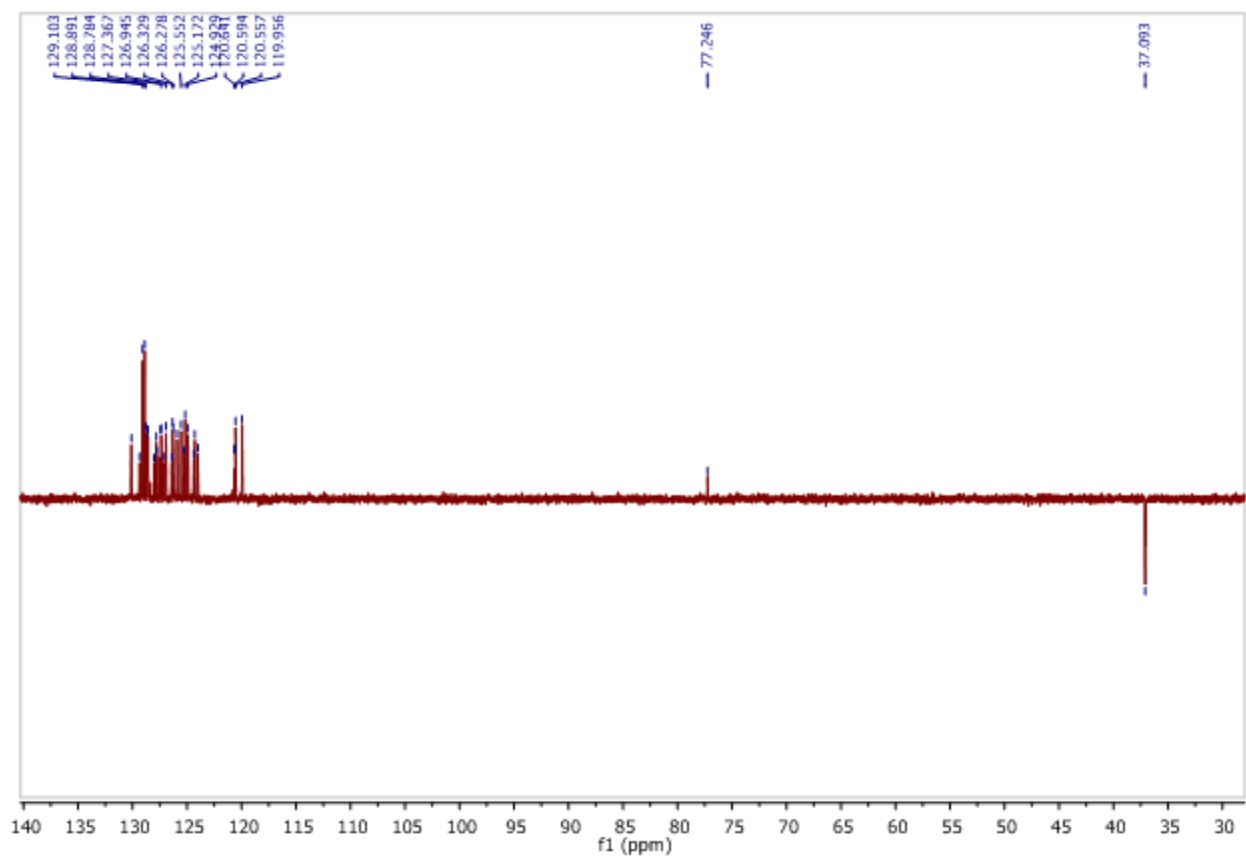
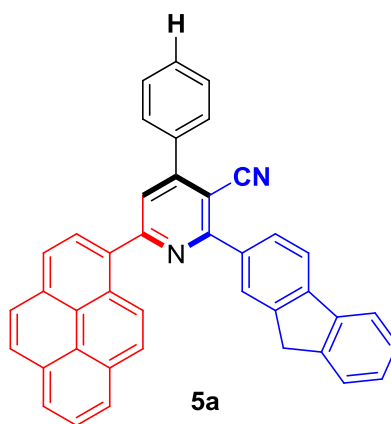


Expanded ^{13}C NMR spectrum of 2-(9*H*-fluoren-2-yl)-4-phenyl-6-(pyren-1-yl)nicotinonitrile

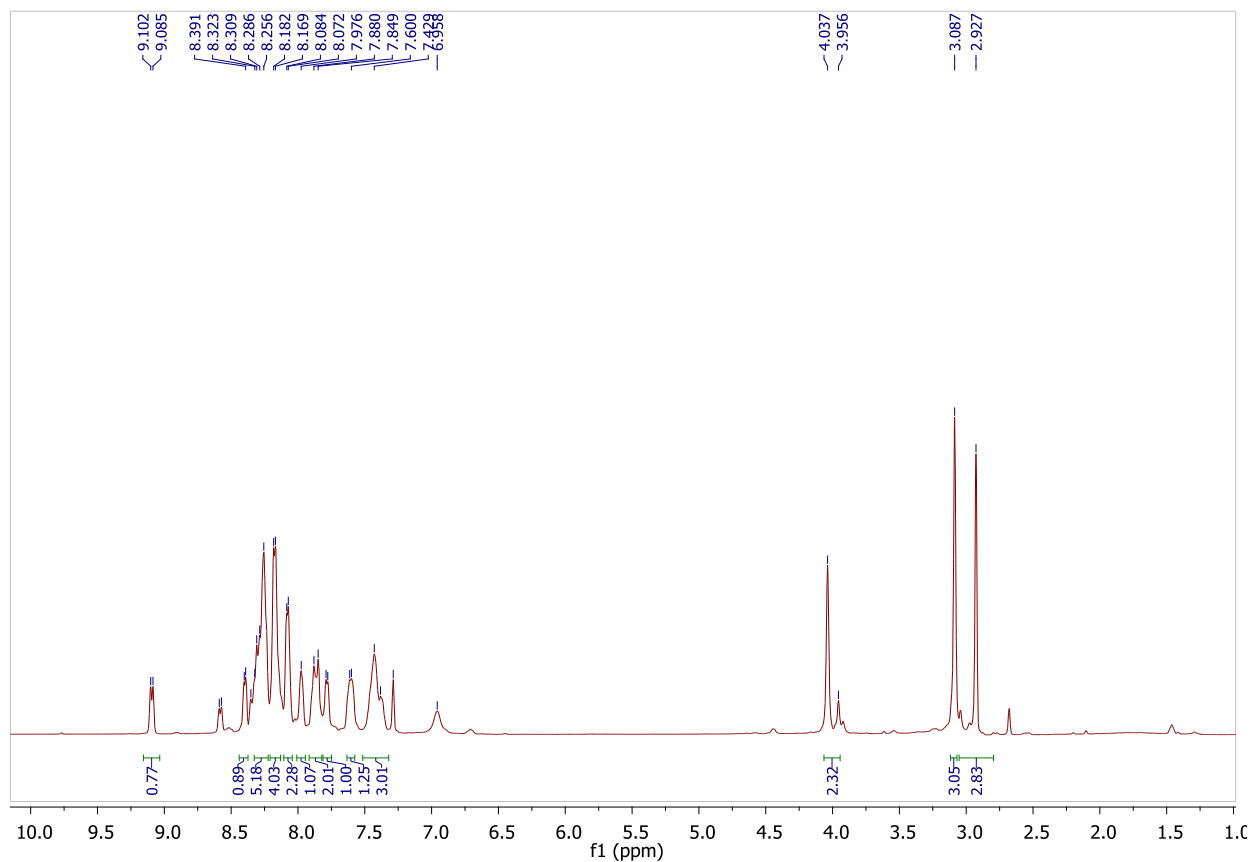
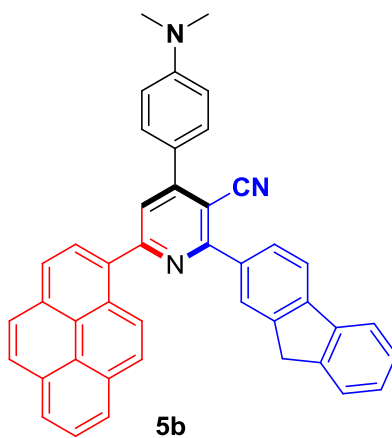
(5a)



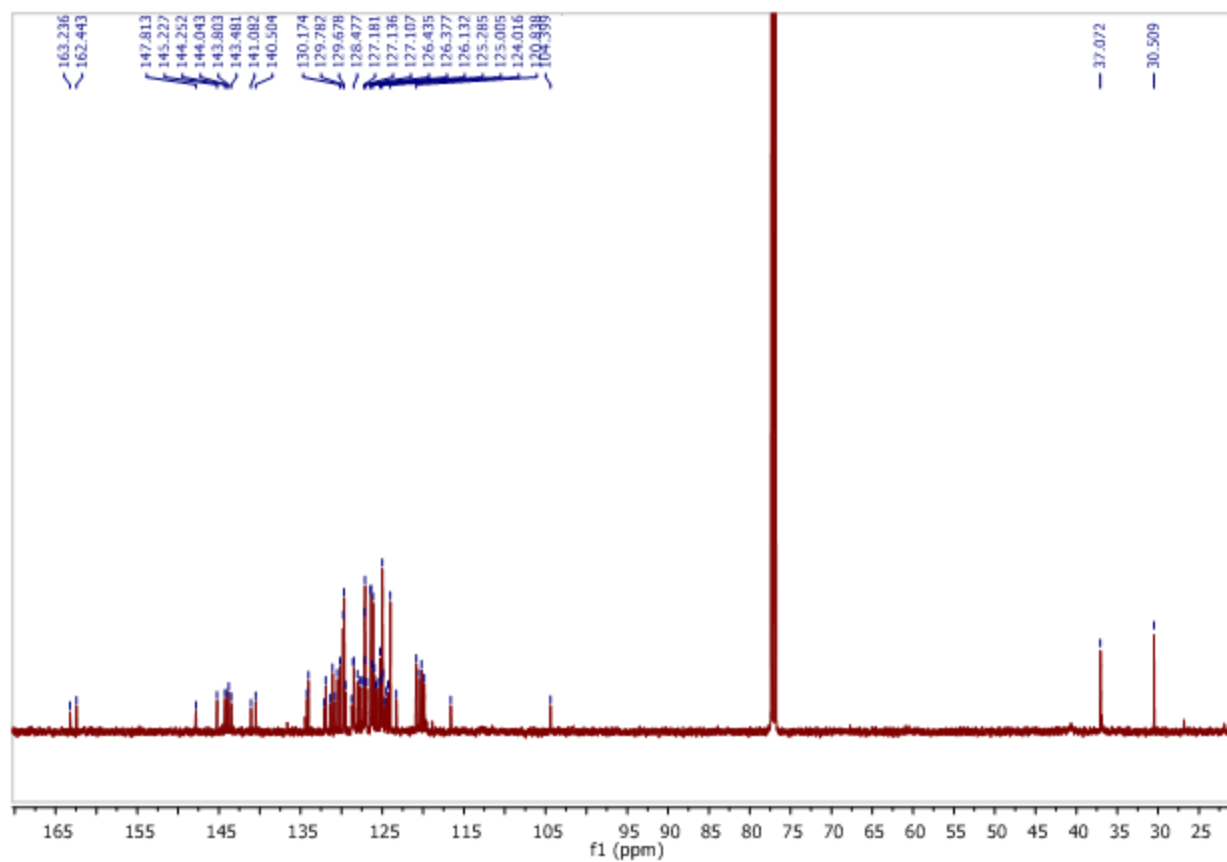
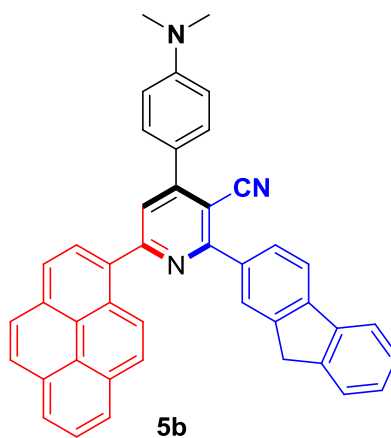
DEPT-135 NMR spectrum of 2-(9H-fluoren-2-yl)-4-phenyl-6-(pyren-1-yl)nicotinonitrile (5a)



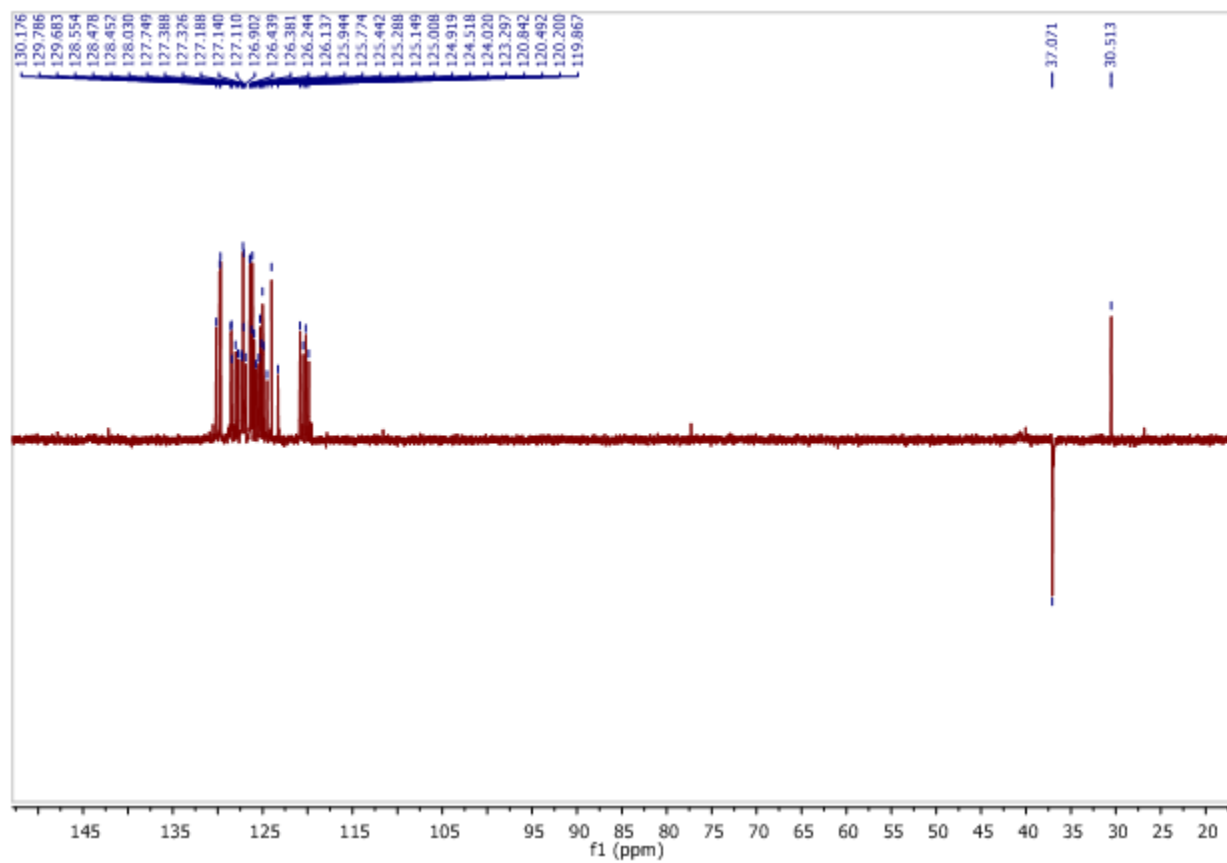
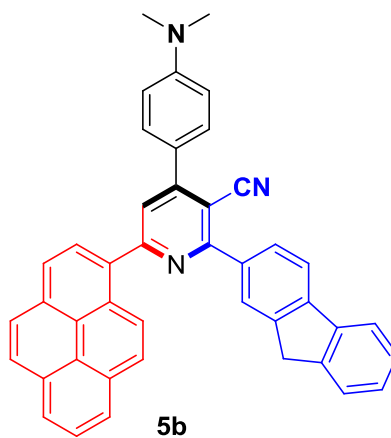
¹H NMR spectrum of 4-(4-(dimethylamino)phenyl)-2-(9H-fluoren-2-yl)-6-(pyren-1-yl)nicotinonitrile (5b)



¹³C NMR spectrum of 4-(4-(dimethylamino)phenyl)-2-(9H-fluoren-2-yl)-6-(pyren-1-yl)nicotinonitrile (5b)

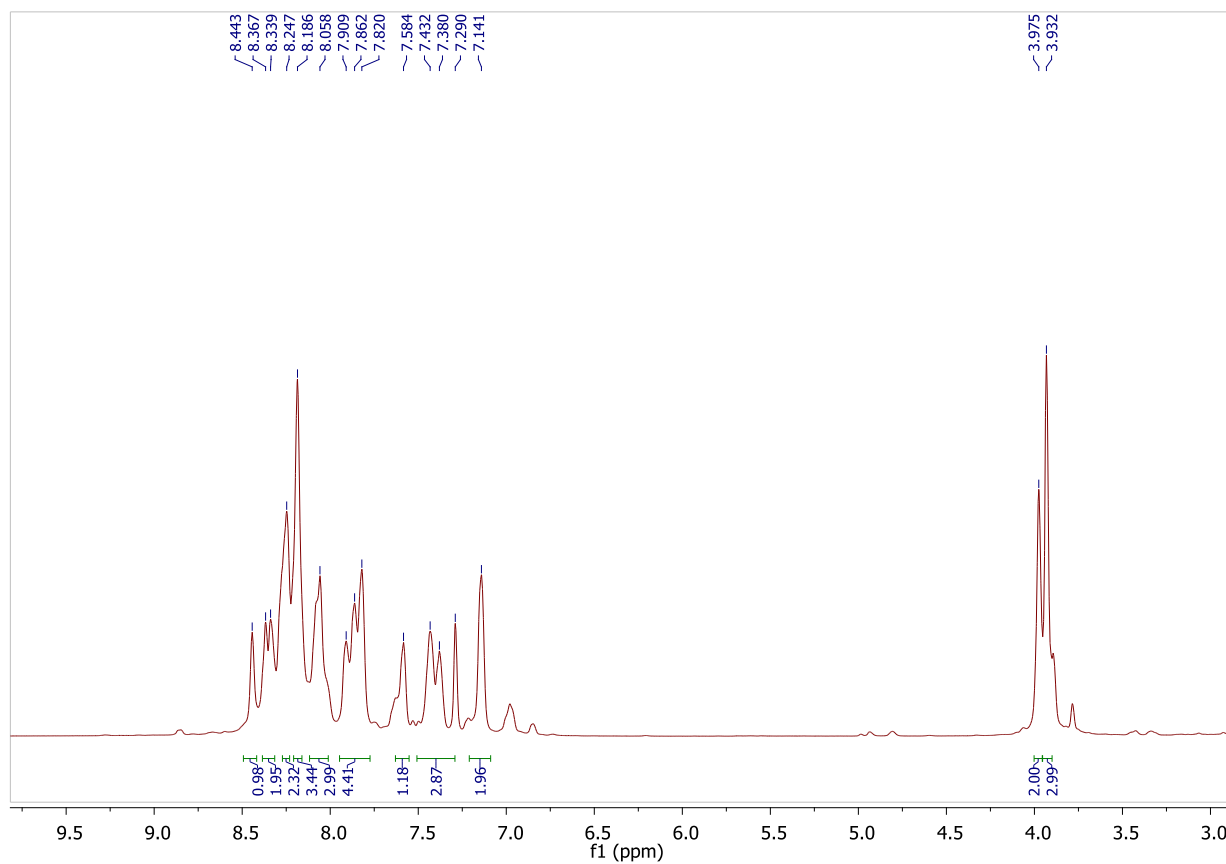
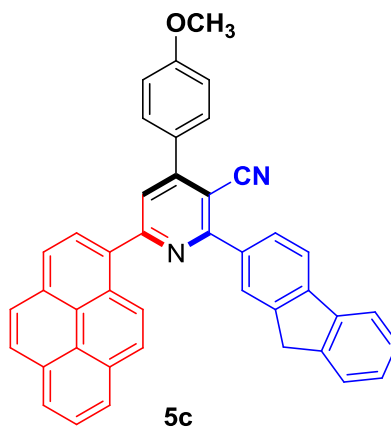


DEPT-135 NMR spectrum of 4-(4-(dimethylamino)phenyl)-2-(9H-fluoren-2-yl)-6-(pyren-1-yl)nicotinonitrile (5b)

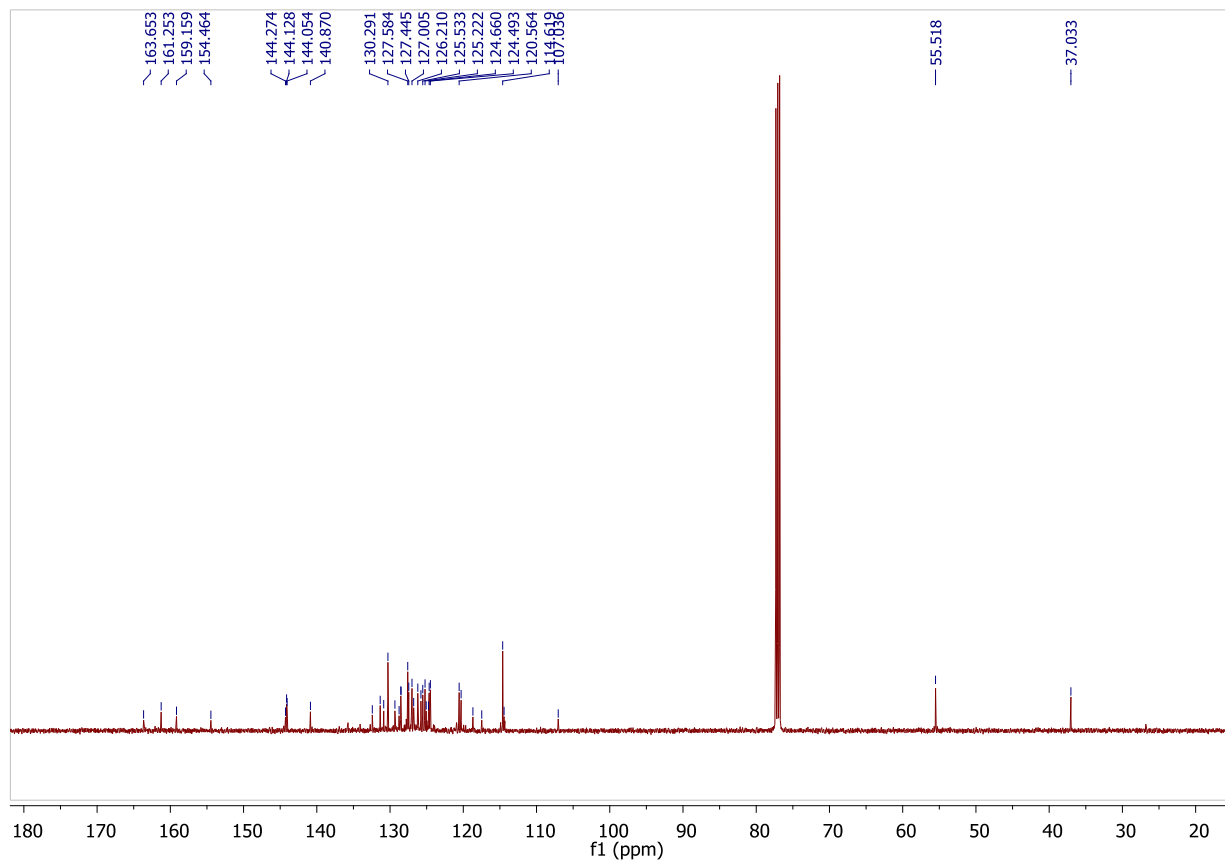
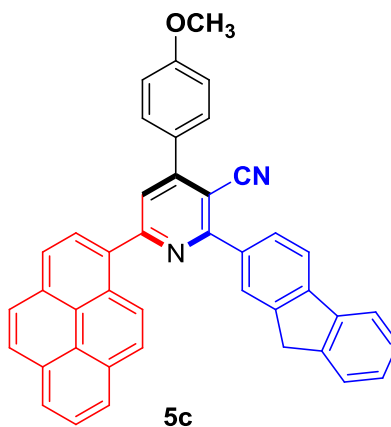


¹H NMR Spectrum of 2-(9H-fluoren-2-yl)-4-(4-methoxyphenyl)-6-(pyren-1-yl)nicotinonitrile

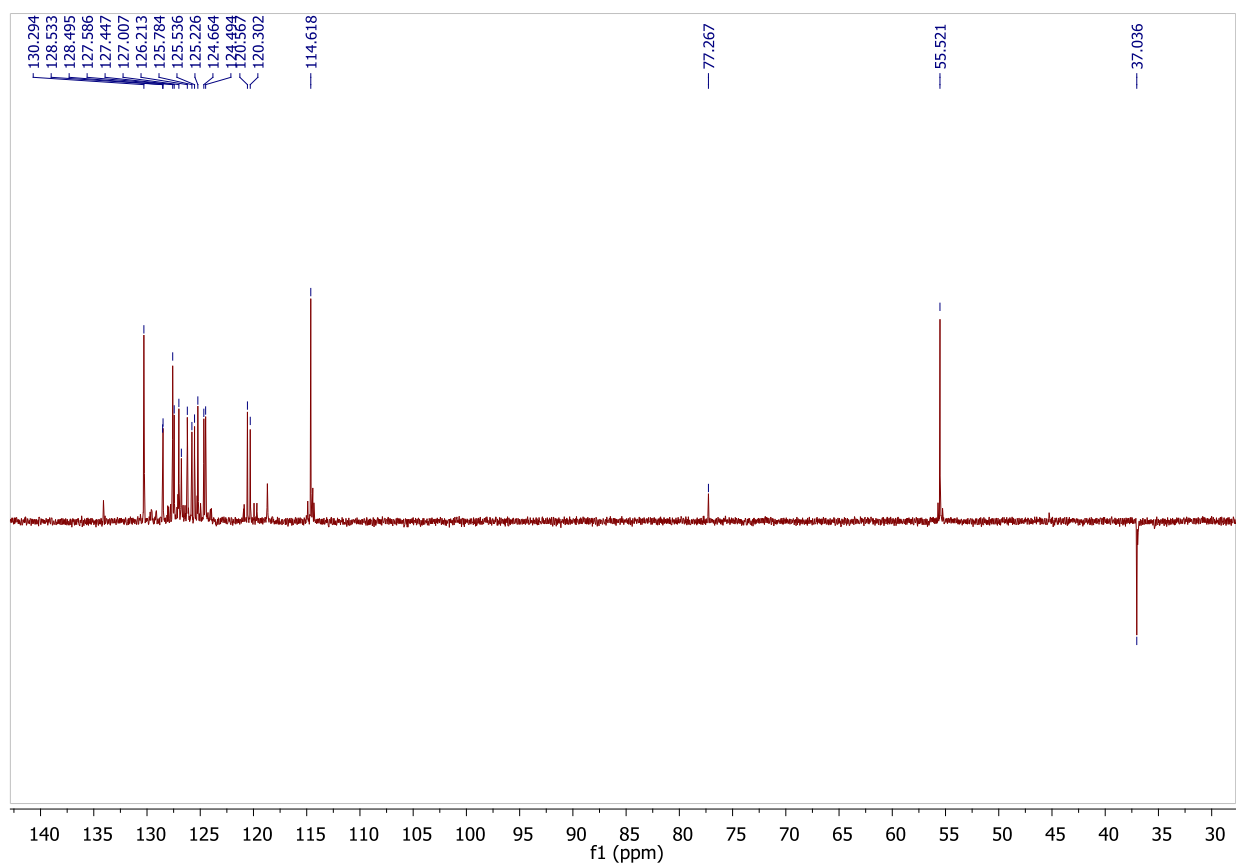
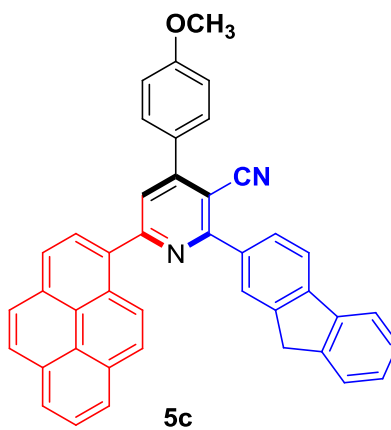
(5c)



¹³C NMR Spectrum of 2-(9H-fluoren-2-yl)-4-(4-methoxyphenyl)-6-(pyren-1-yl)nicotinonitrile (5c)

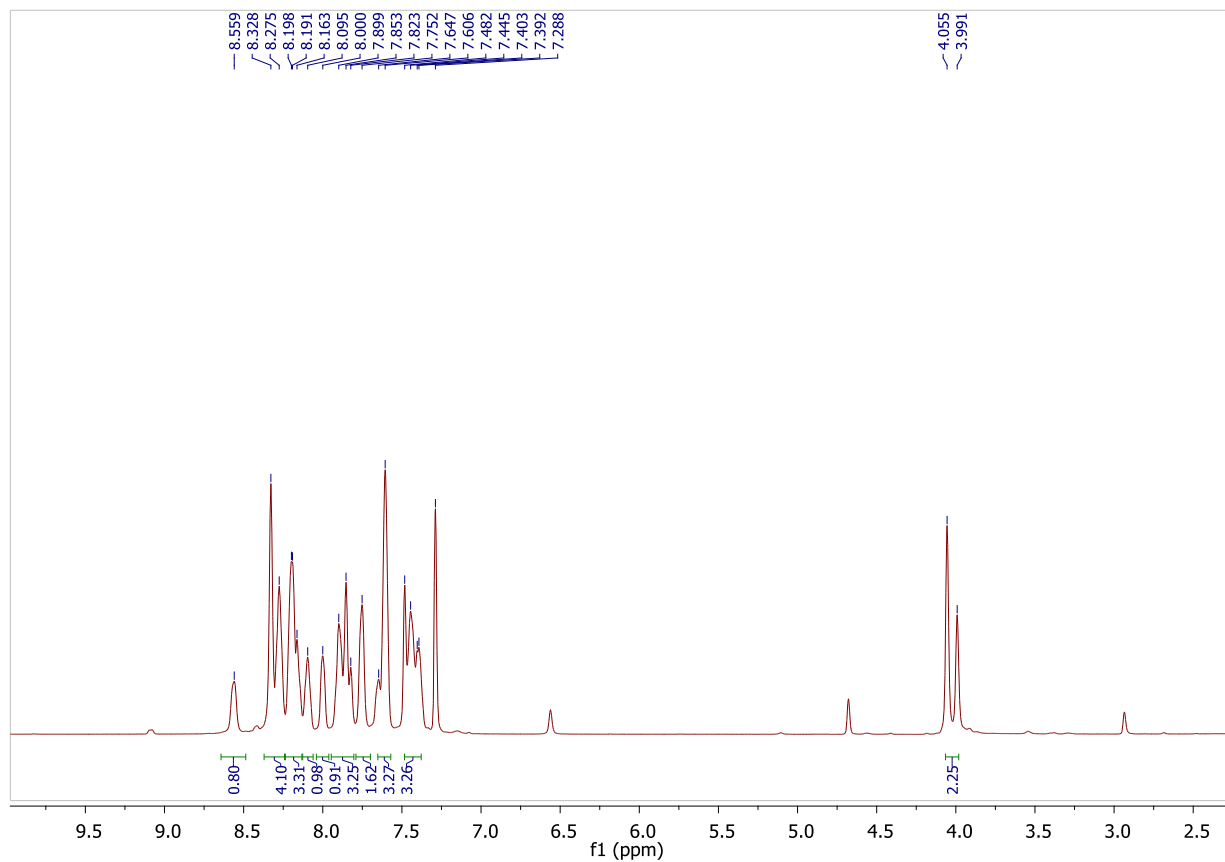
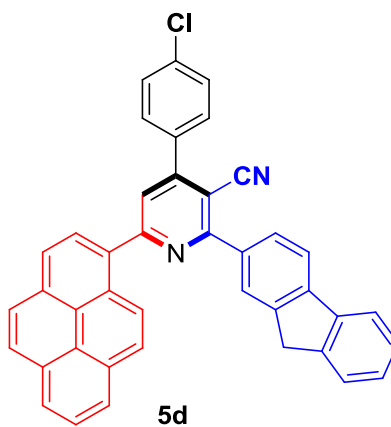


DEPT-135 NMR Spectrum of 2-(9H-fluoren-2-yl)-4-(4-methoxyphenyl)-6-(pyren-1-yl)nicotinonitrile (5c)



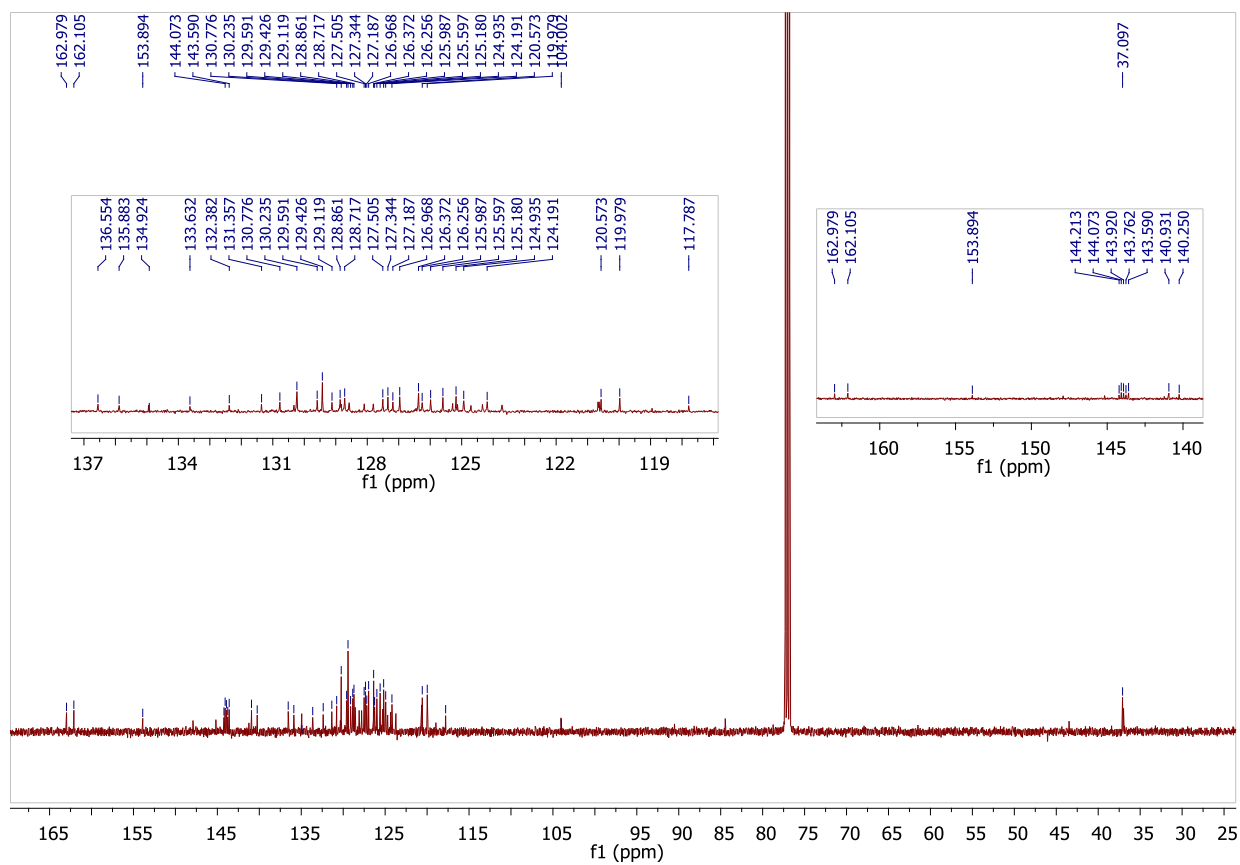
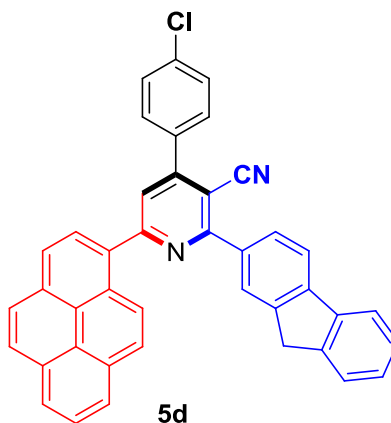
¹H NMR spectrum of 4-(4-chlorophenyl)-2-(9H-fluoren-2-yl)-6-(pyren-1-yl)nicotinonitrile

(5d)

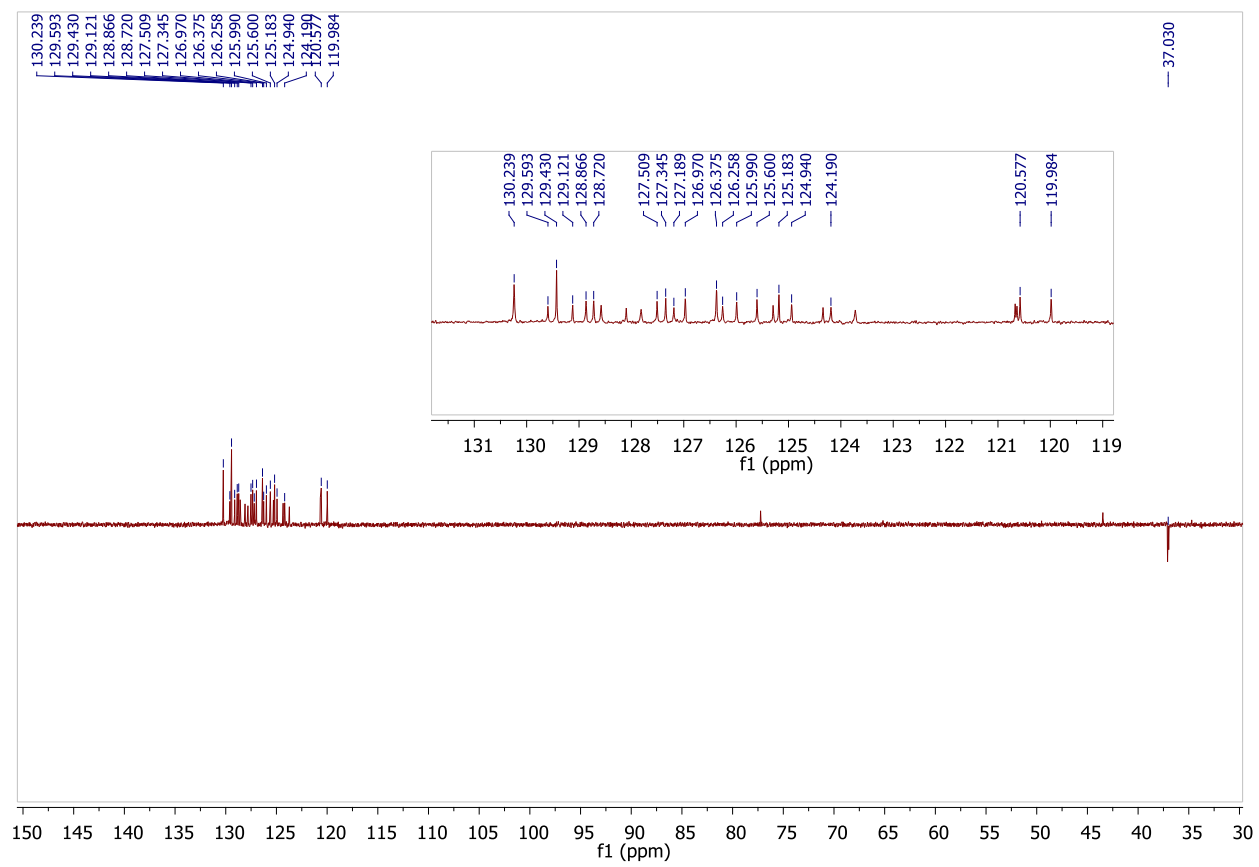
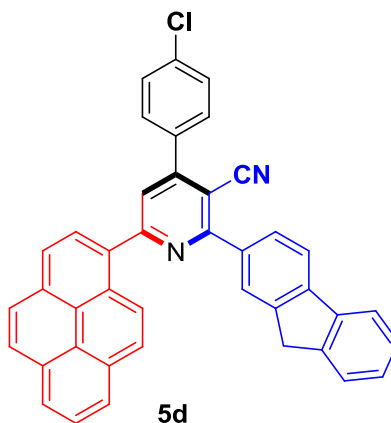


¹³C NMR spectrum of 4-(4-chlorophenyl)-2-(9H-fluoren-2-yl)-6-(pyren-1-yl)nicotinonitrile

(5d)

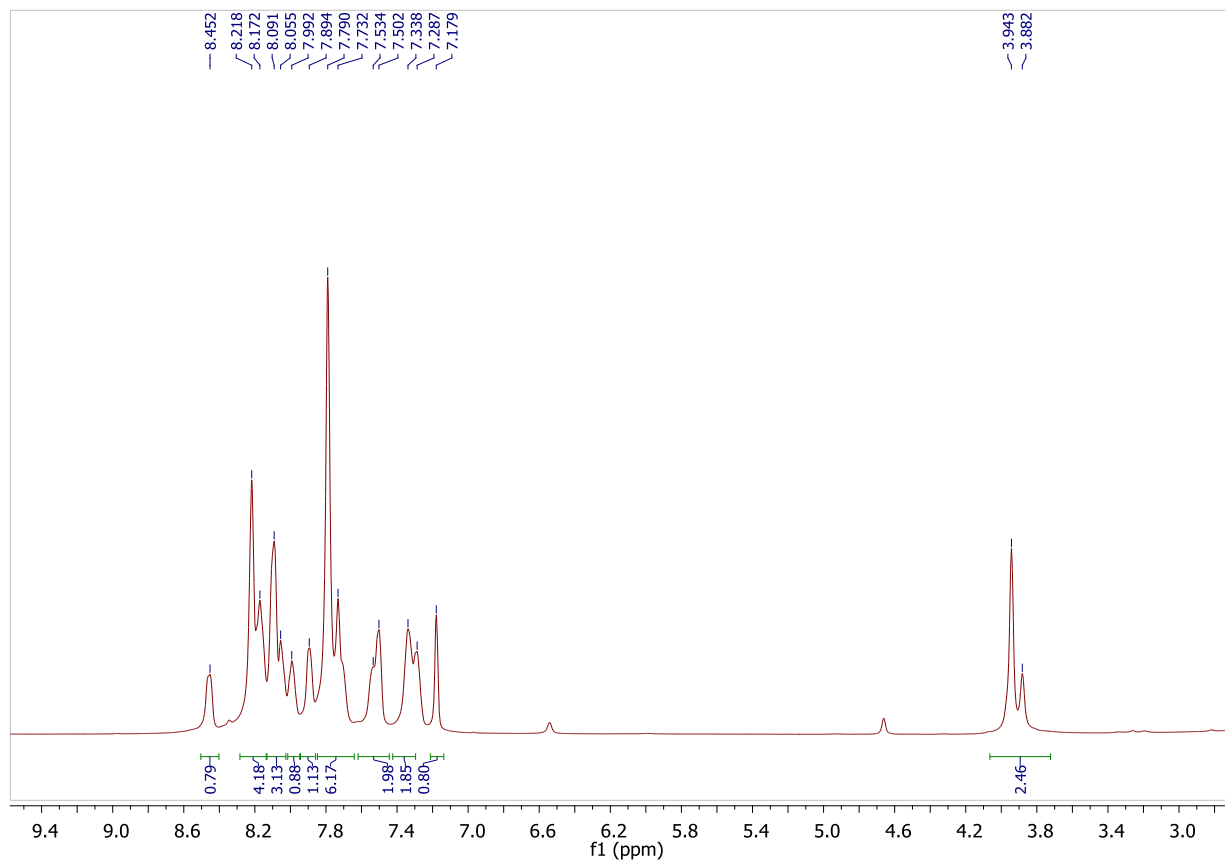
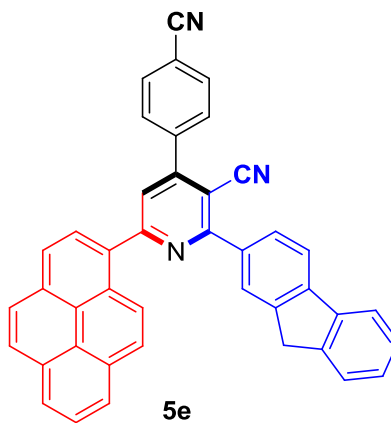


DEPT-135 NMR spectrum of 4-(4-chlorophenyl)-2-(9H-fluoren-2-yl)-6-(pyren-1-yl)nicotinonitrile (5d)



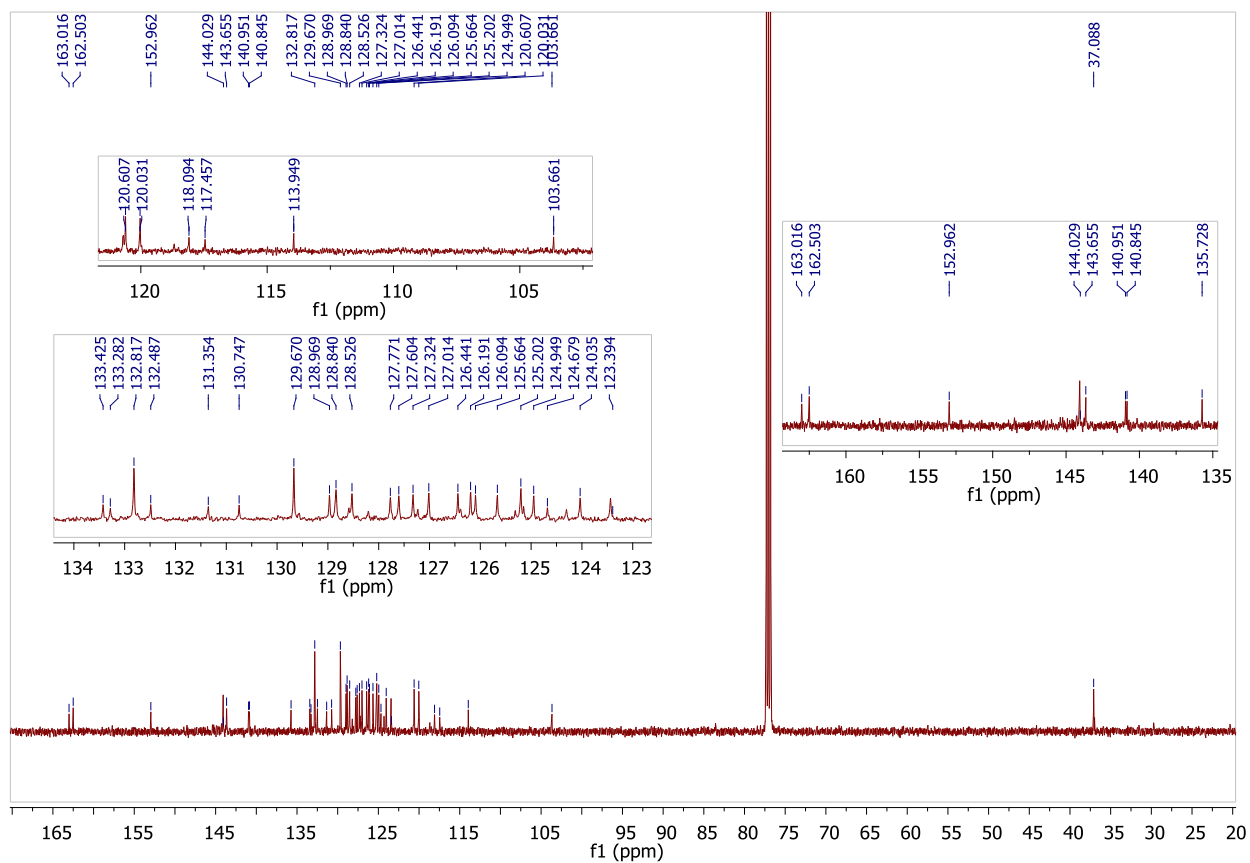
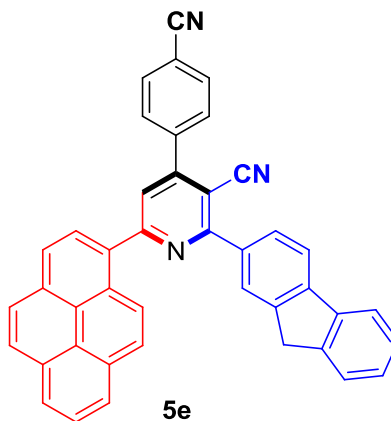
¹H NMR spectrum of 4-(4-cyanophenyl)-2-(9H-fluoren-2-yl)-6-(pyren-1-yl)nicotinonitrile

(5e)

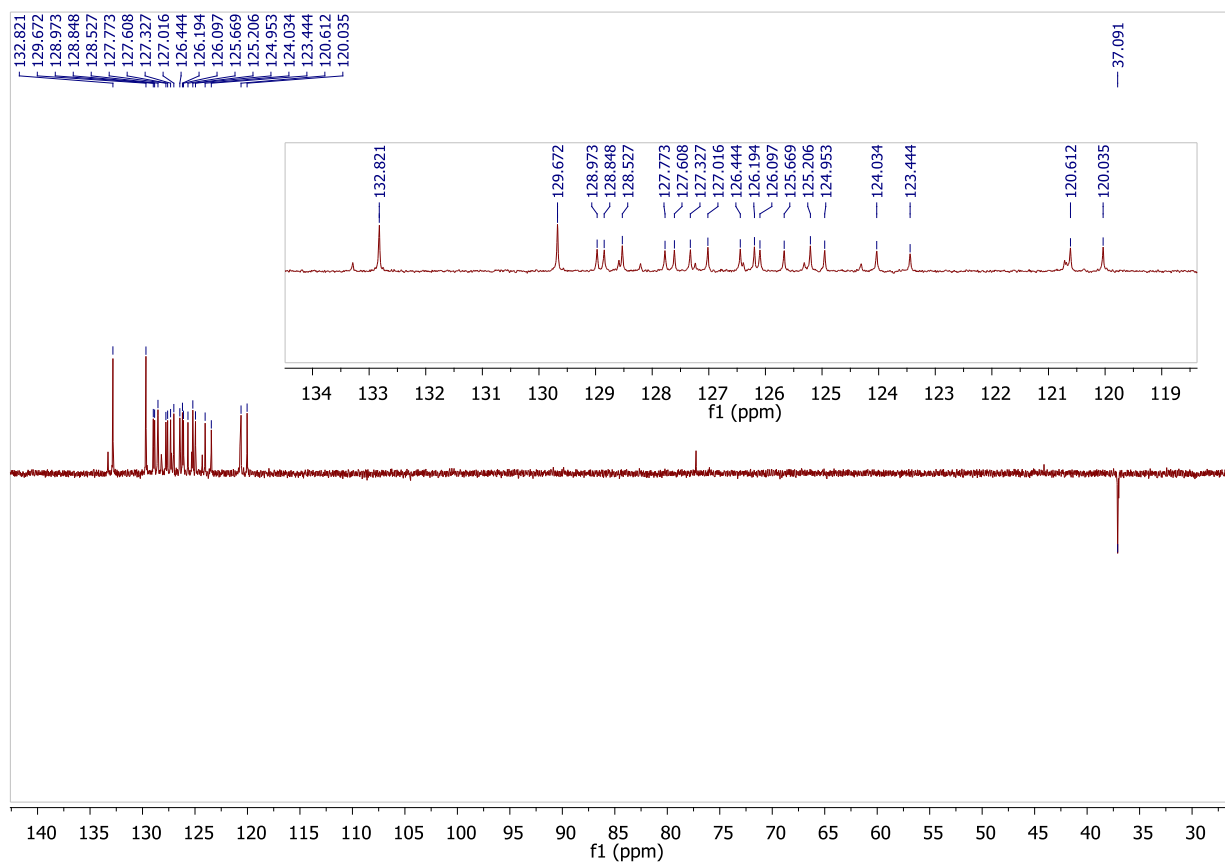
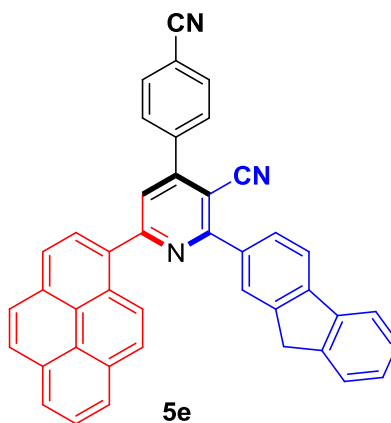


^{13}C NMR spectrum of 4-(4-cyanophenyl)-2-(9H-fluoren-2-yl)-6-(pyren-1-yl)nicotinonitrile

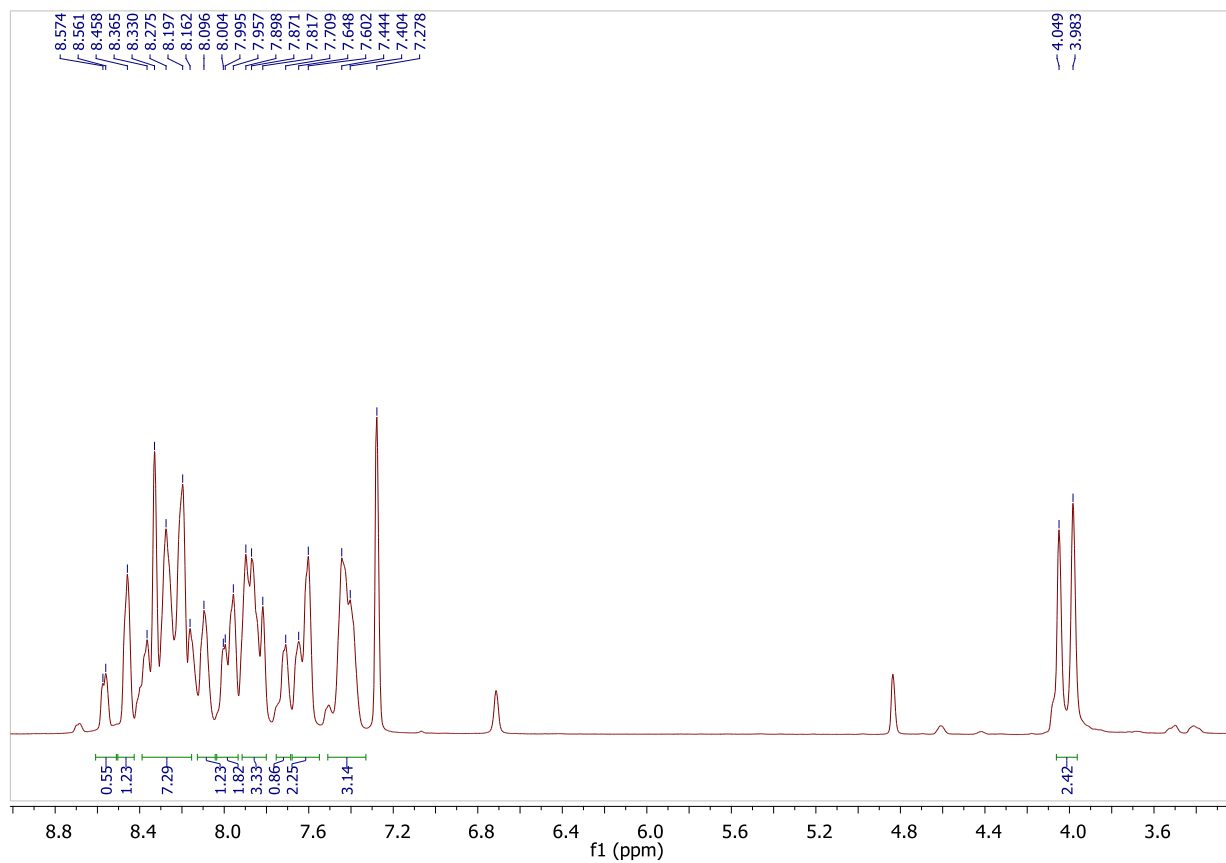
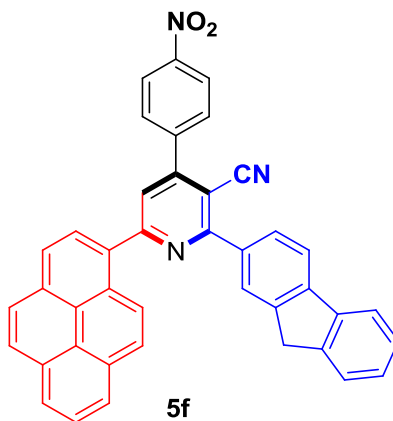
(5e)



DEPT-135 NMR spectrum of 4-(4-cyanophenyl)-2-(9H-fluoren-2-yl)-6-(pyren-1-yl)nicotinonitrile (5e)

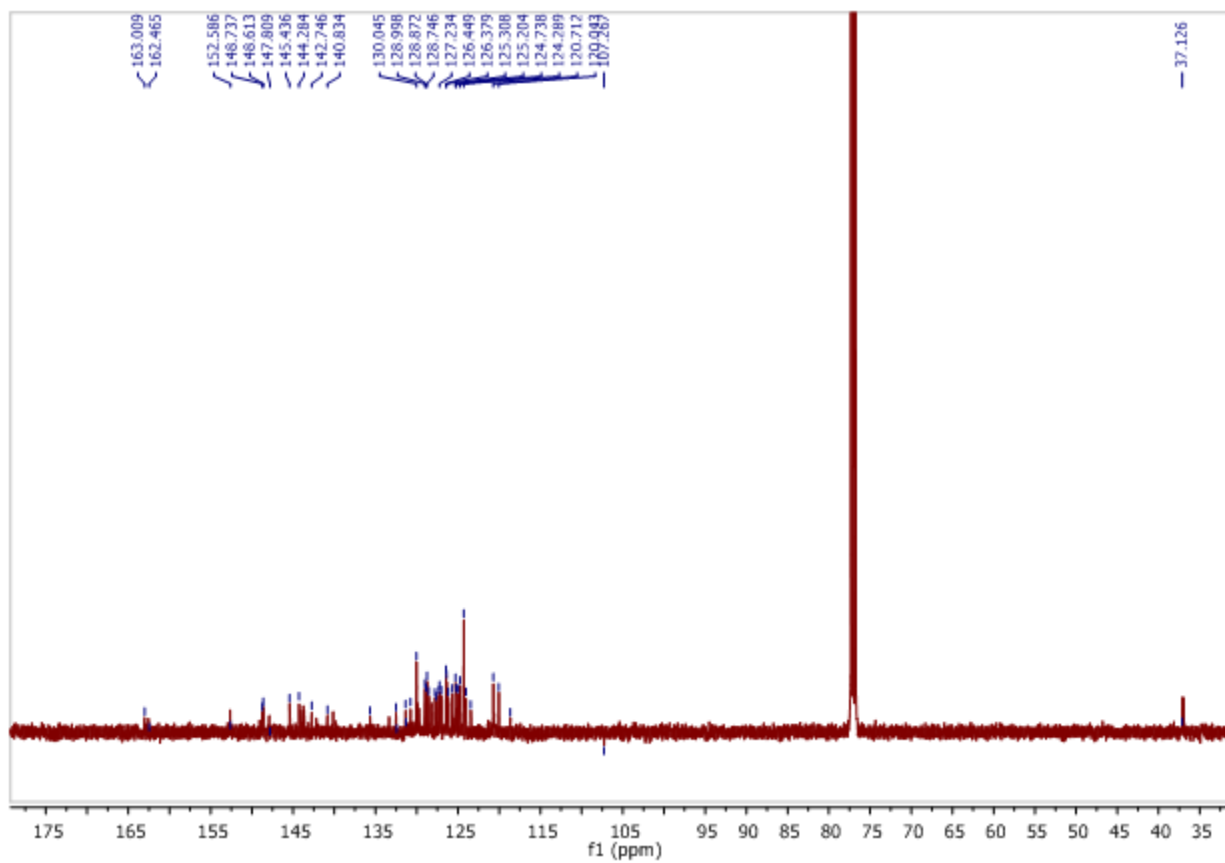
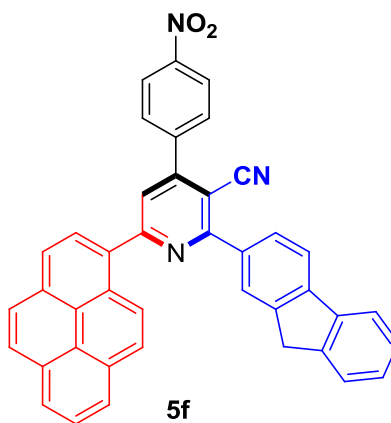


¹H NMR spectrum of 2-(9H-fluoren-2-yl)-4-(4-nitrophenyl)-6-(pyren-1-yl)nicotinonitrile (5f)

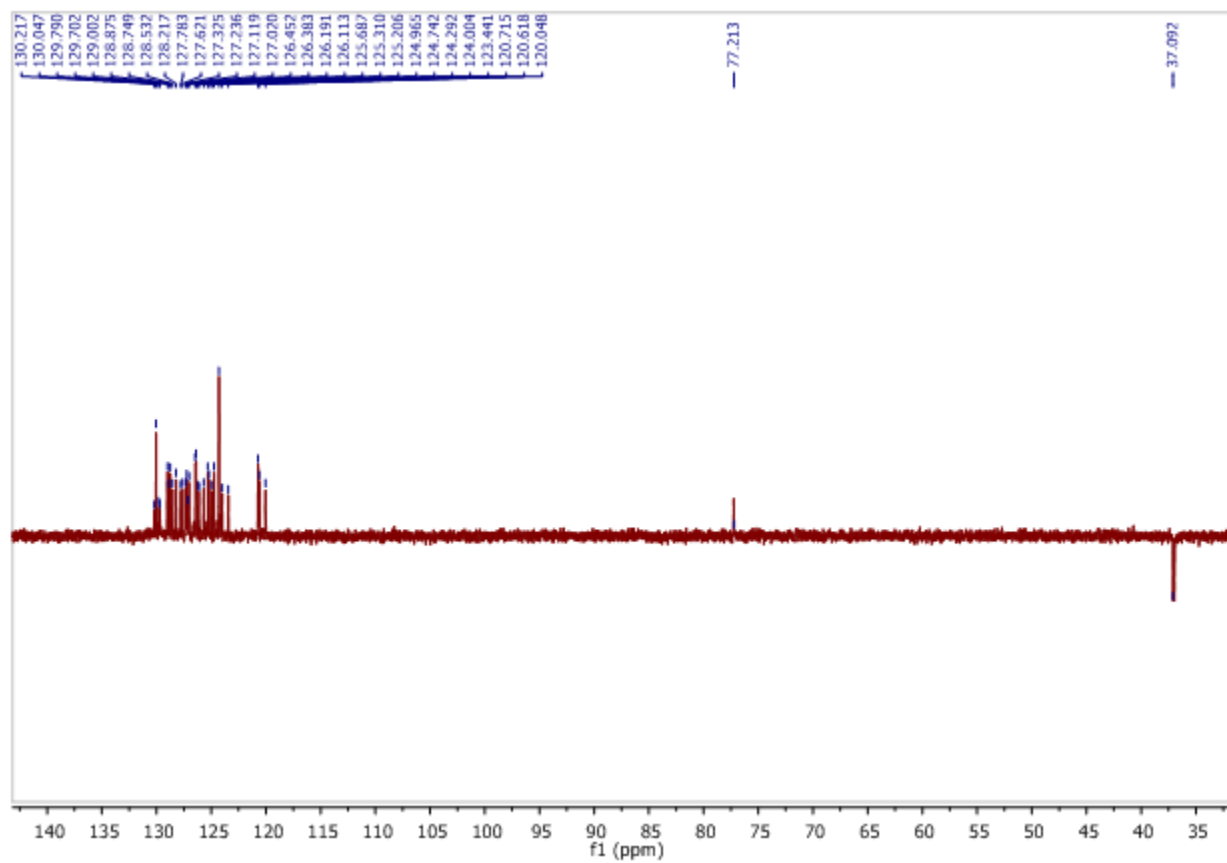
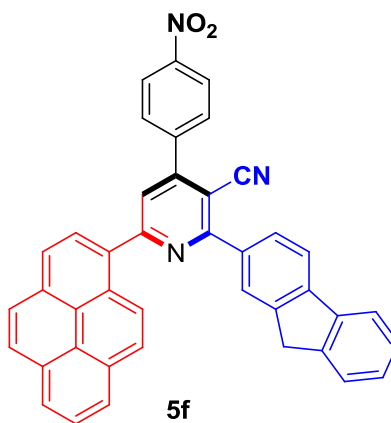


¹³C NMR spectrum of 2-(9H-fluoren-2-yl)-4-(4-nitrophenyl)-6-(pyren-1-yl)nicotinonitrile

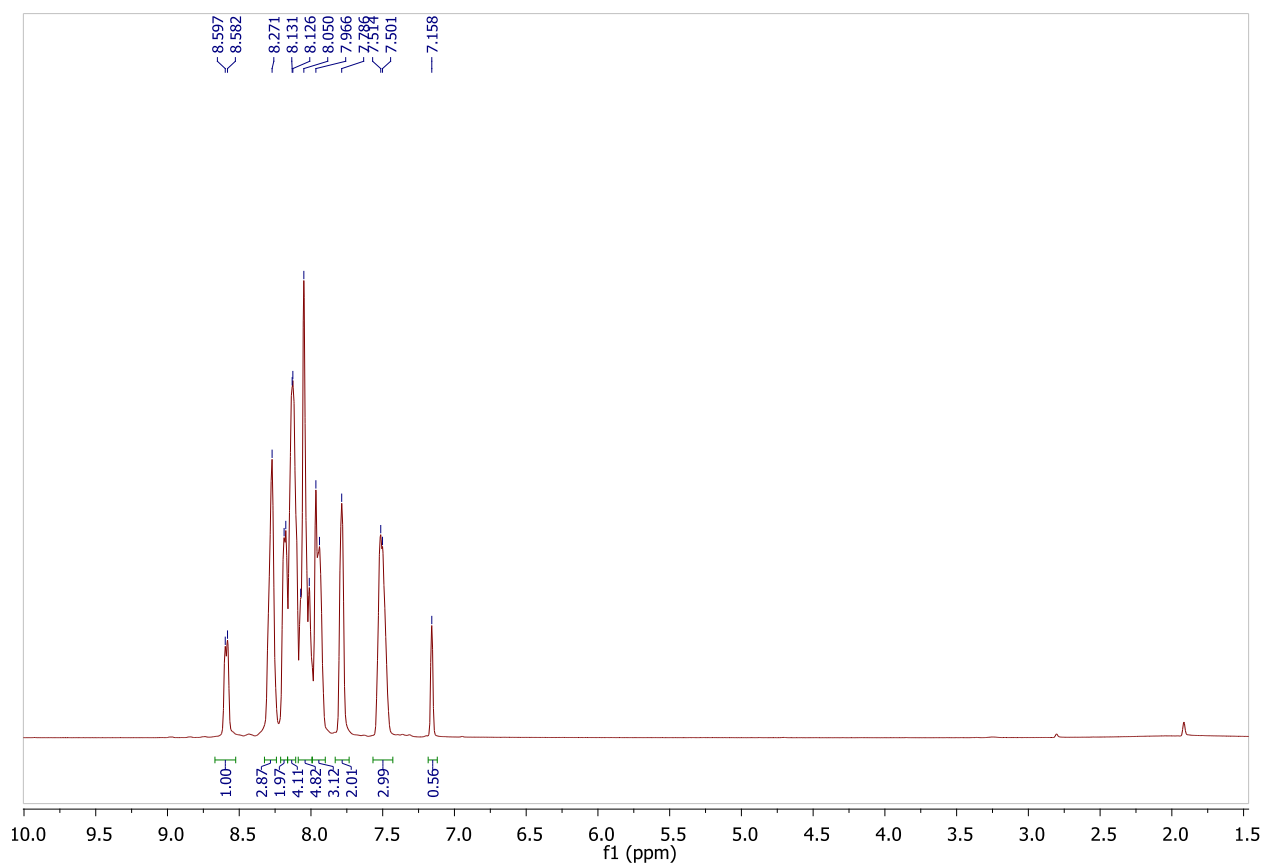
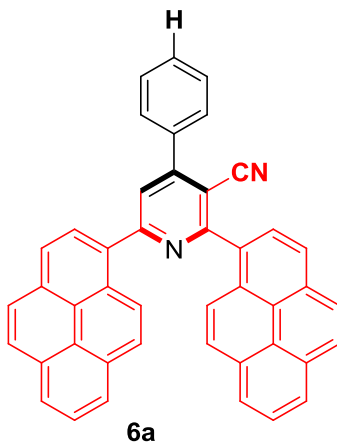
(5f)



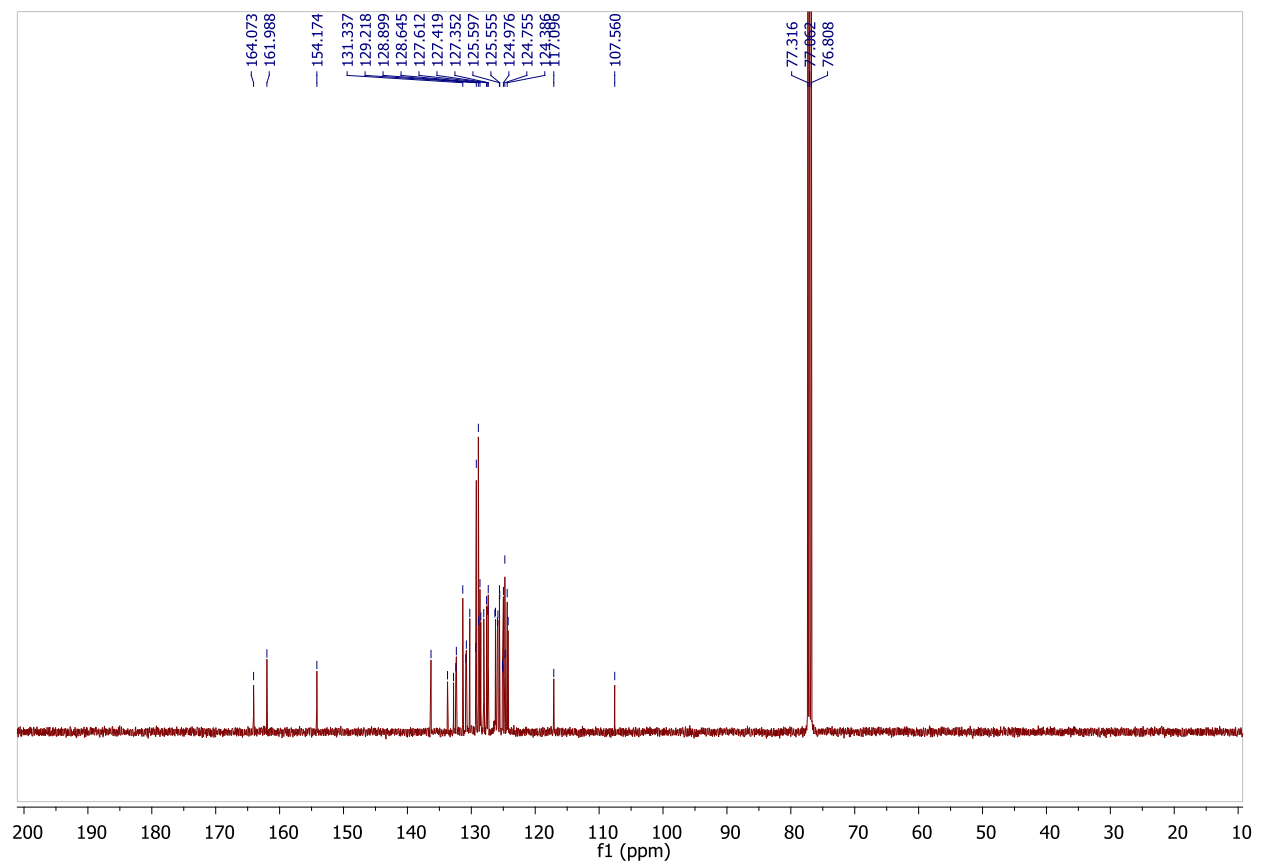
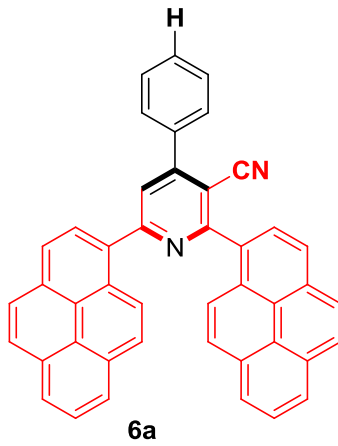
DEPT-135 NMR spectrum of 2-(9H-fluoren-2-yl)-4-(4-nitrophenyl)-6-(pyren-1-yl)nicotinonitrile (5f)



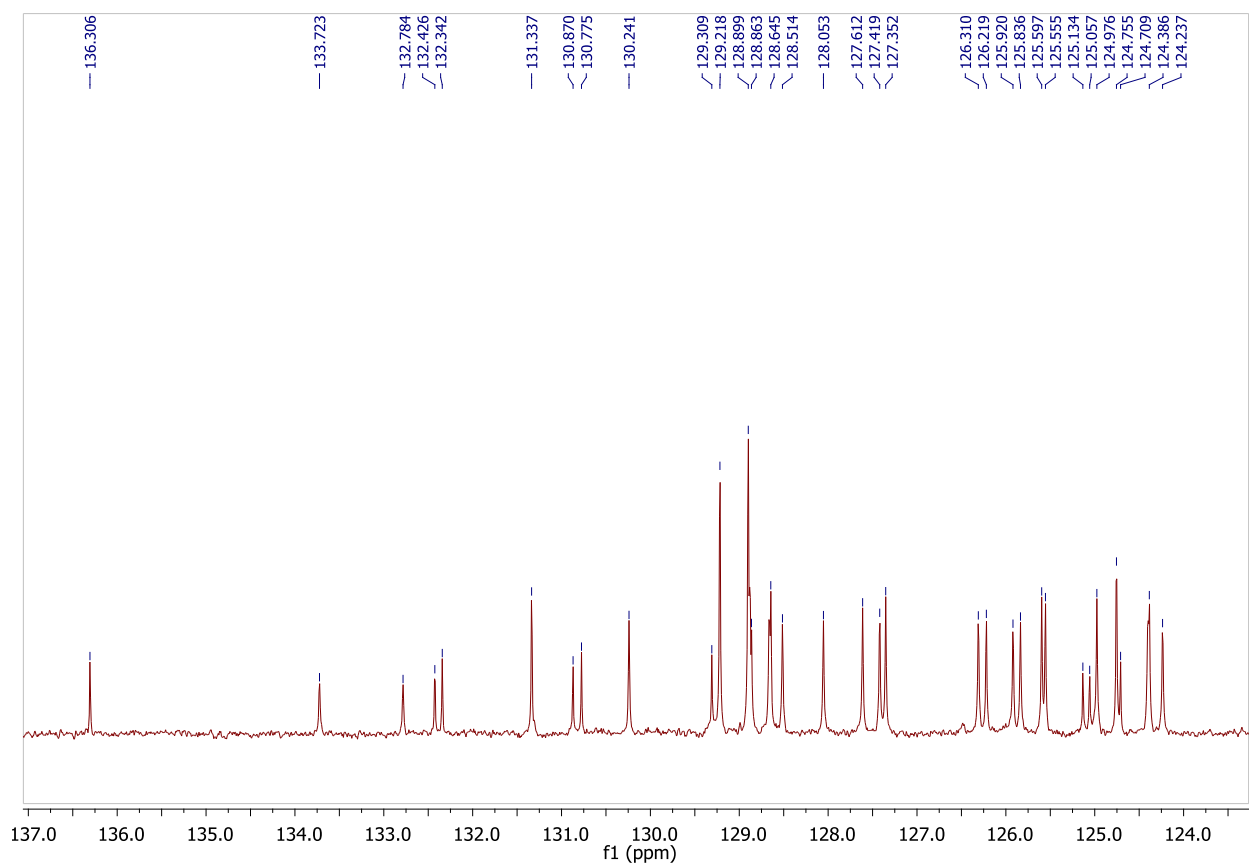
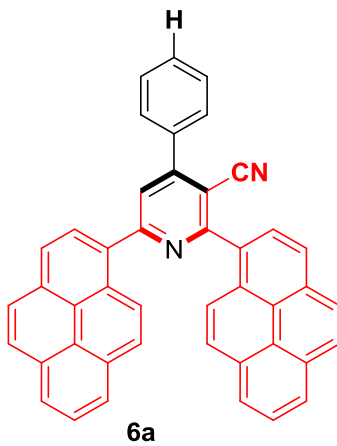
^1H NMR spectrum of 4-phenyl-2,6-di(pyren-1-yl)nicotinonitrile (6a)



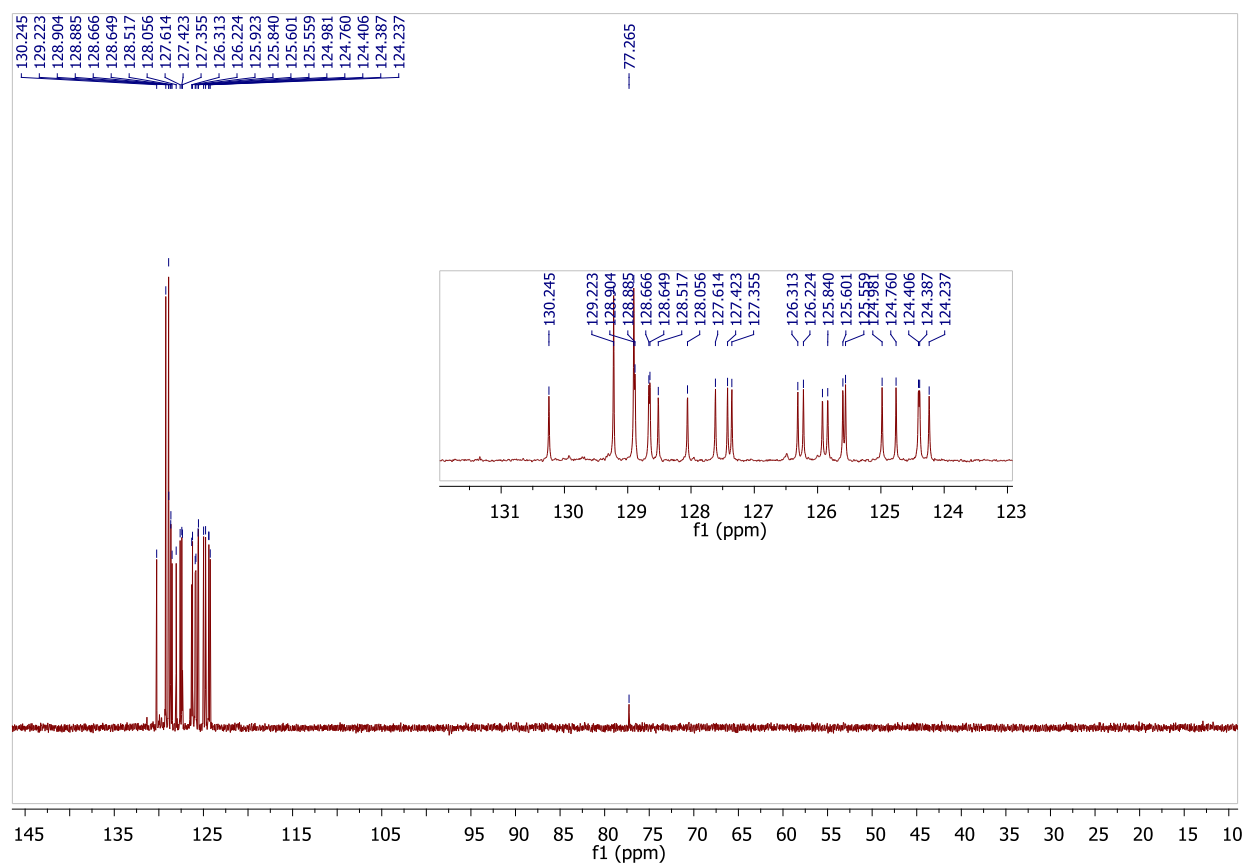
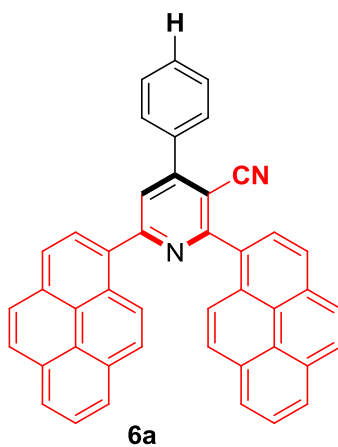
^{13}C NMR spectrum of 4-phenyl-2,6-di(pyren-1-yl)nicotinonitrile (6a)



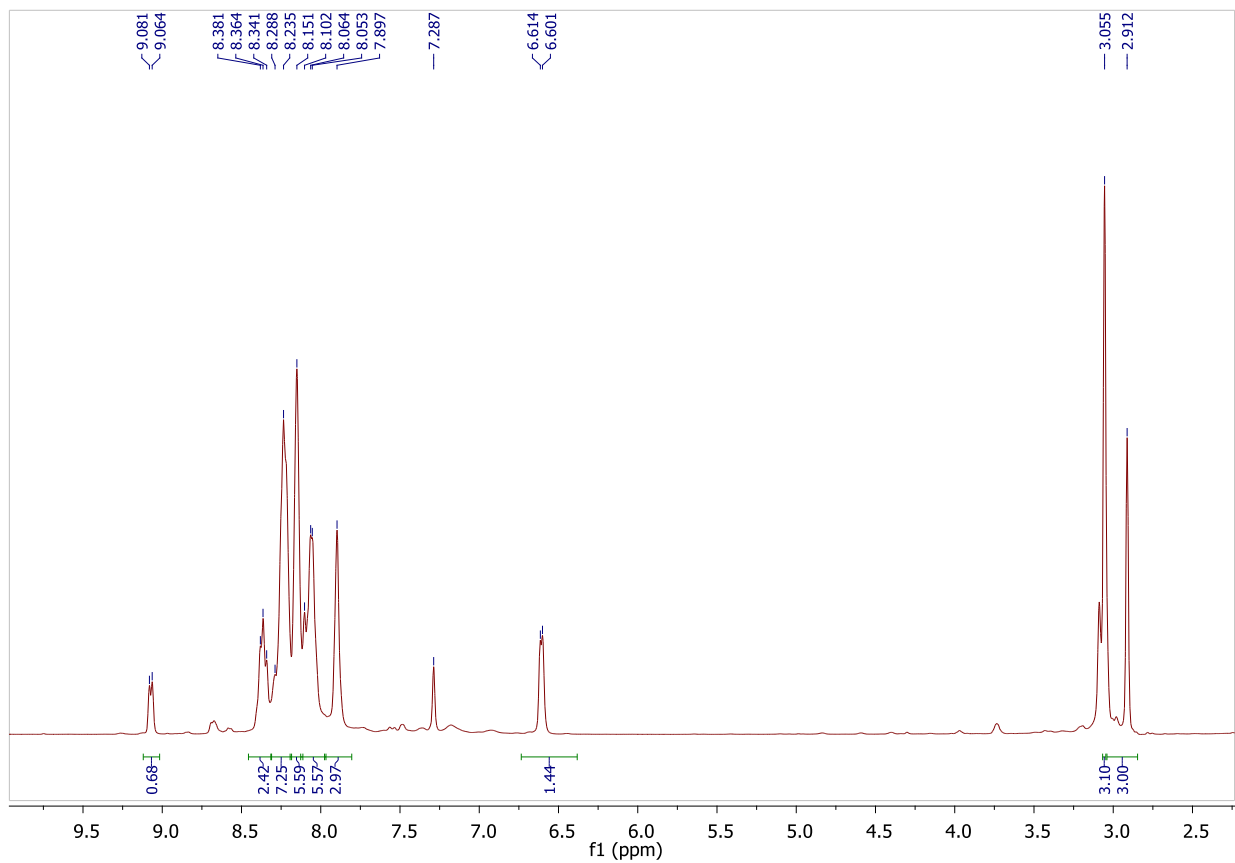
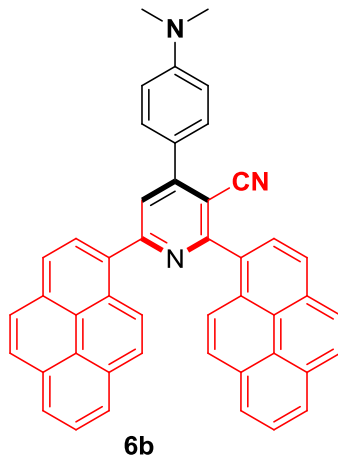
Expanded ^{13}C NMR spectrum of 4-phenyl-2,6-di(pyren-1-yl)nicotinonitrile (6a)



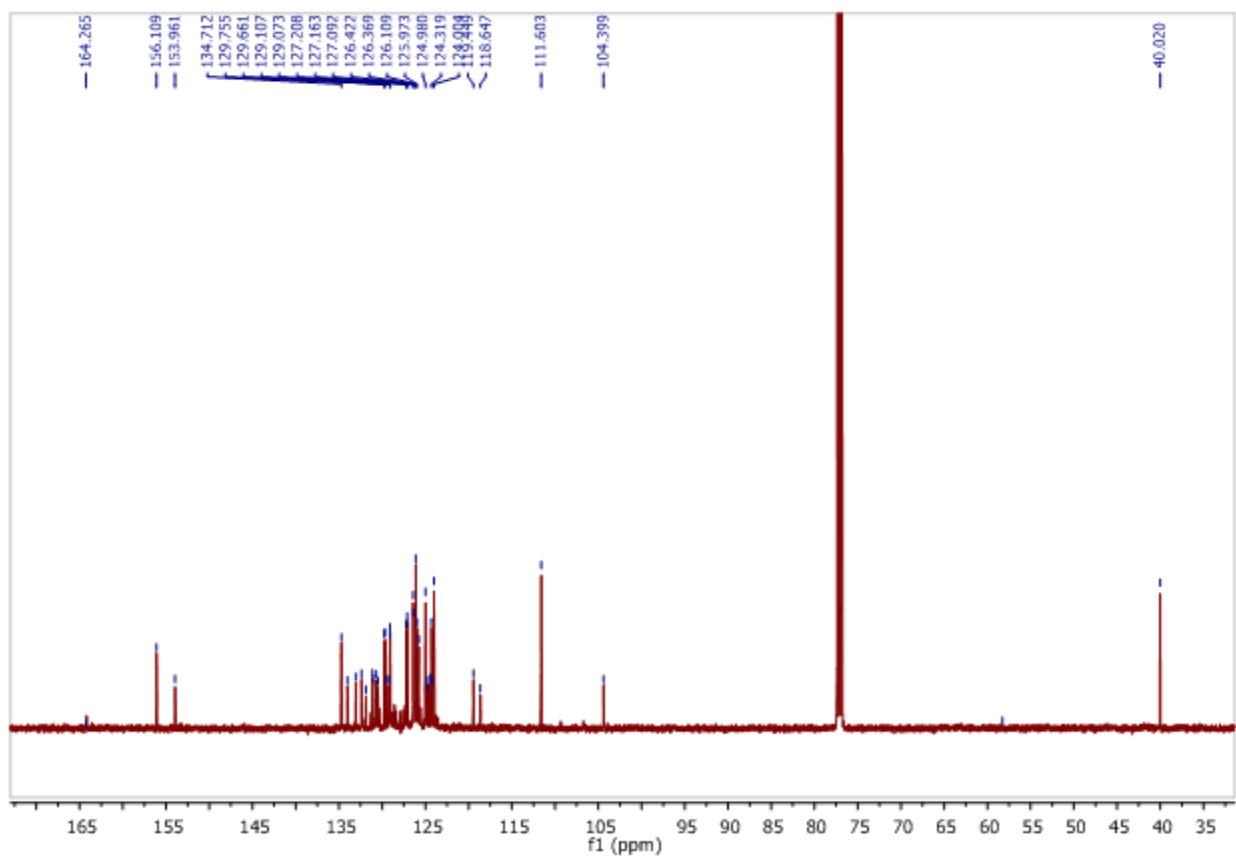
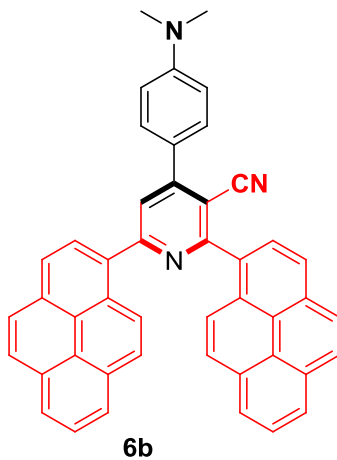
DEPT-135 NMR spectrum of 4-phenyl-2,6-di(pyren-1-yl)nicotinonitrile (6a)



¹H NMR spectrum 4-(4-(dimethylamino)phenyl)-2,6-di(pyren-1-yl)nicotinitrile (6b)

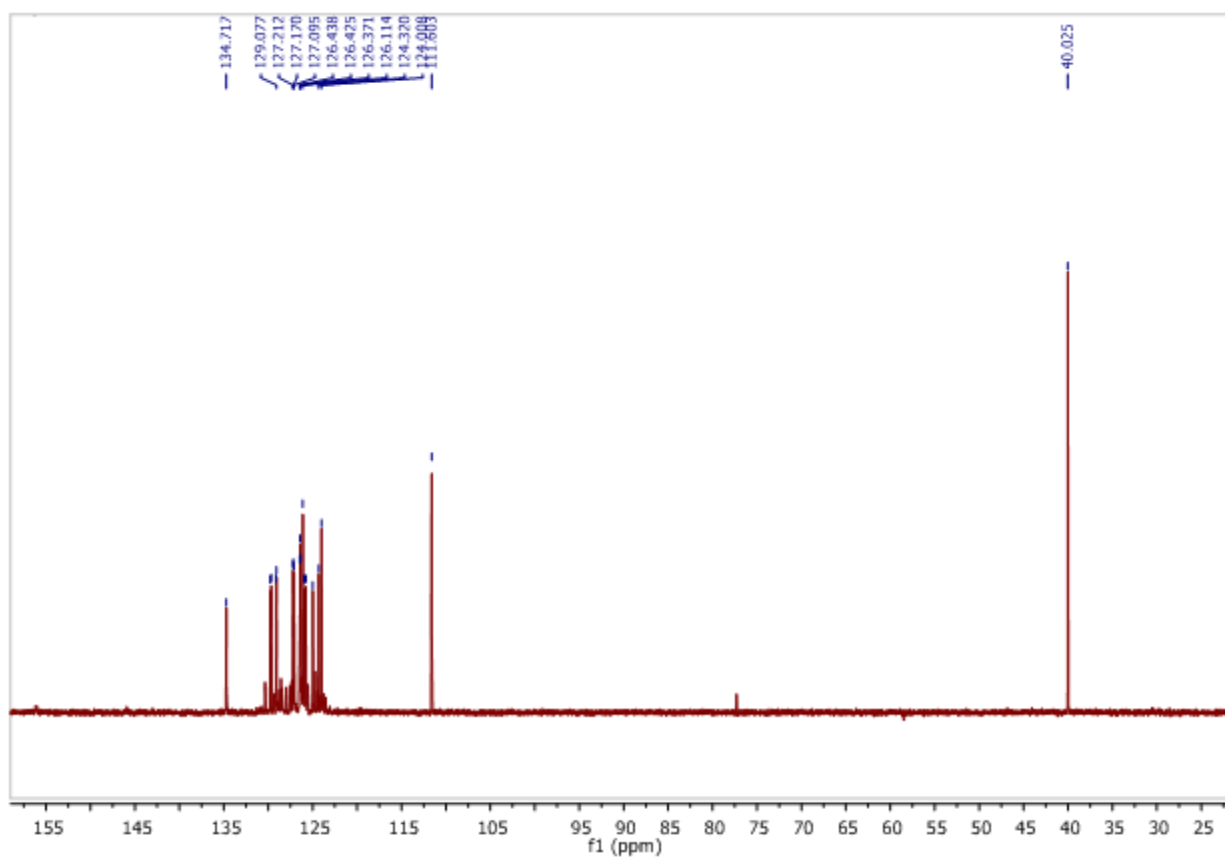
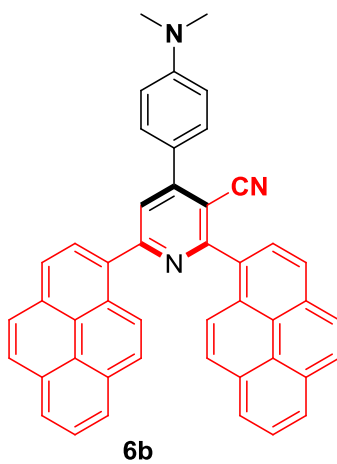


¹³C NMR spectrum 4-(4-(dimethylamino)phenyl)-2,6-di(pyren-1-yl)nicotinonitrile (6b)

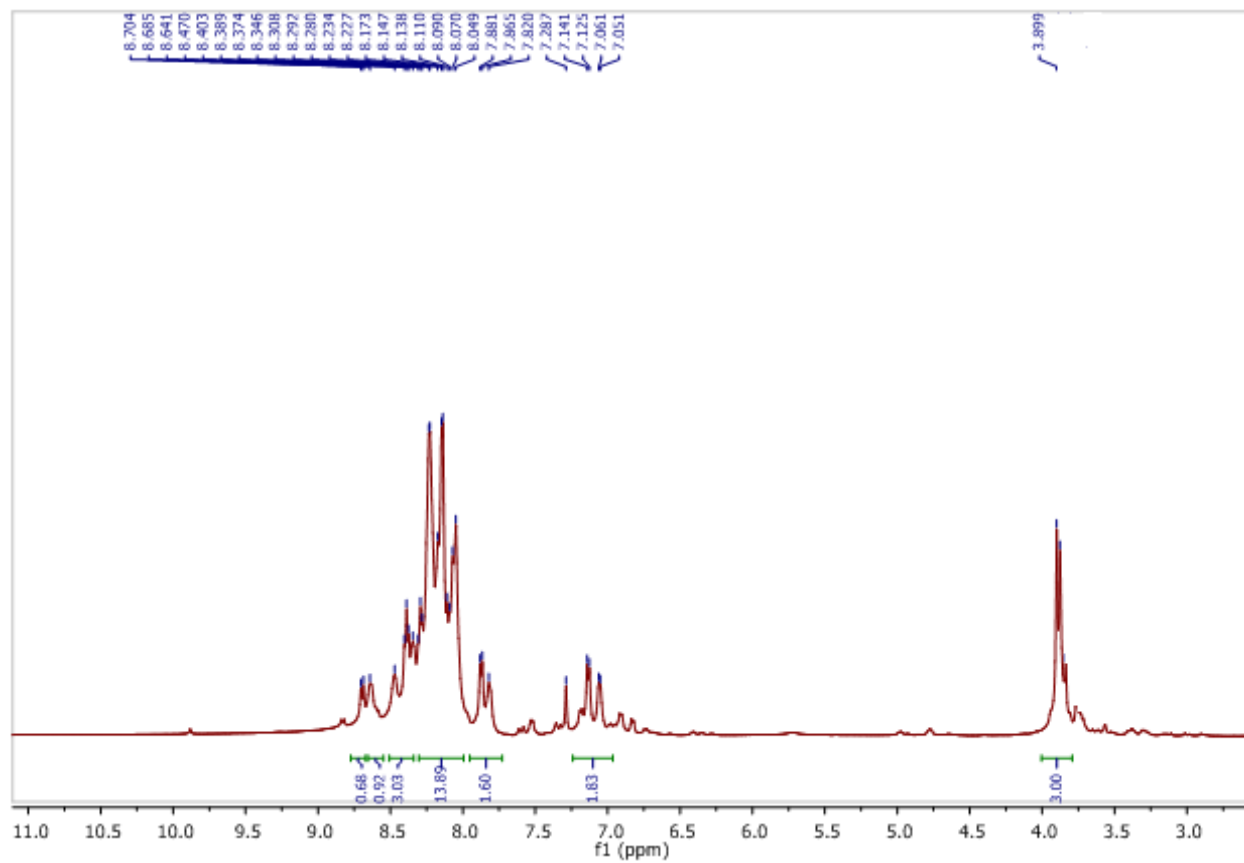
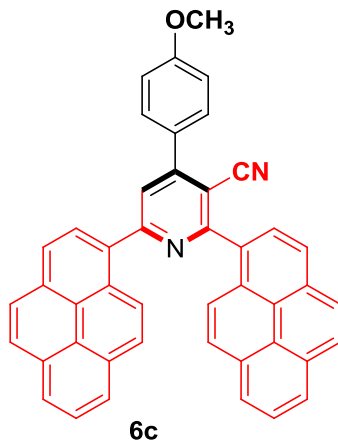


DEPT-135 NMR spectrum 4-(4-(dimethylamino)phenyl)-2,6-di(pyren-1-yl)nicotinonitrile

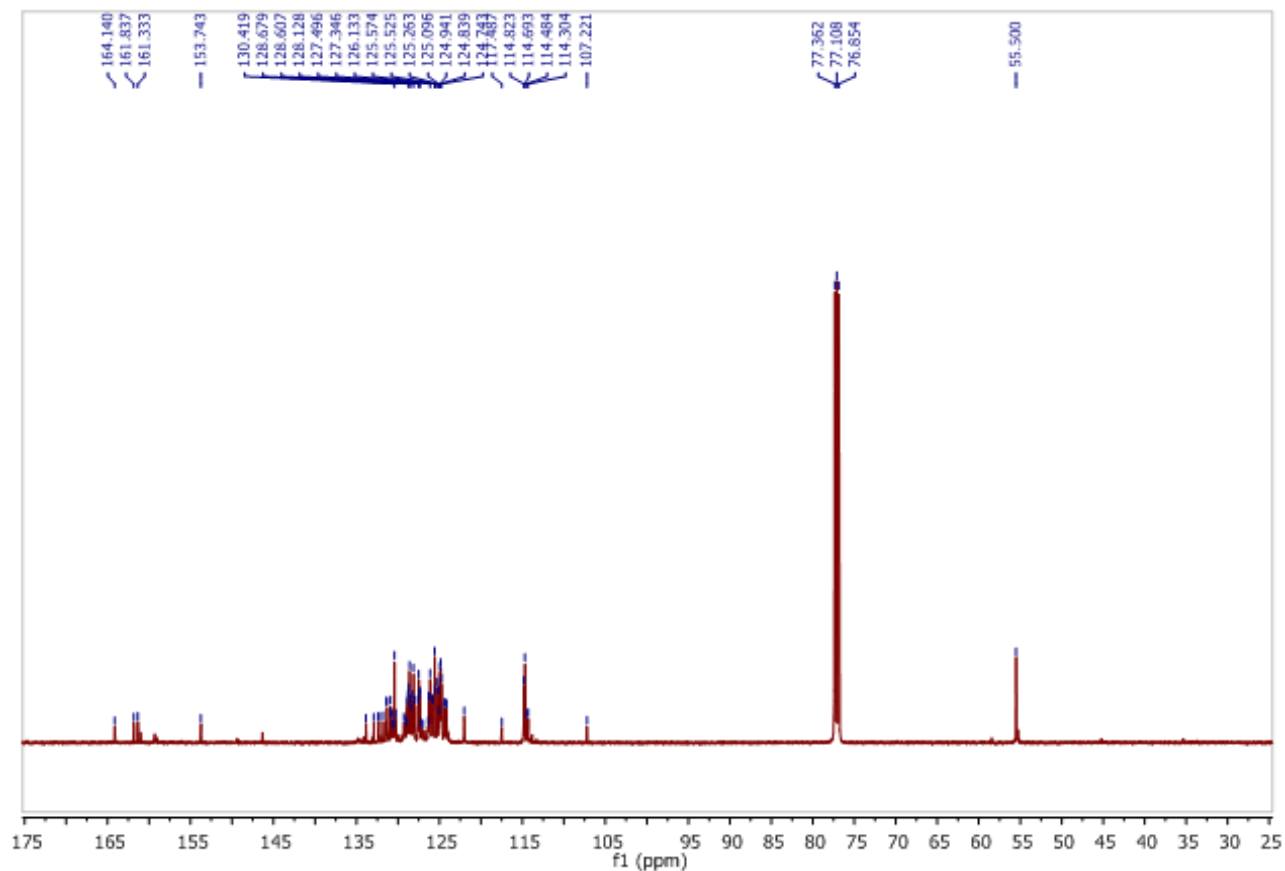
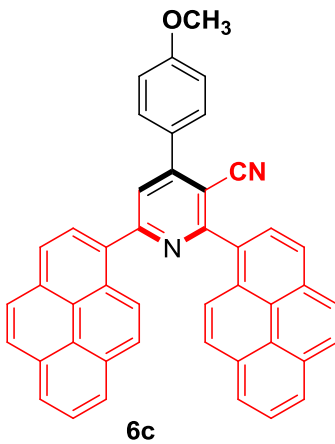
(6b)



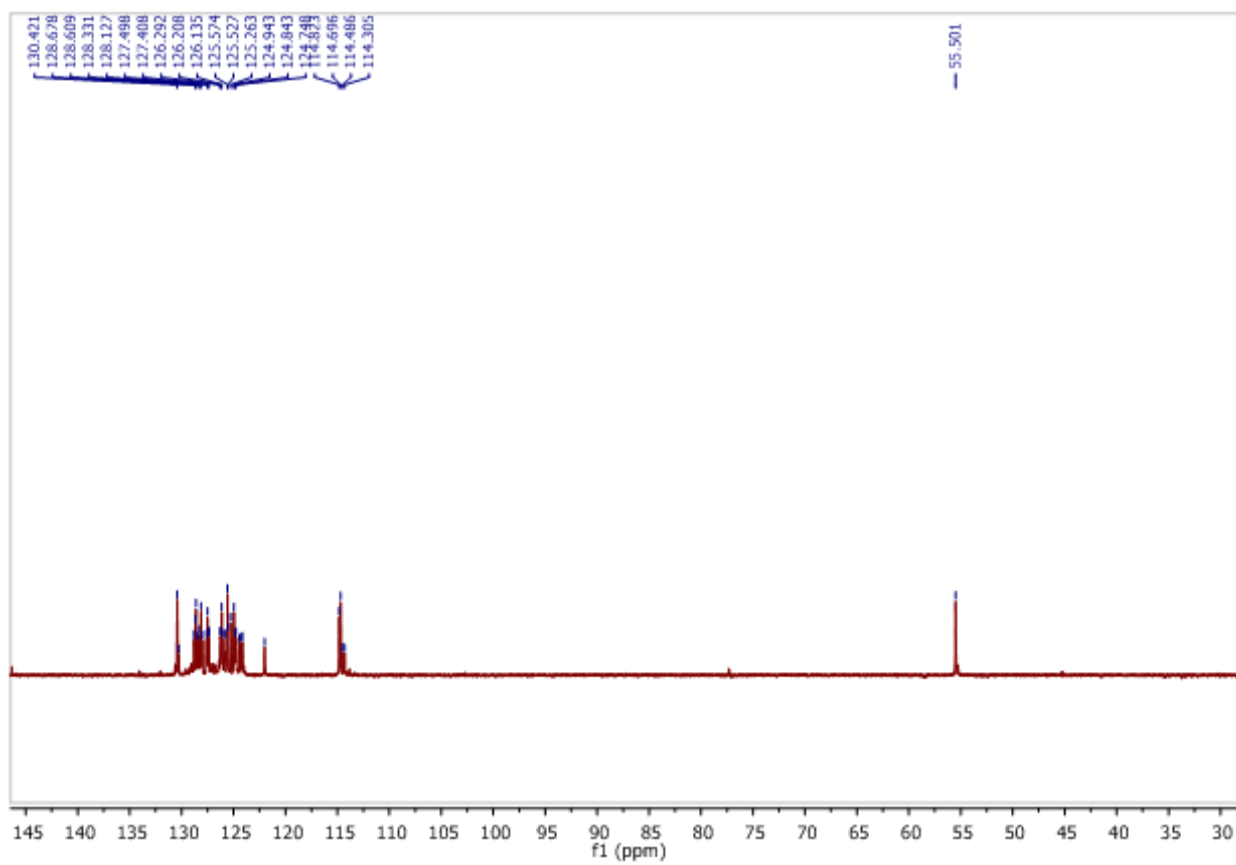
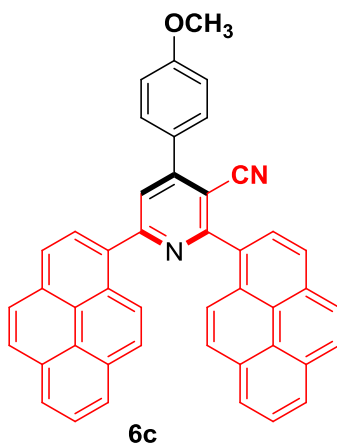
¹H NMR spectrum of 4-(4-methoxyphenyl)-2,6-di(pyren-1-yl)nicotinonitrile (6c)



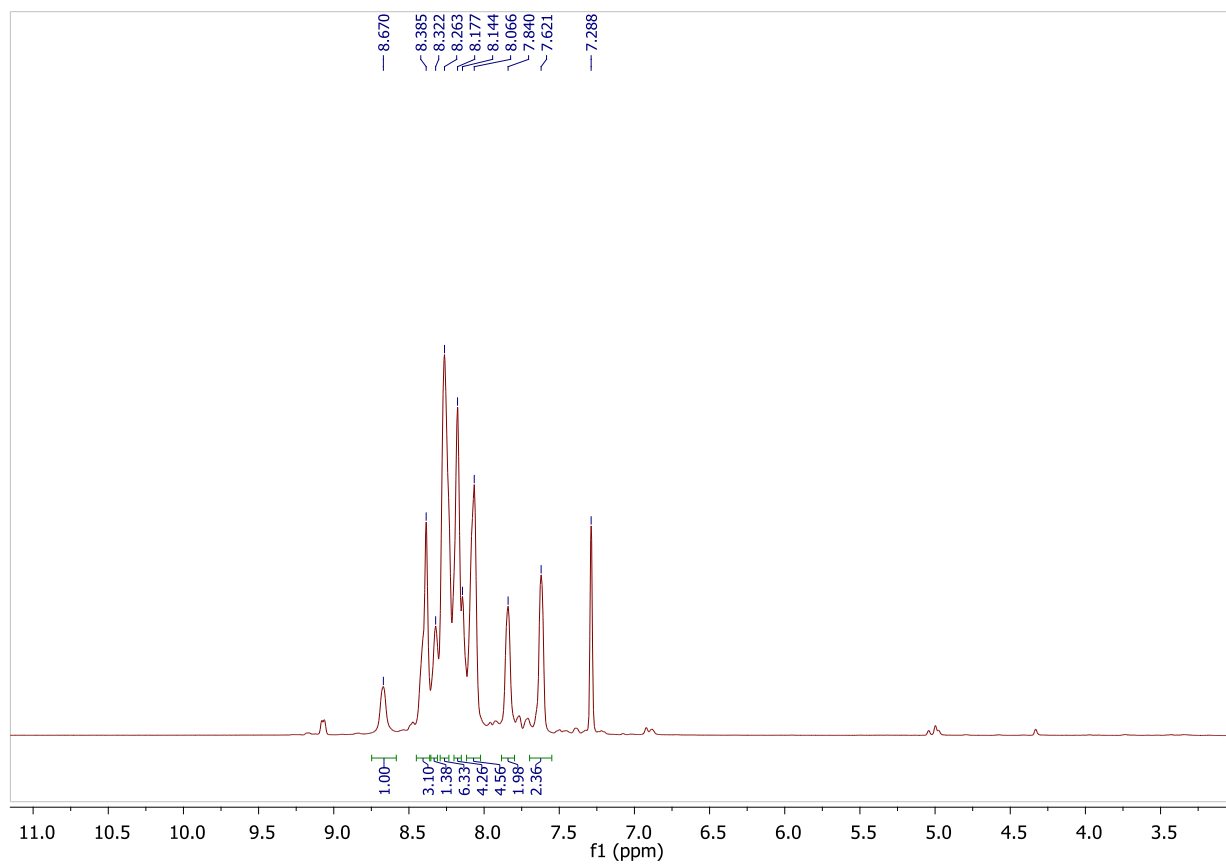
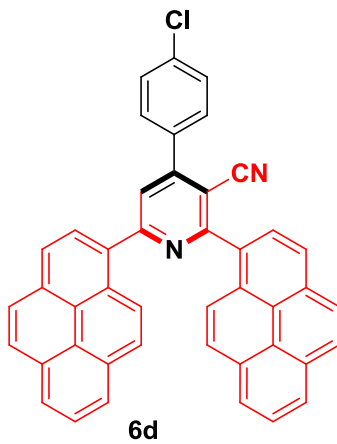
¹³C NMR spectrum of 4-(4-methoxyphenyl)-2,6-di(pyren-1-yl)nicotinonitrile (6c)



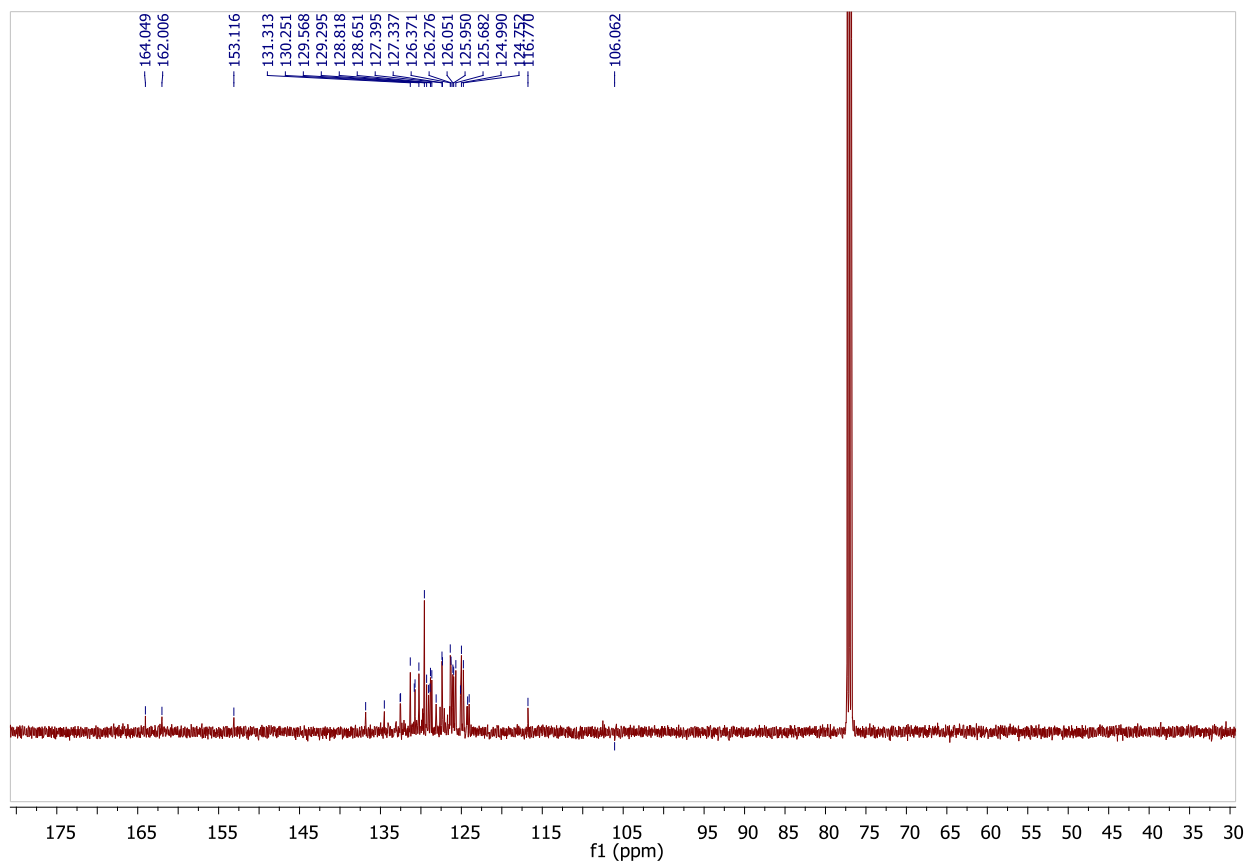
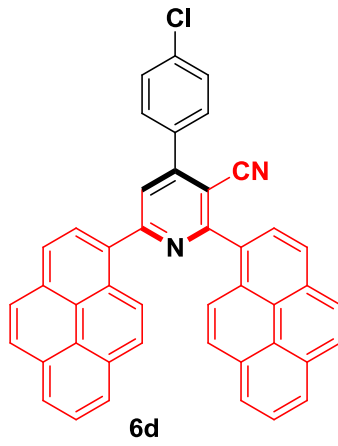
DEPT-135 NMR spectrum of 4-(4-methoxyphenyl)-2,6-di(pyren-1-yl)nicotinonitrile (6c)



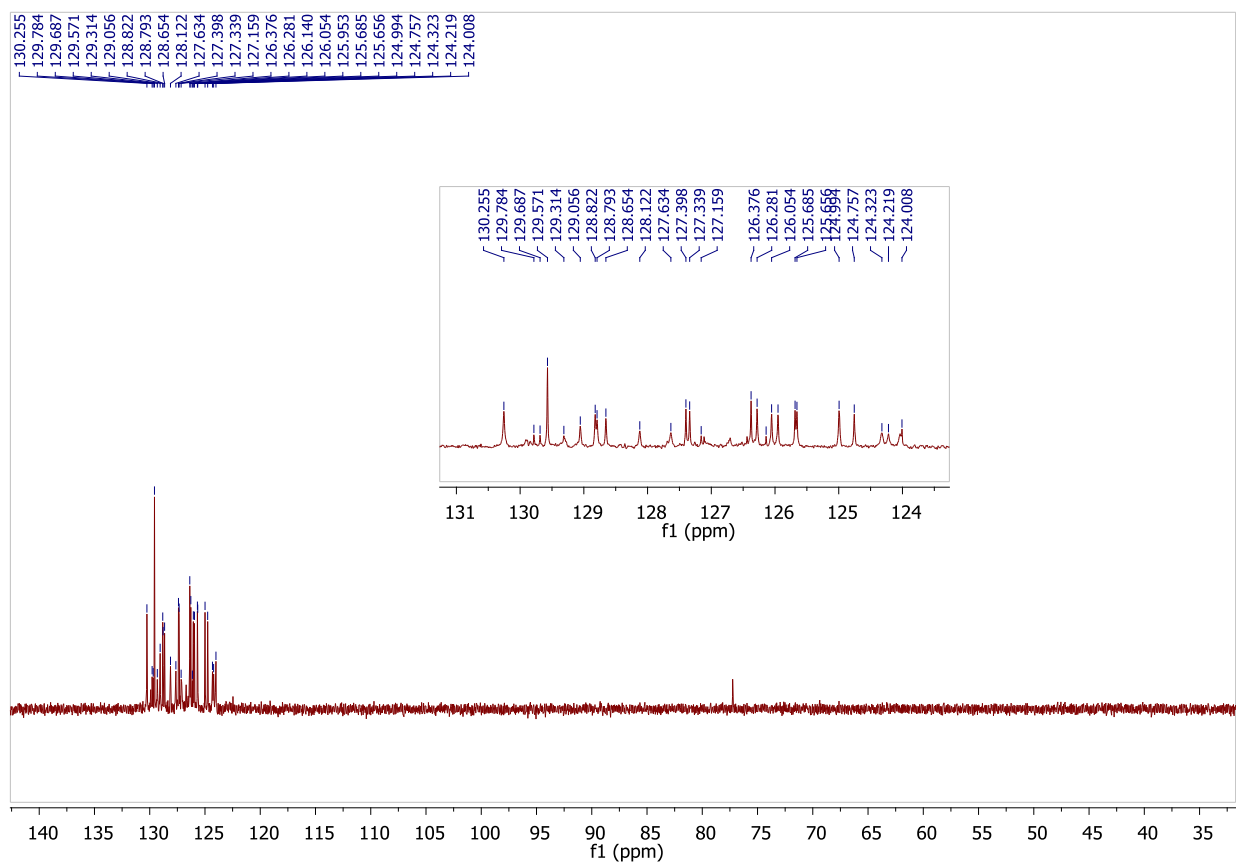
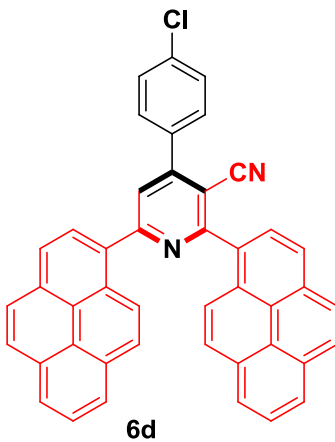
¹H NMR spectrum of 4-(4-chlorophenyl)-2,6-di(pyren-1-yl)nicotinonitrile (6d)



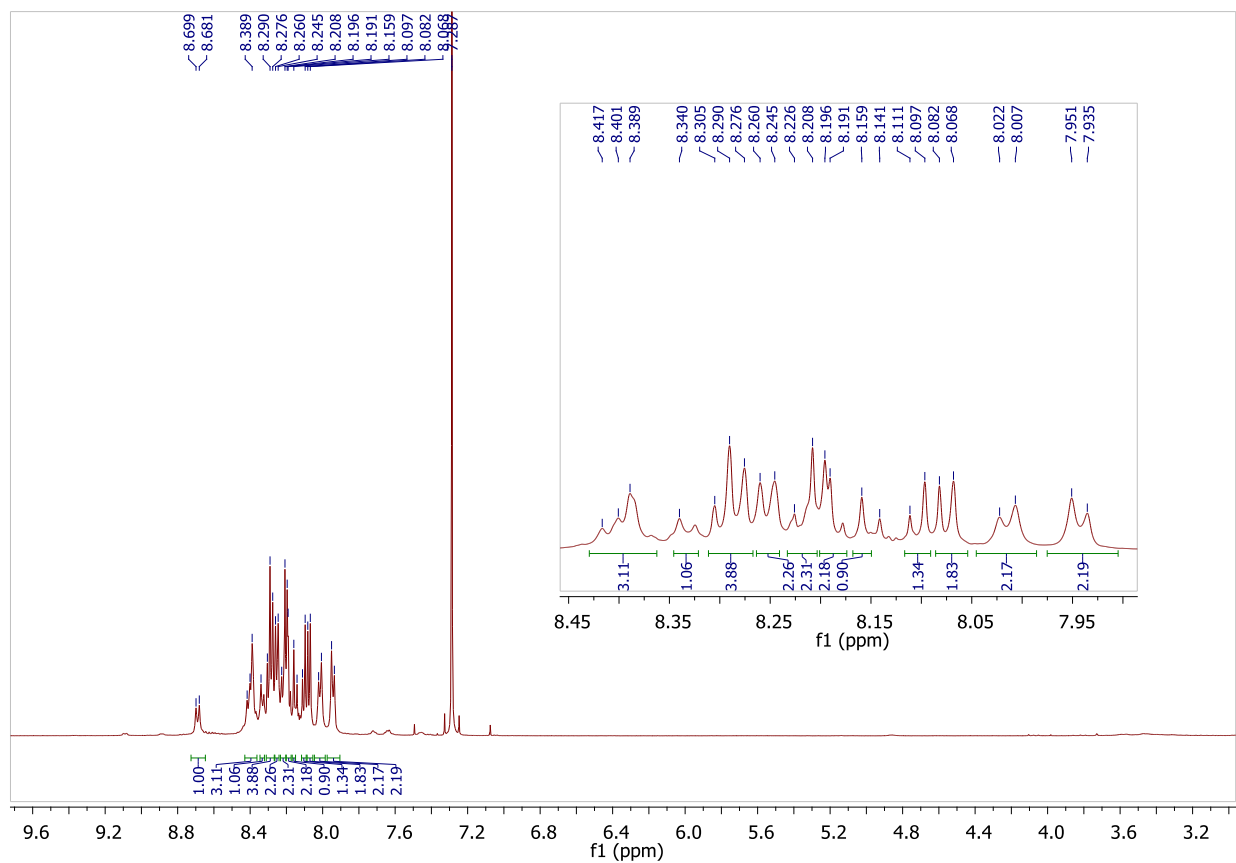
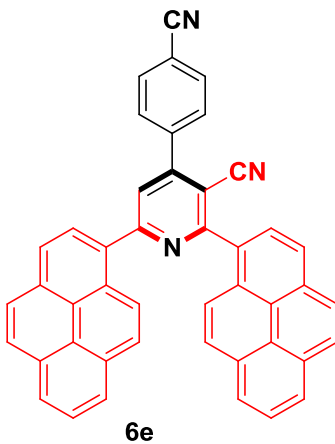
^{13}C NMR spectrum of 4-(4-chlorophenyl)-2,6-di(pyren-1-yl)nicotinonitrile (6d)



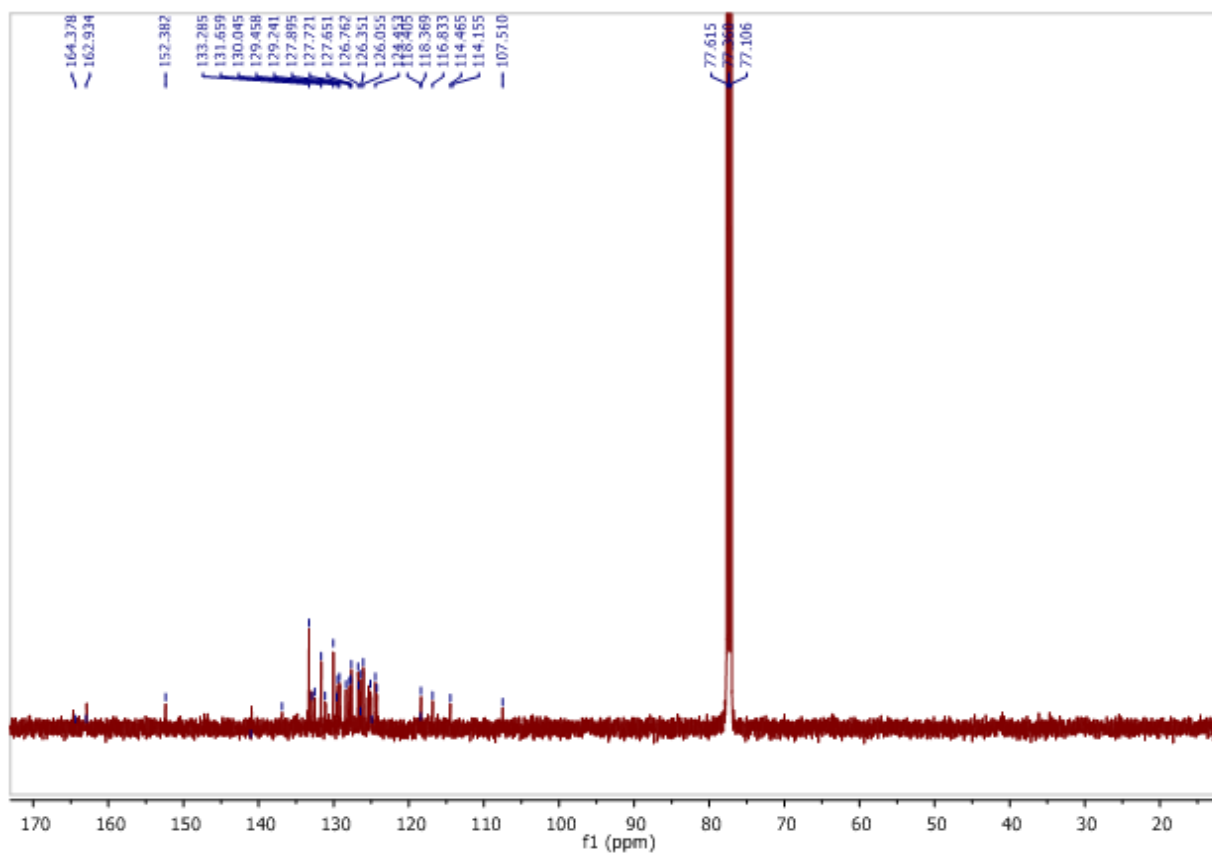
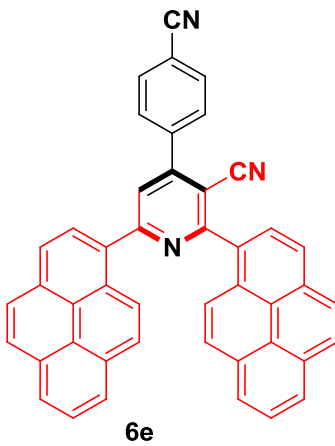
DEPT-135 NMR spectrum of 4-(4-chlorophenyl)-2,6-di(pyren-1-yl)nicotinonitrile (6d)



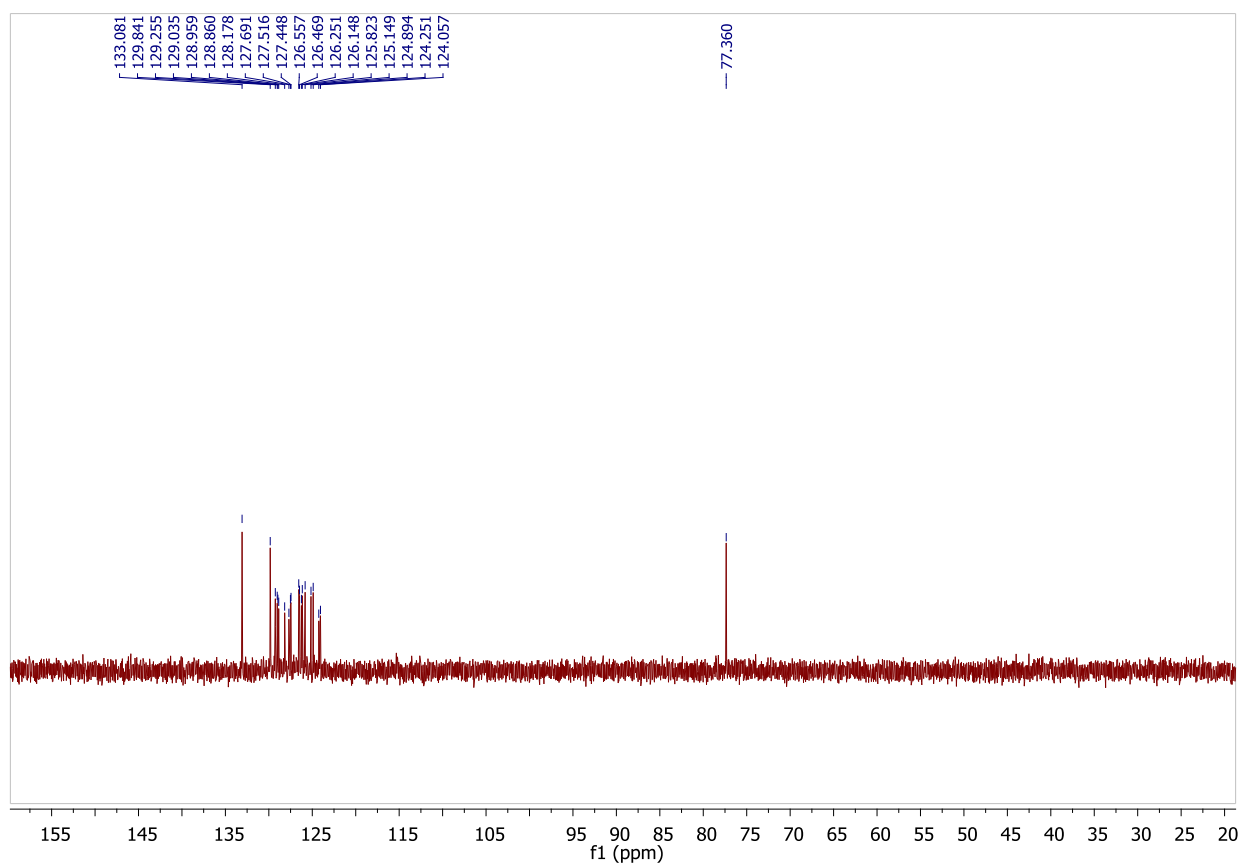
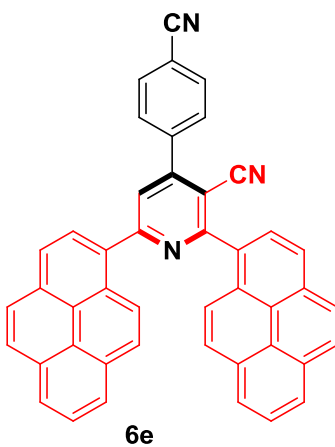
¹H NMR spectrum 4-(4-cyanophenyl)-2,6-di(pyren-1-yl)nicotinonitrile (6e)



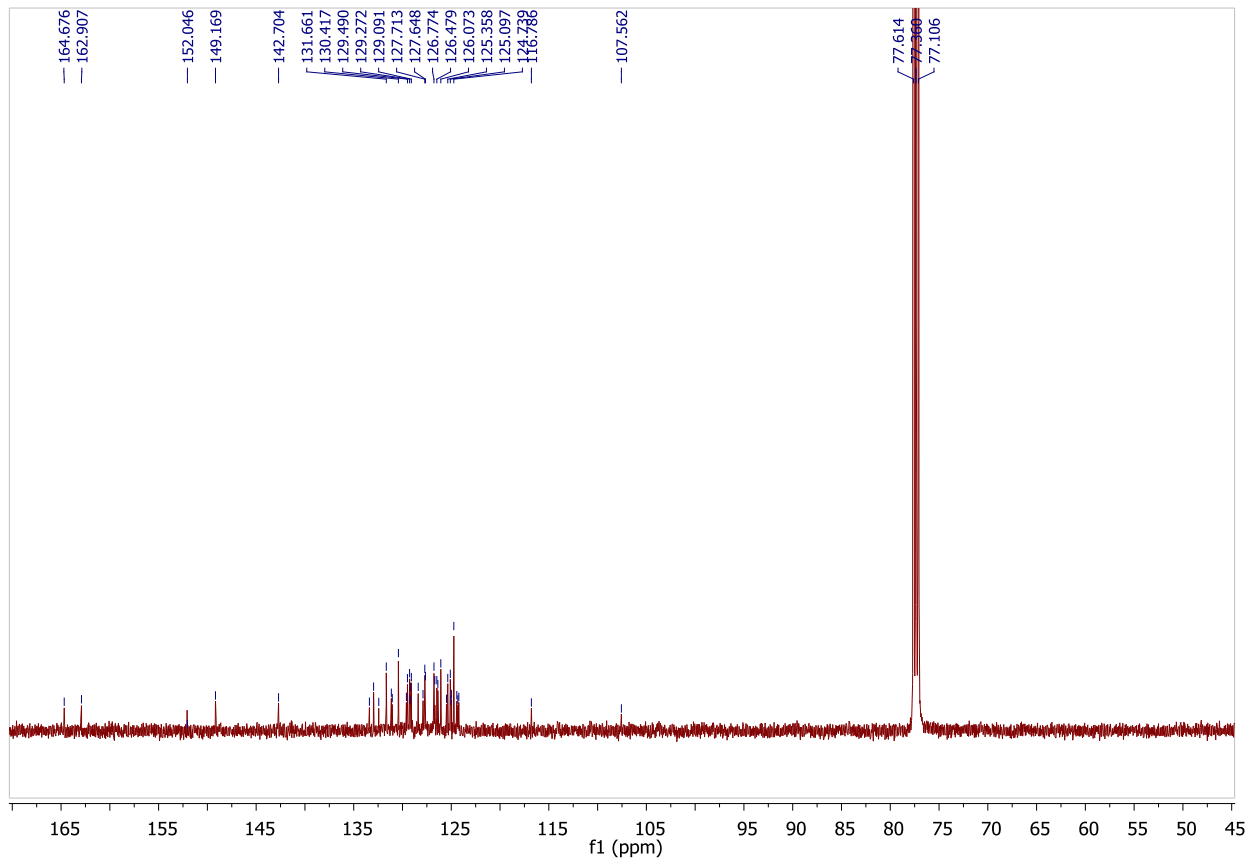
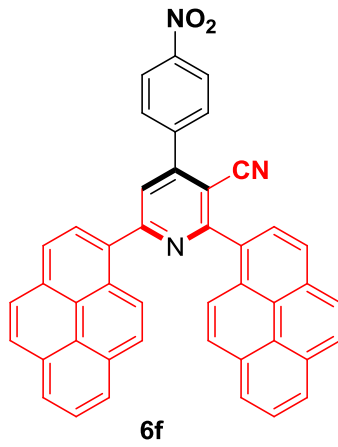
¹³C NMR spectrum 4-(4-cyanophenyl)-2,6-di(pyren-1-yl)nicotinonitrile (6e)



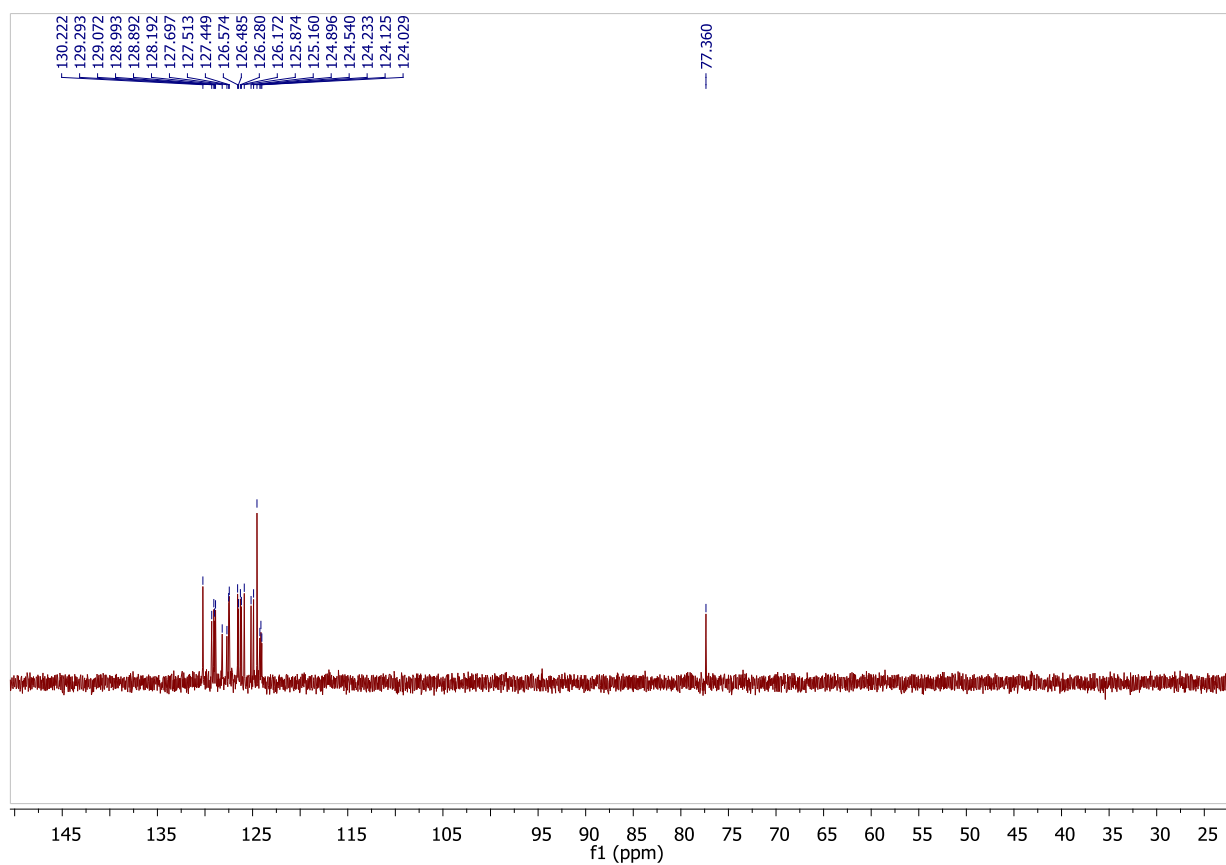
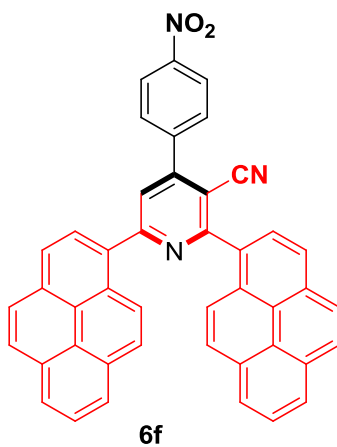
DEPT-135 NMR spectrum 4-(4-cyanophenyl)-2,6-di(pyren-1-yl)nicotinonitrile (6e)



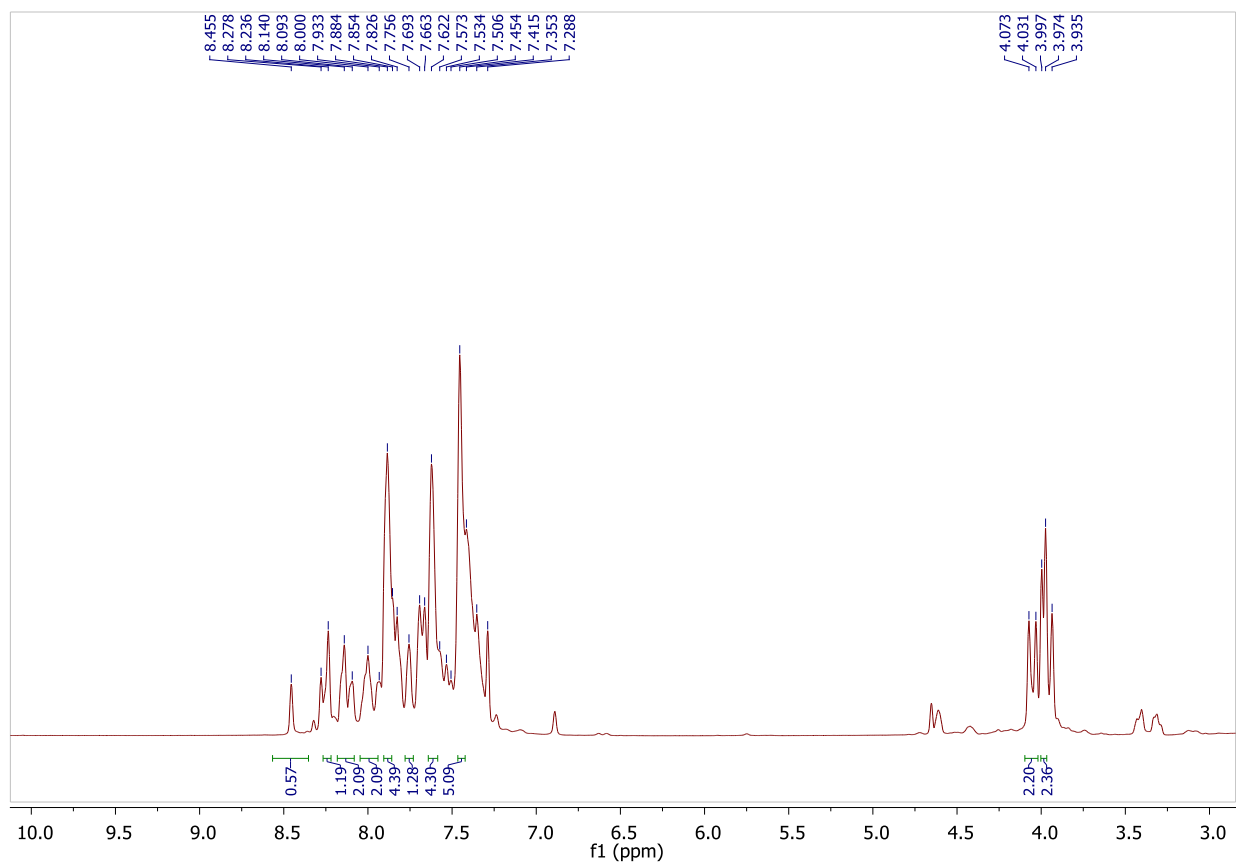
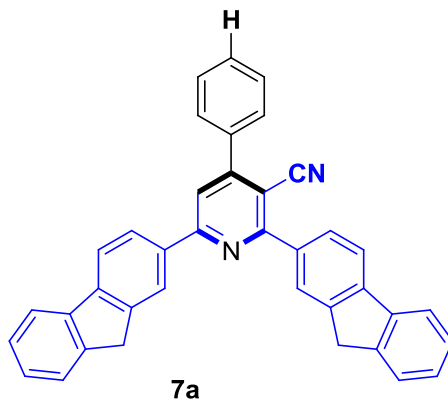
^{13}C NMR spectrum of 4-(4-nitrophenyl)-2,6-di(pyren-1-yl)nicotinonitrile (6f)



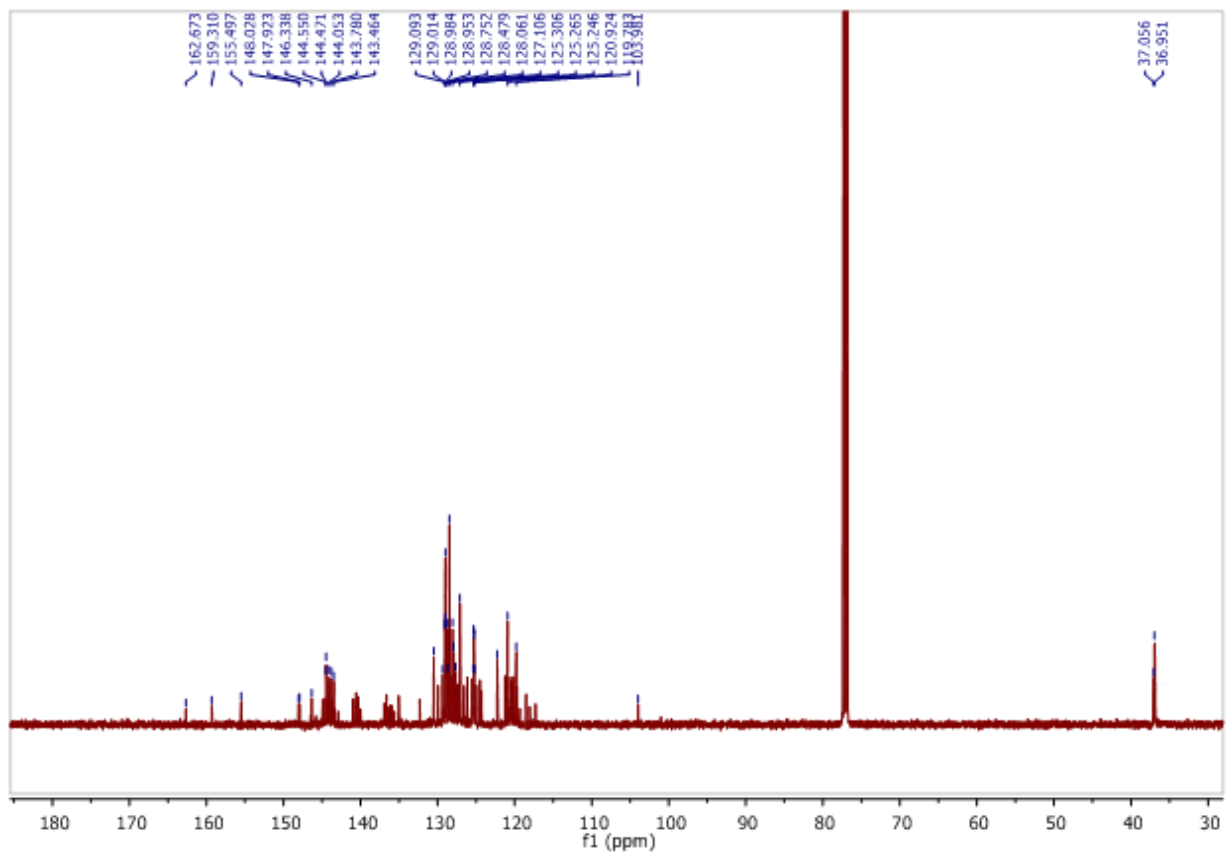
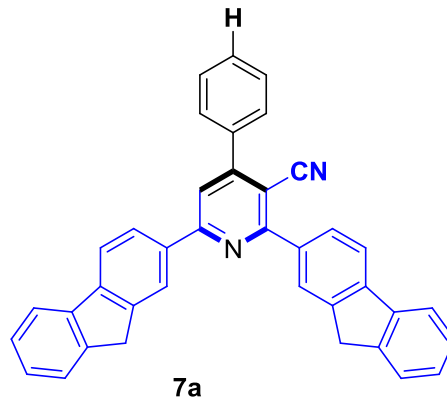
DEPT-135 NMR spectrum of 4-(4-nitrophenyl)-2,6-di(pyren-1-yl)nicotinonitrile (6f)



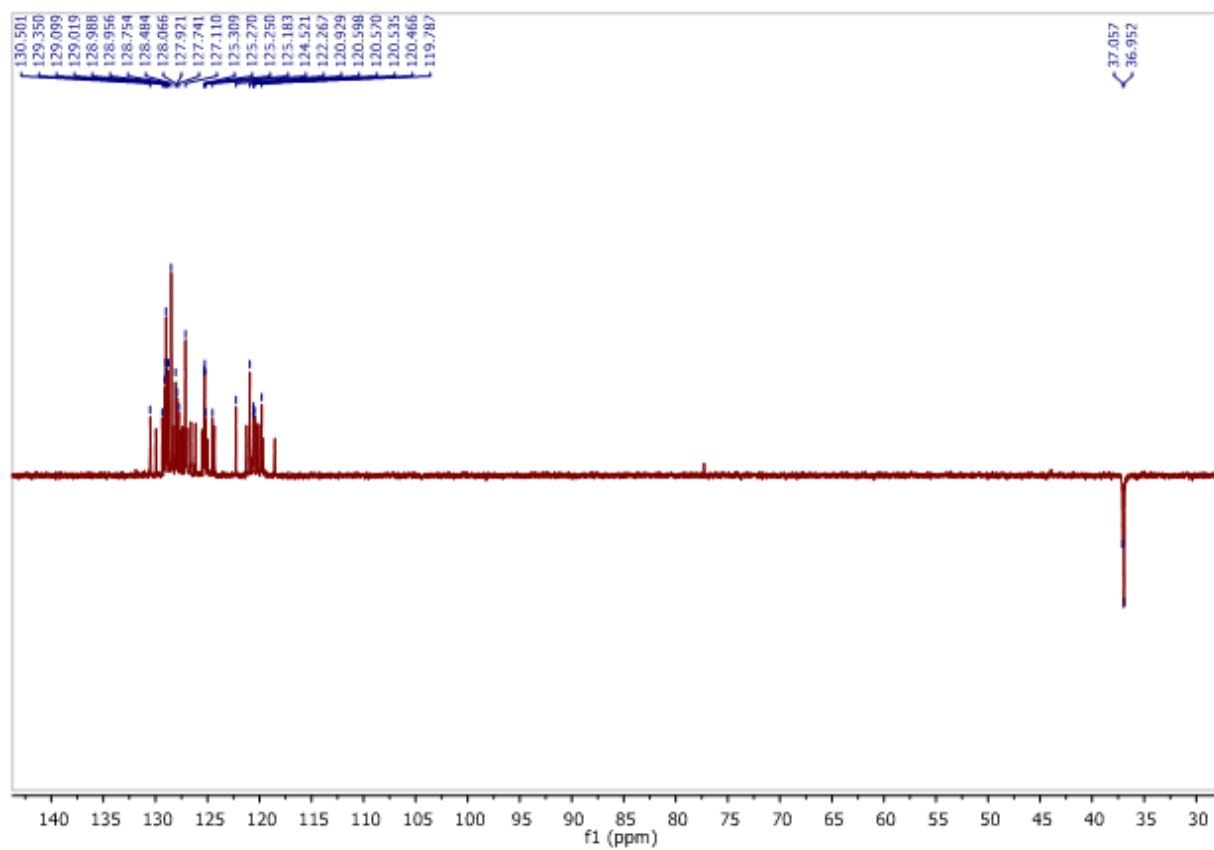
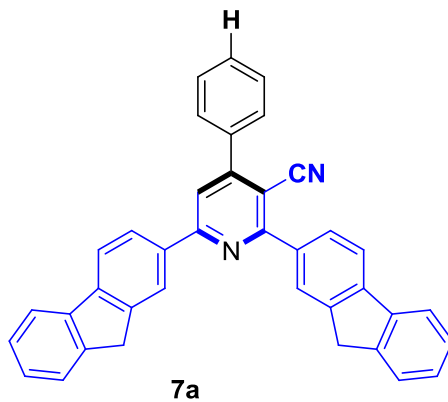
¹H NMR spectrum of 2,6-di(9H-fluoren-2-yl)-4-phenylnicotinonitrile (7a)



¹³C NMR spectrum of 2,6-di(9*H*-fluoren-2-yl)-4-phenylnicotinonitrile (7a)

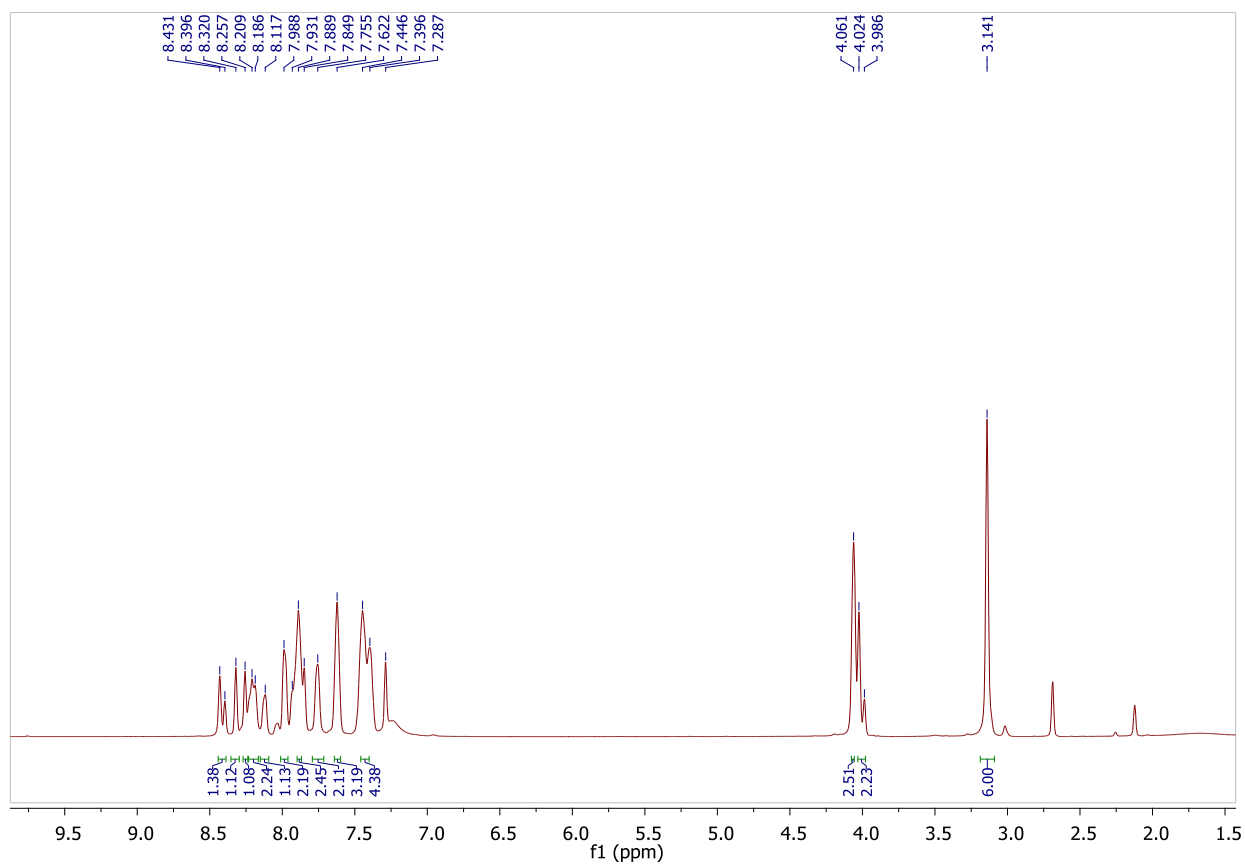
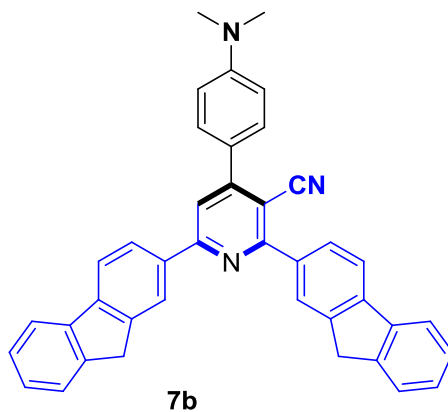


DEPT-135 NMR spectrum of 2,6-di(9*H*-fluoren-2-yl)-4-phenylnicotinonitrile (**7a**)



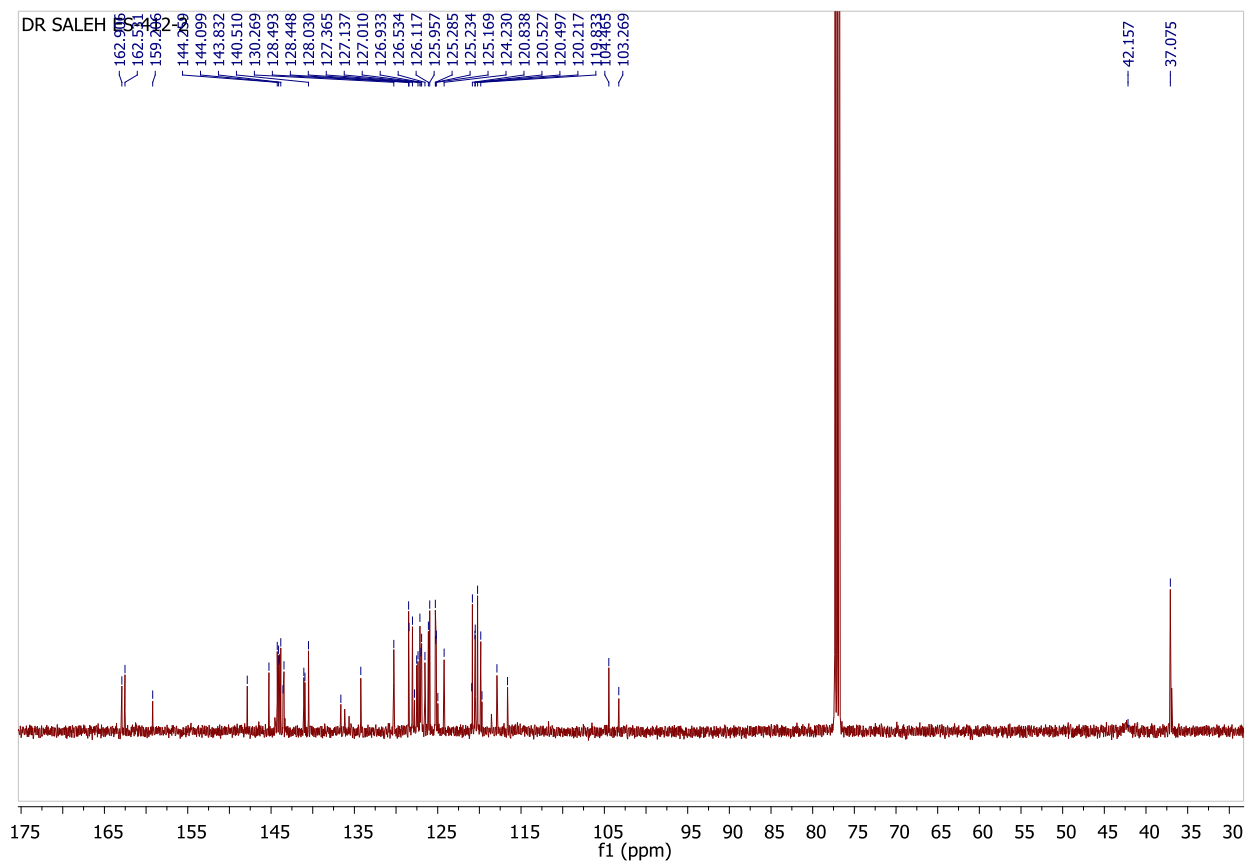
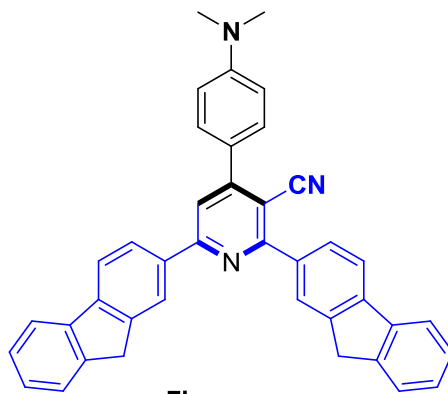
¹H NMR spectrum of 4-(4-(dimethylamino)phenyl)-2,6-di(9H-fluoren-2-yl)nicotinonitrile

(7b)

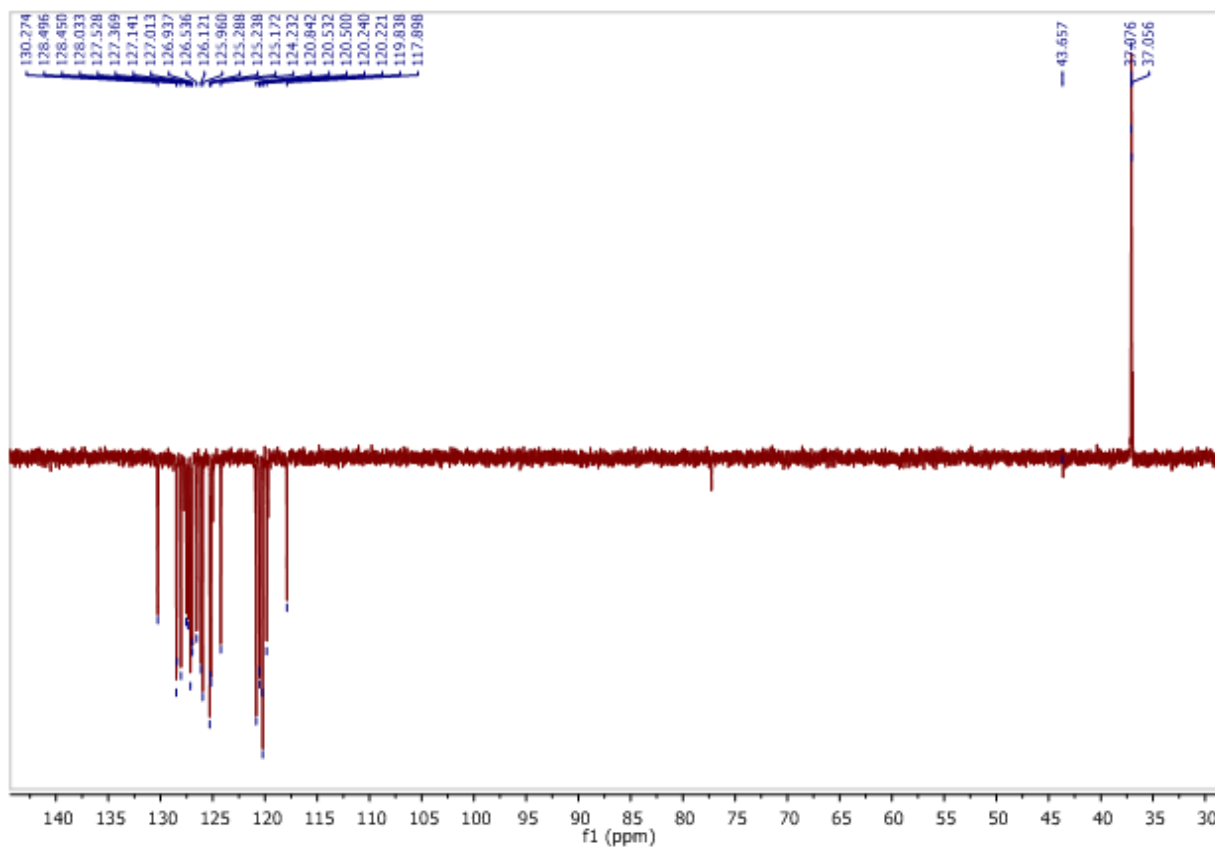
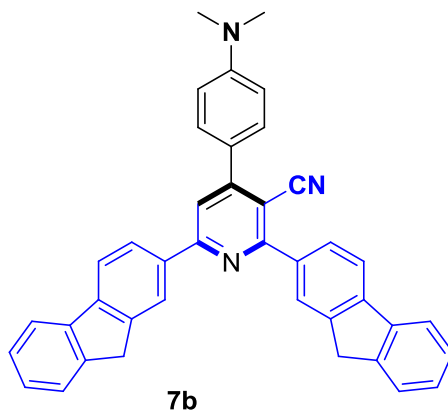


¹³C NMR spectrum of 4-(4-(dimethylamino)phenyl)-2,6-di(9H-fluoren-2-yl)nicotinonitrile

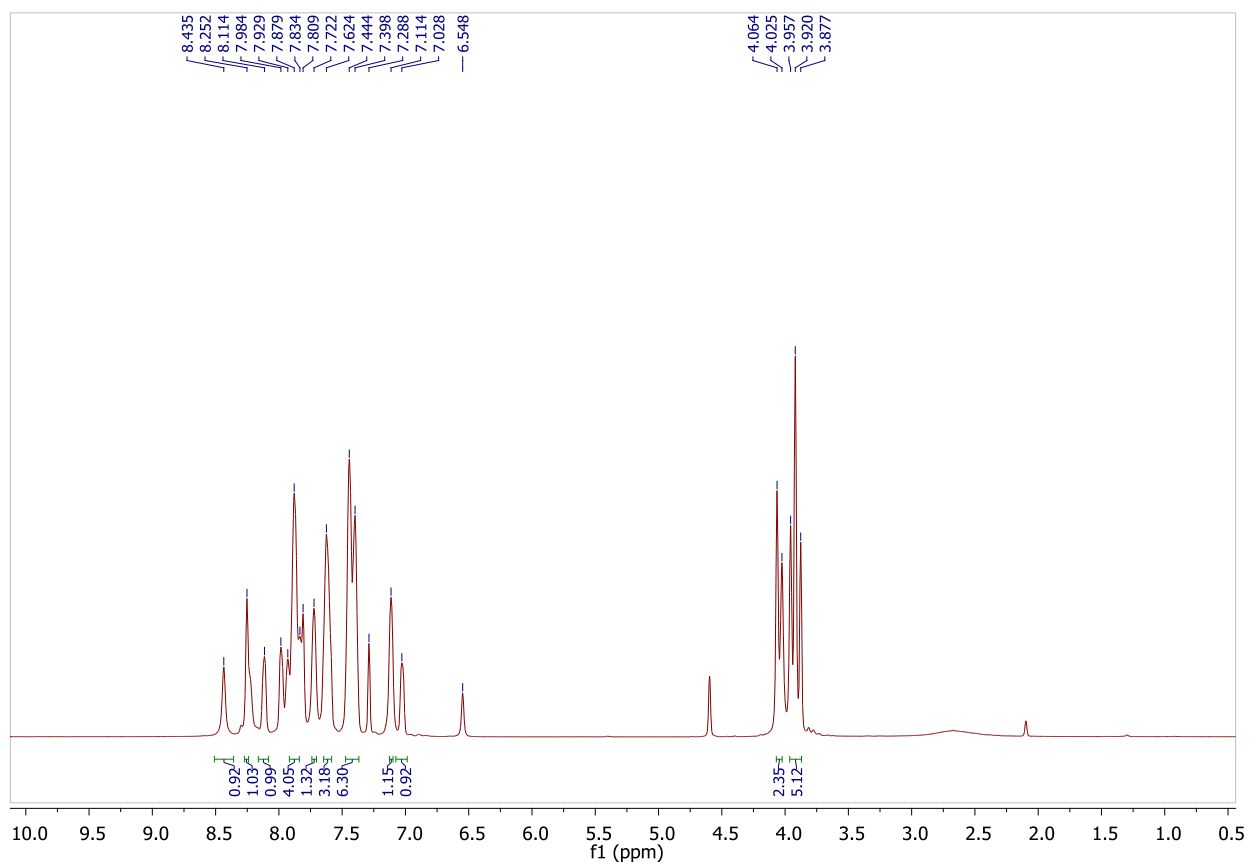
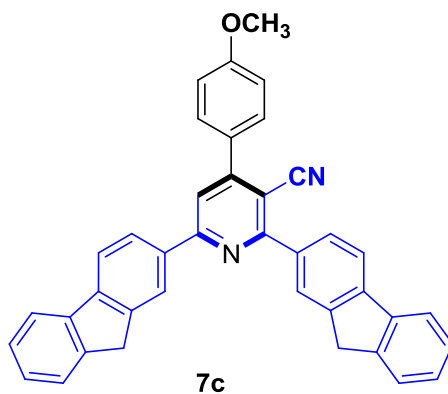
(7b)



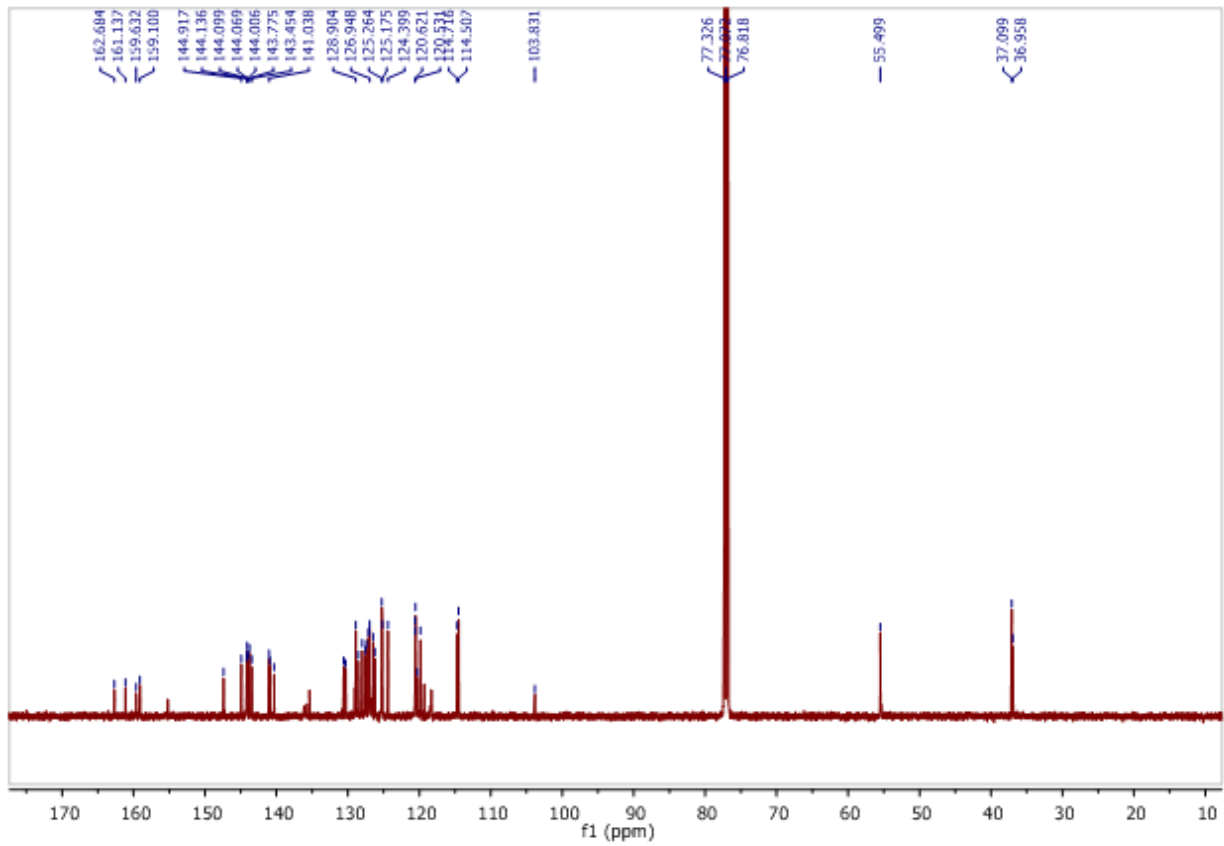
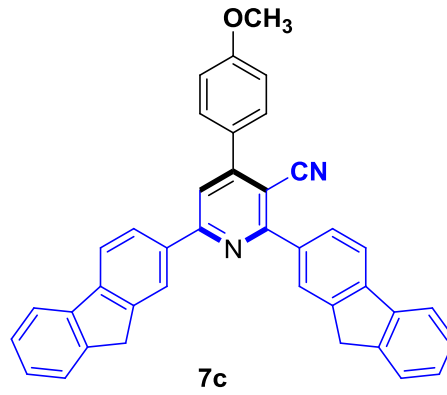
DEPT-135 NMR spectrum of 4-(4-(dimethylamino)phenyl)-2,6-di(9H-fluoren-2-yl)nicotinonitrile (7b)



¹H NMR spectrum of 2,6-di(9H-fluoren-2-yl)-4-(4-methoxyphenyl)nicotinonitrile (7c)

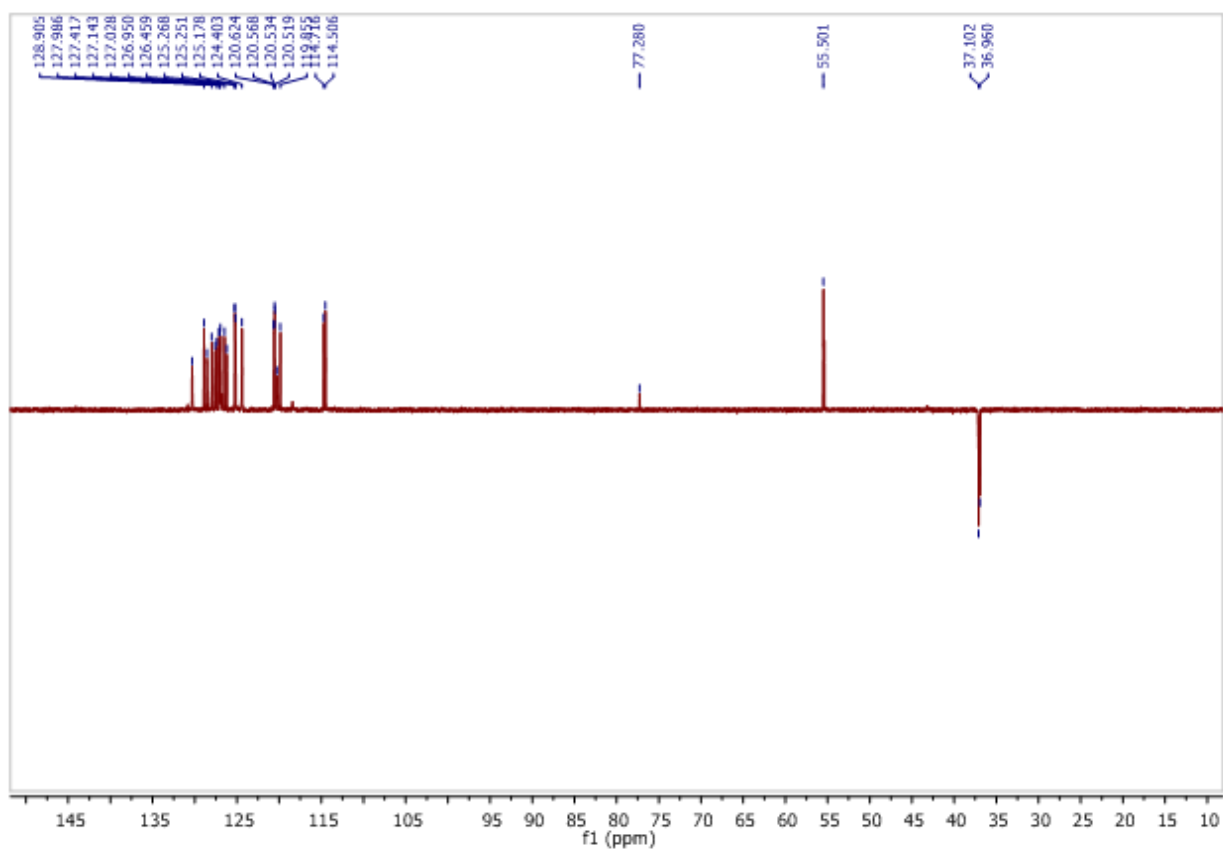
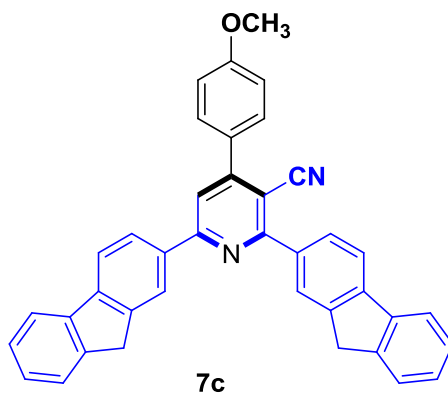


¹³C NMR spectrum of 2,6-di(9H-fluoren-2-yl)-4-(4-methoxyphenyl)nicotinonitrile (7c)

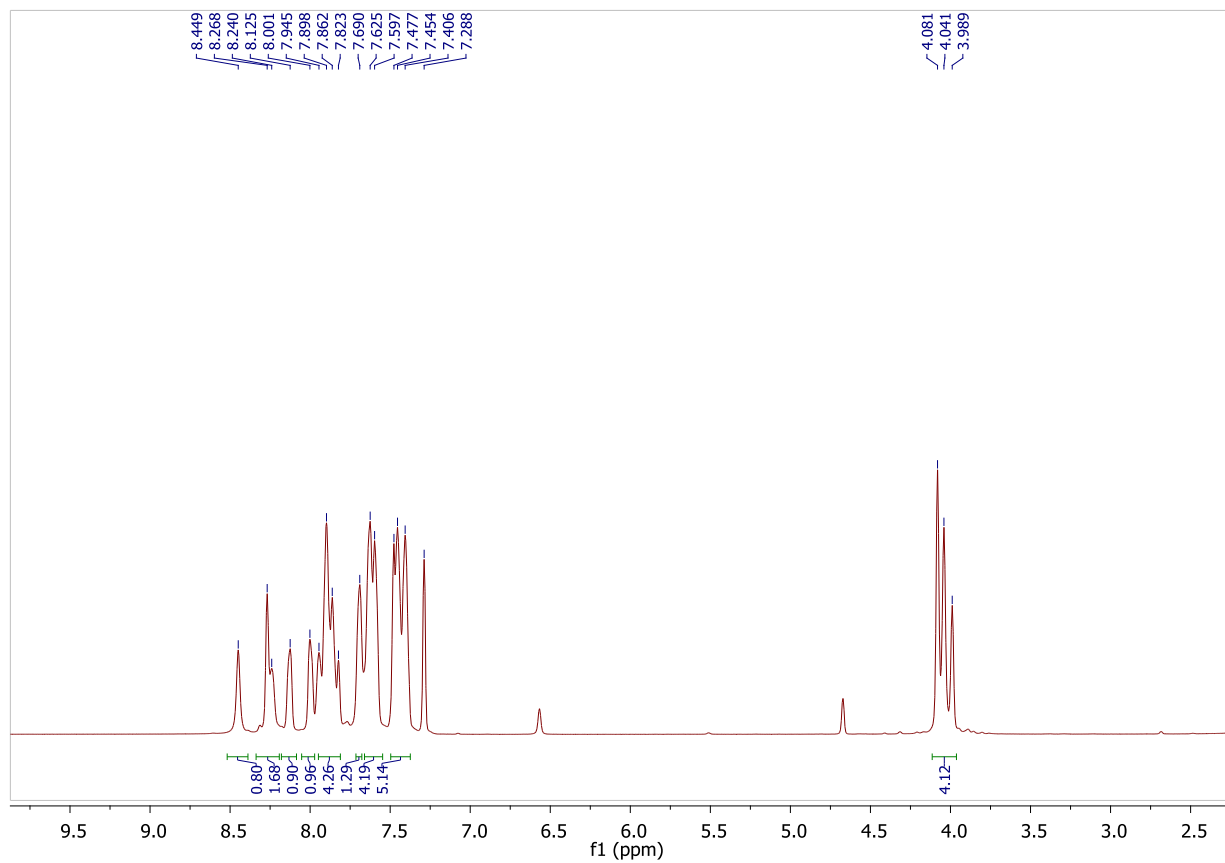
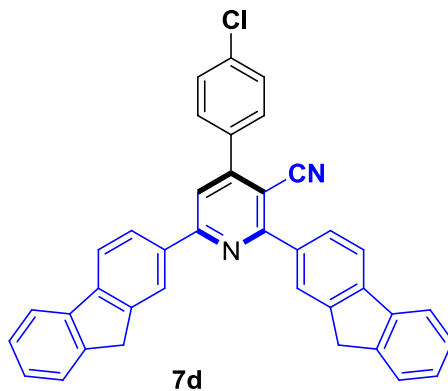


DEPT-135 NMR spectrum of 2,6-di(9H-fluoren-2-yl)-4-(4-methoxyphenyl)nicotinonitrile

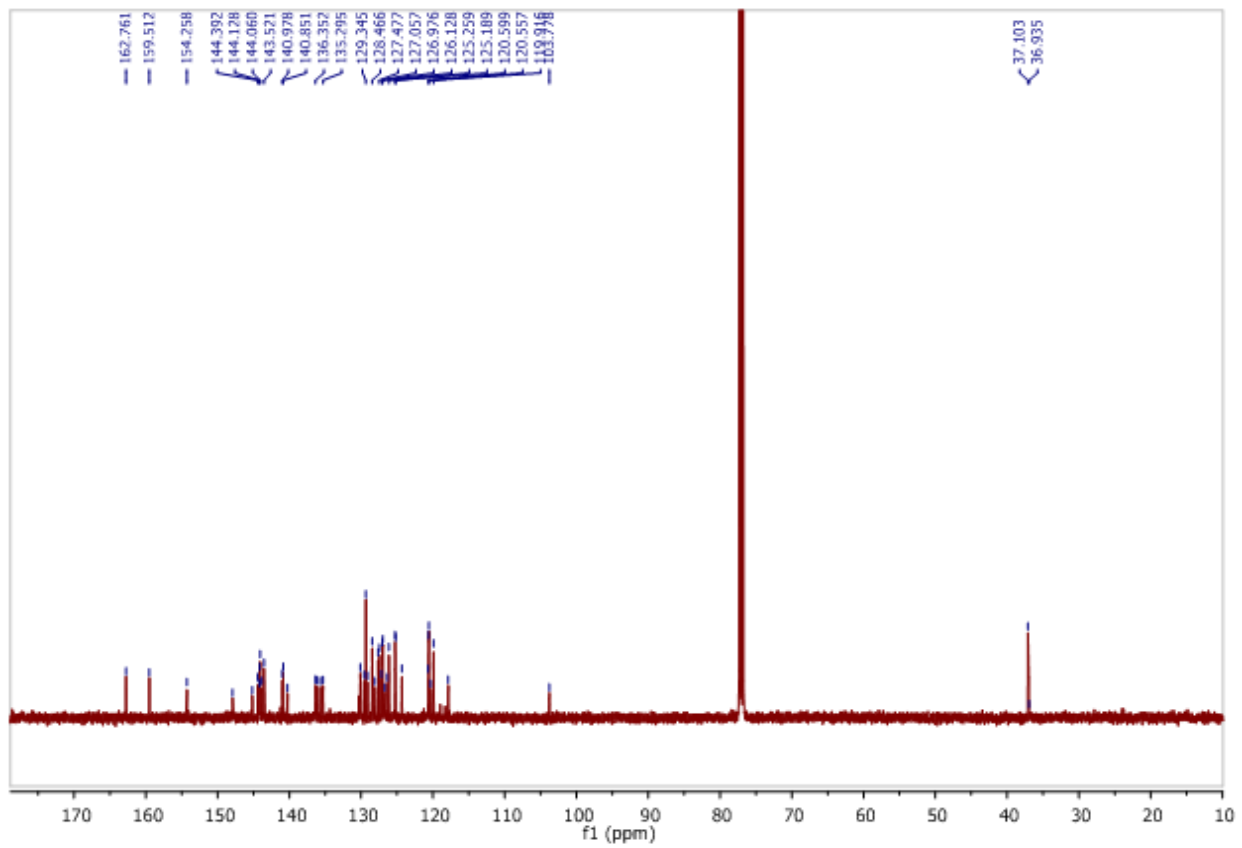
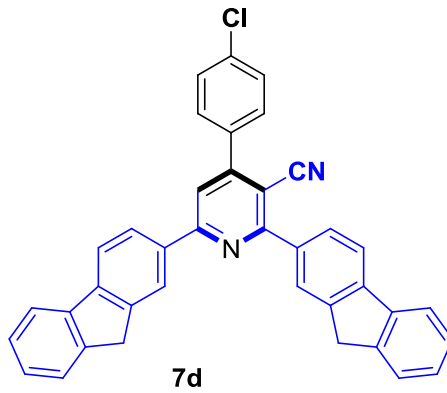
(7c)



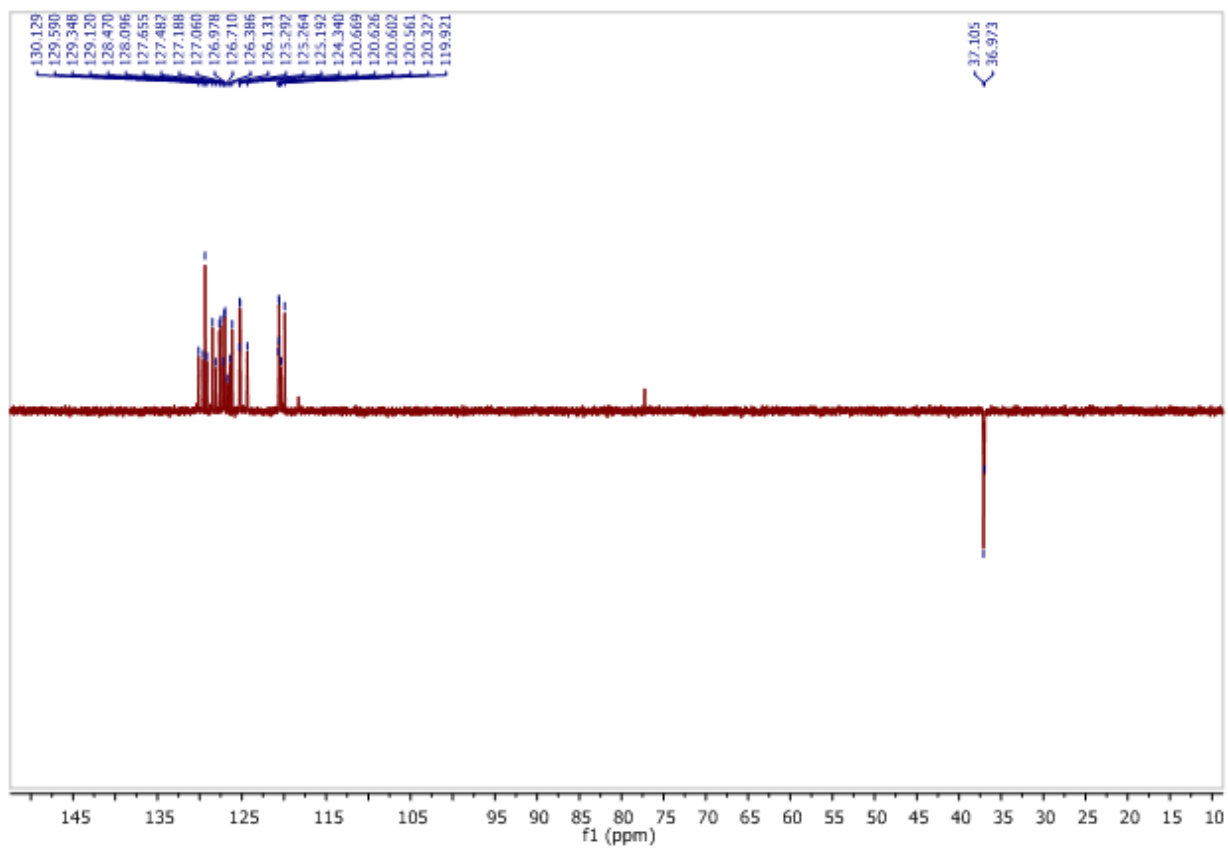
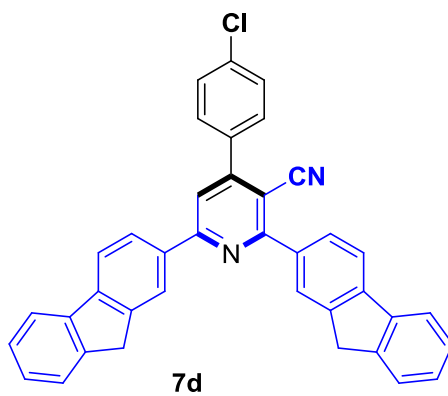
¹H NMR spectrum 4-(4-chlorophenyl)-2,6-di(9H-fluoren-2-yl)nicotinonitrile (7d)



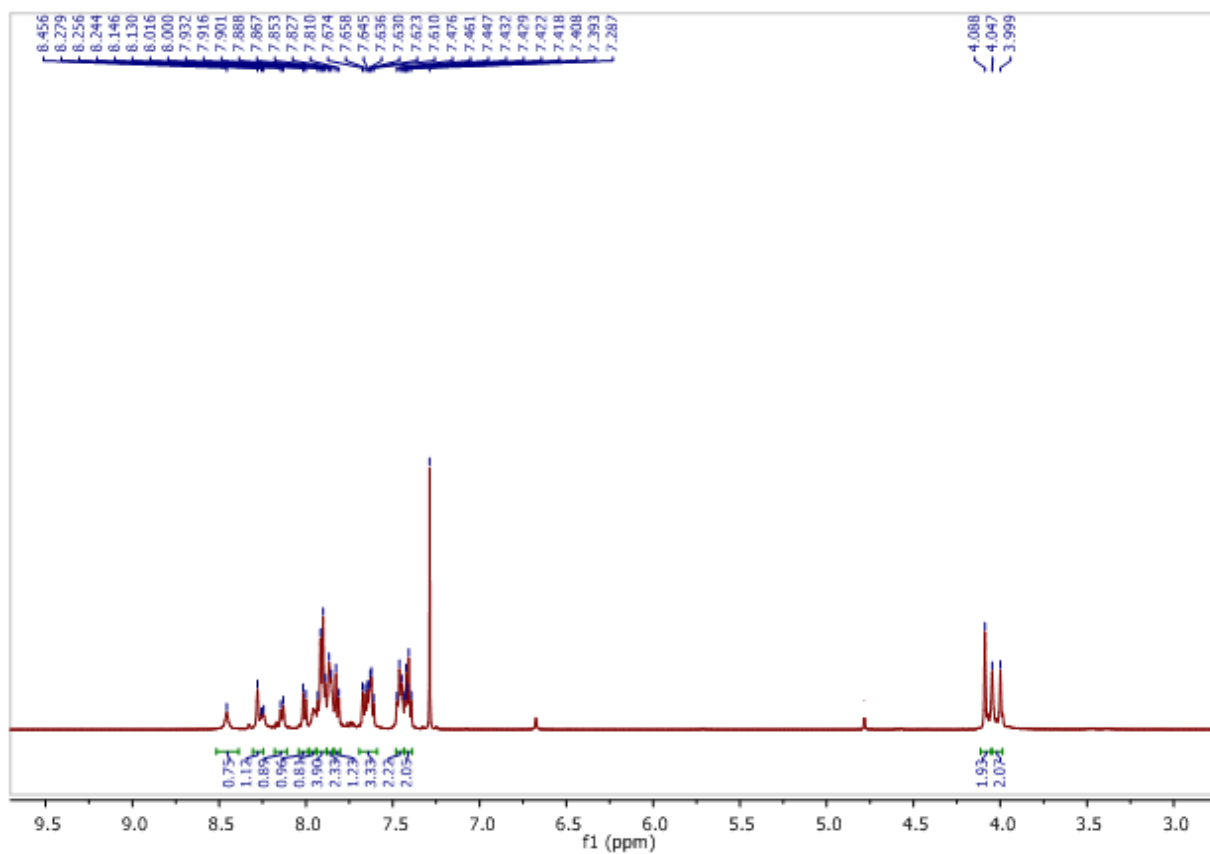
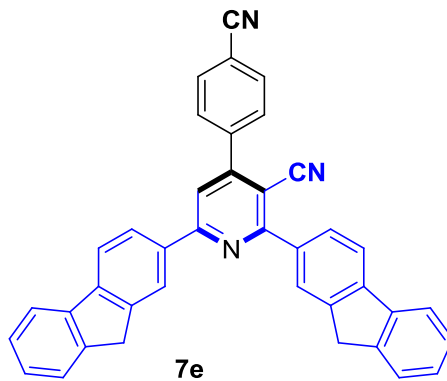
¹³C NMR spectrum 4-(4-chlorophenyl)-2,6-di(9H-fluoren-2-yl)nicotinonitrile (7d)



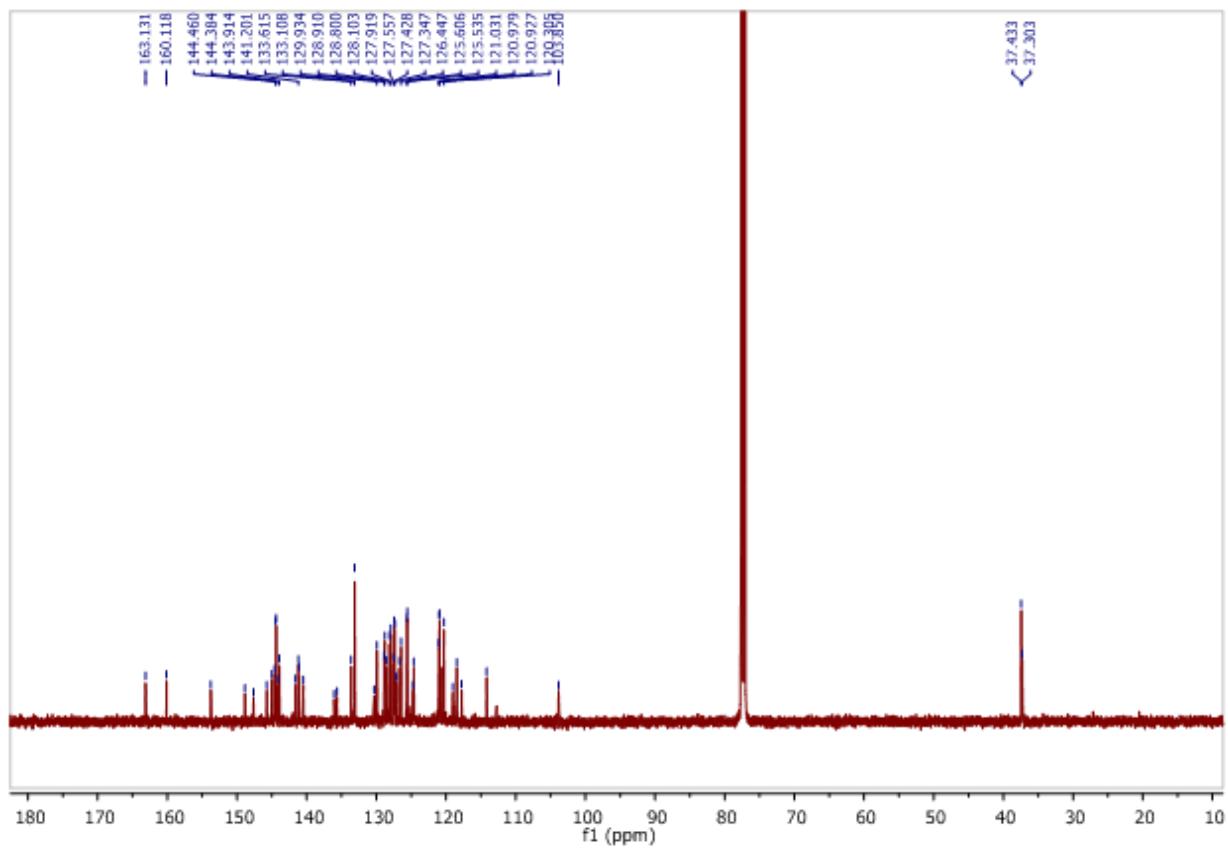
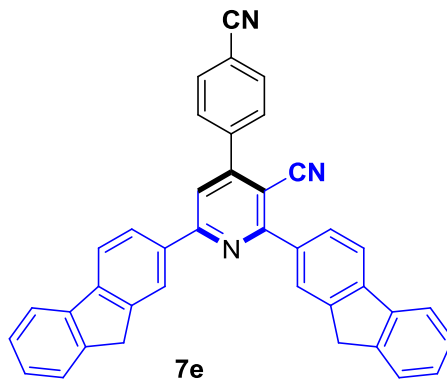
DEPT-135 NMR spectrum 4-(4-chlorophenyl)-2,6-di(9H-fluoren-2-yl)nicotinonitrile (7d)



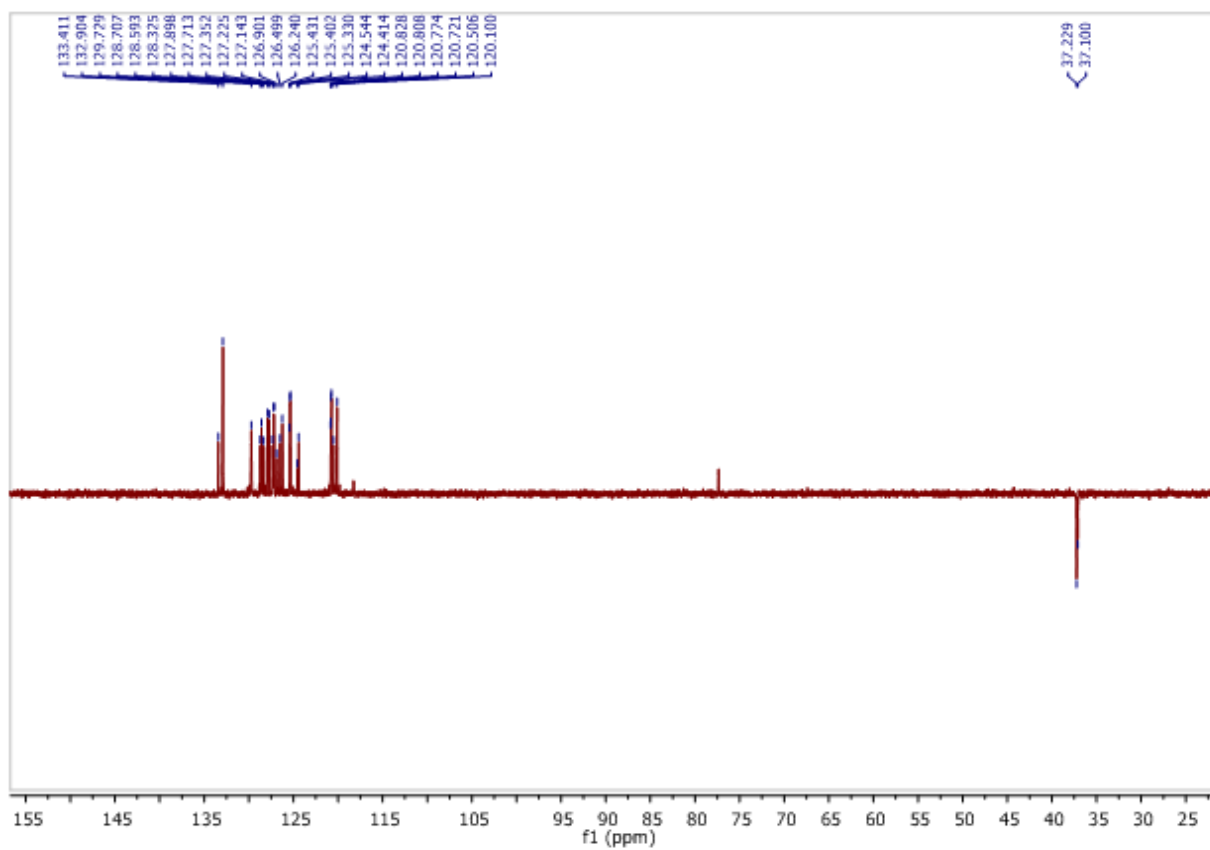
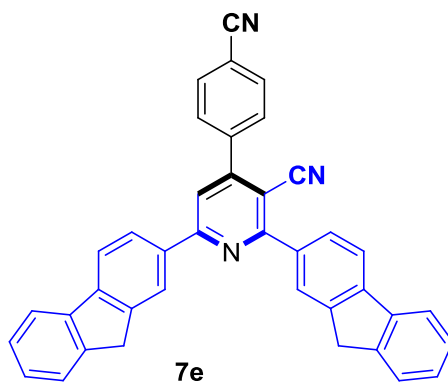
¹H NMR spectrum of 4-(4-cyanophenyl)-2,6-di(9H-fluoren-2-yl)nicotinonitrile (7e)



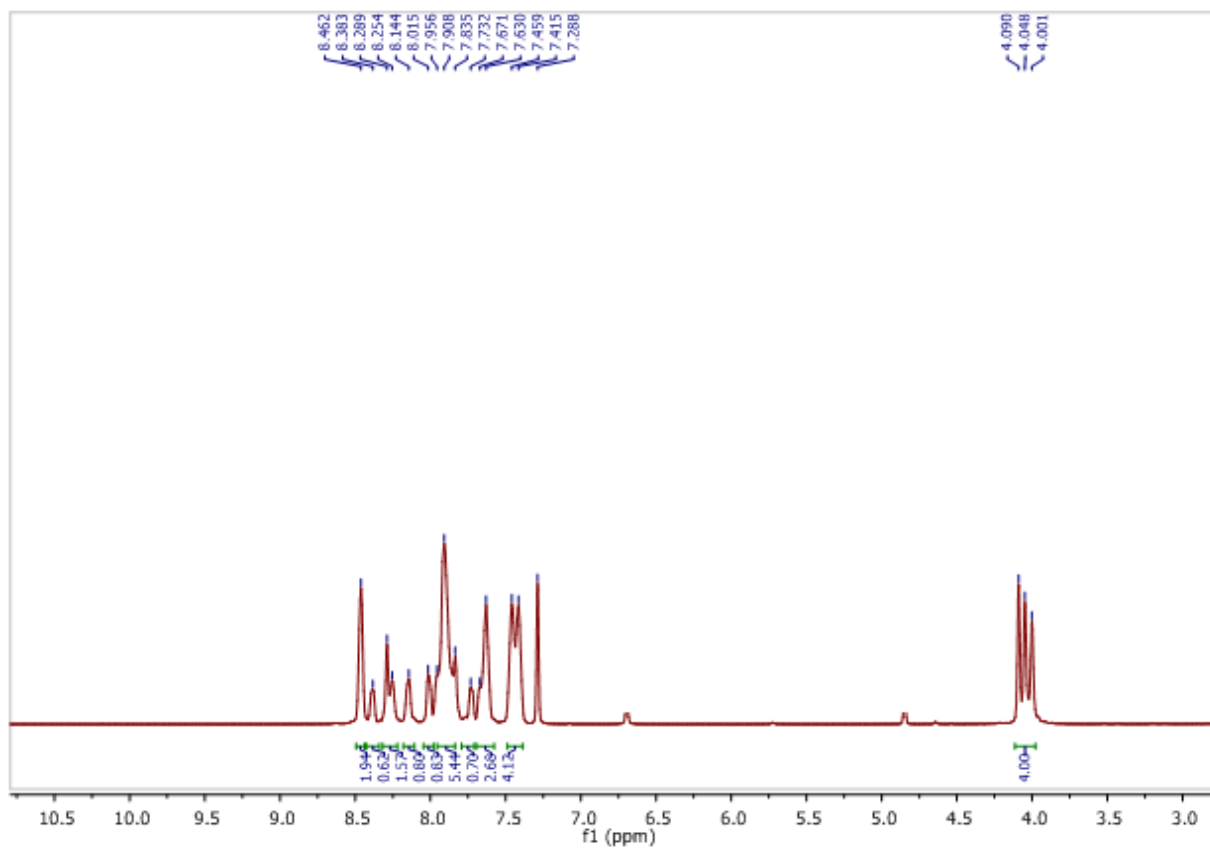
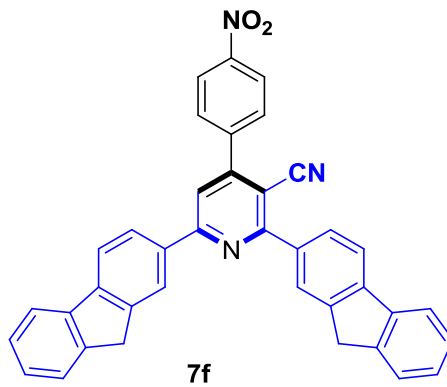
¹³C NMR spectrum of 4-(4-cyanophenyl)-2,6-di(9H-fluoren-2-yl)nicotinonitrile (7e)



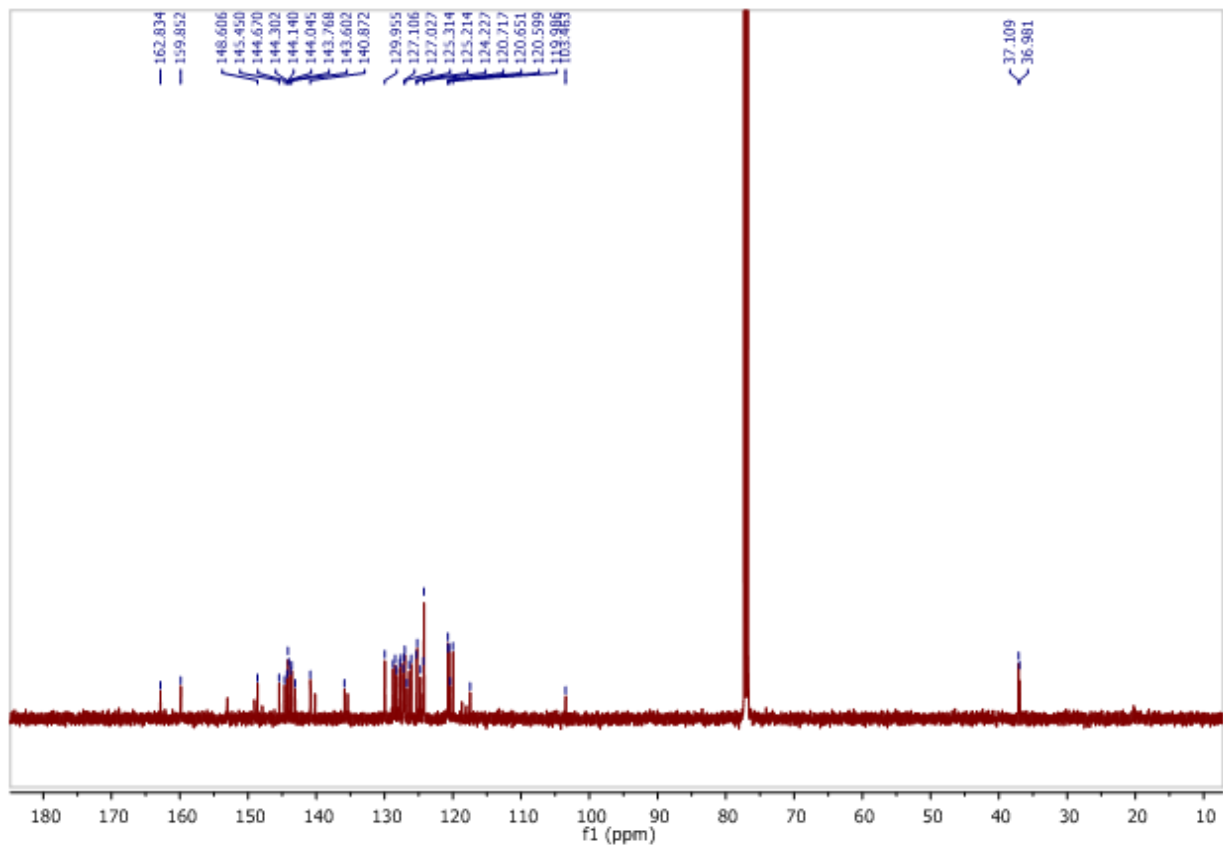
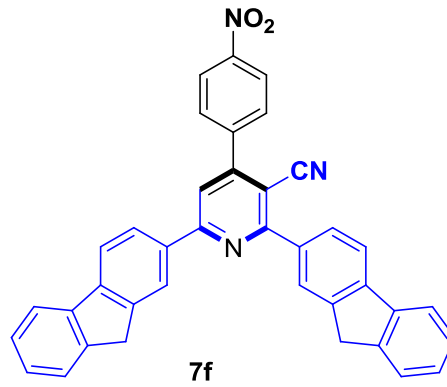
DEPT-135 NMR spectrum of 4-(4-cyanophenyl)-2,6-di(9H-fluoren-2-yl)nicotinonitrile (7e)



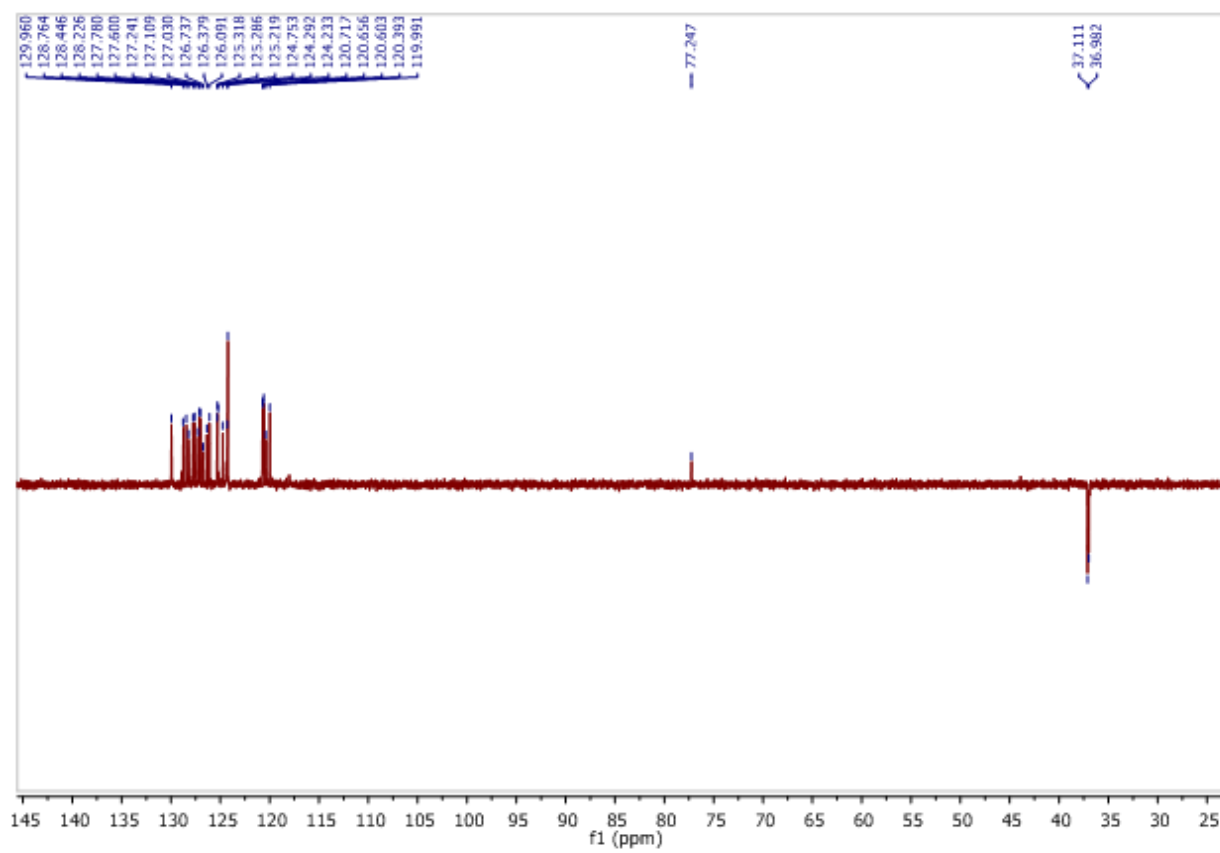
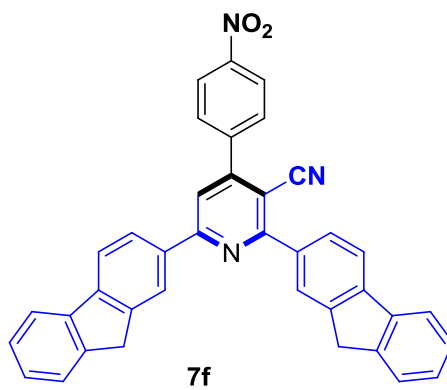
¹H NMR spectrum of 2,6-di(9H-fluoren-2-yl)-4-(4-nitrophenyl)nicotinonitrile (7f)



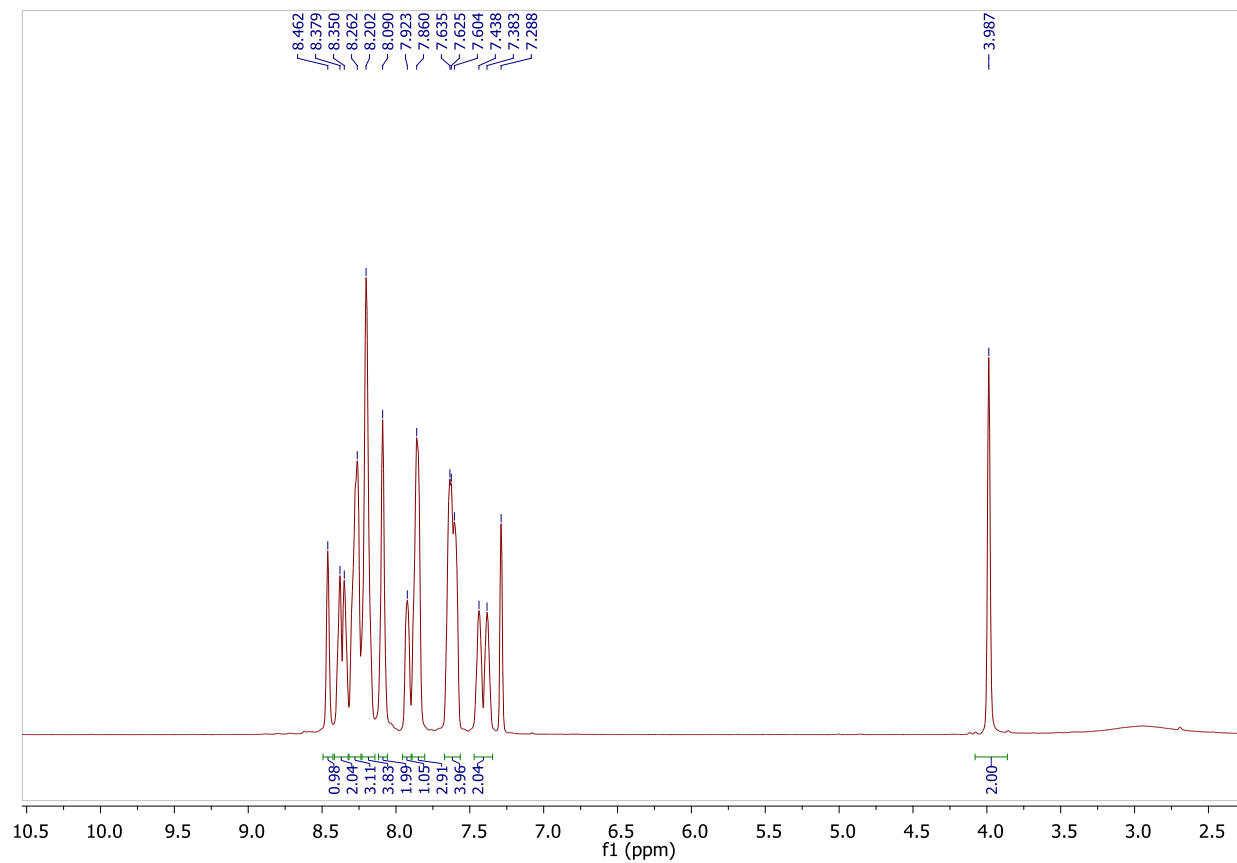
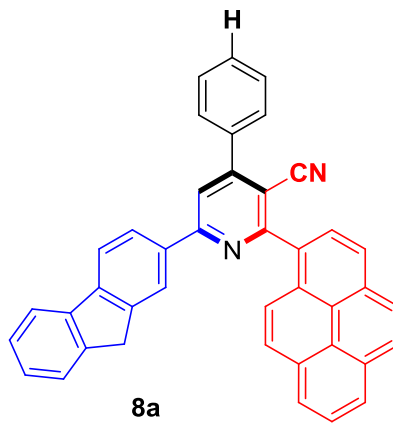
¹³C NMR spectrum of 2,6-di(9H-fluoren-2-yl)-4-(4-nitrophenyl)nicotinonitrile (7f)



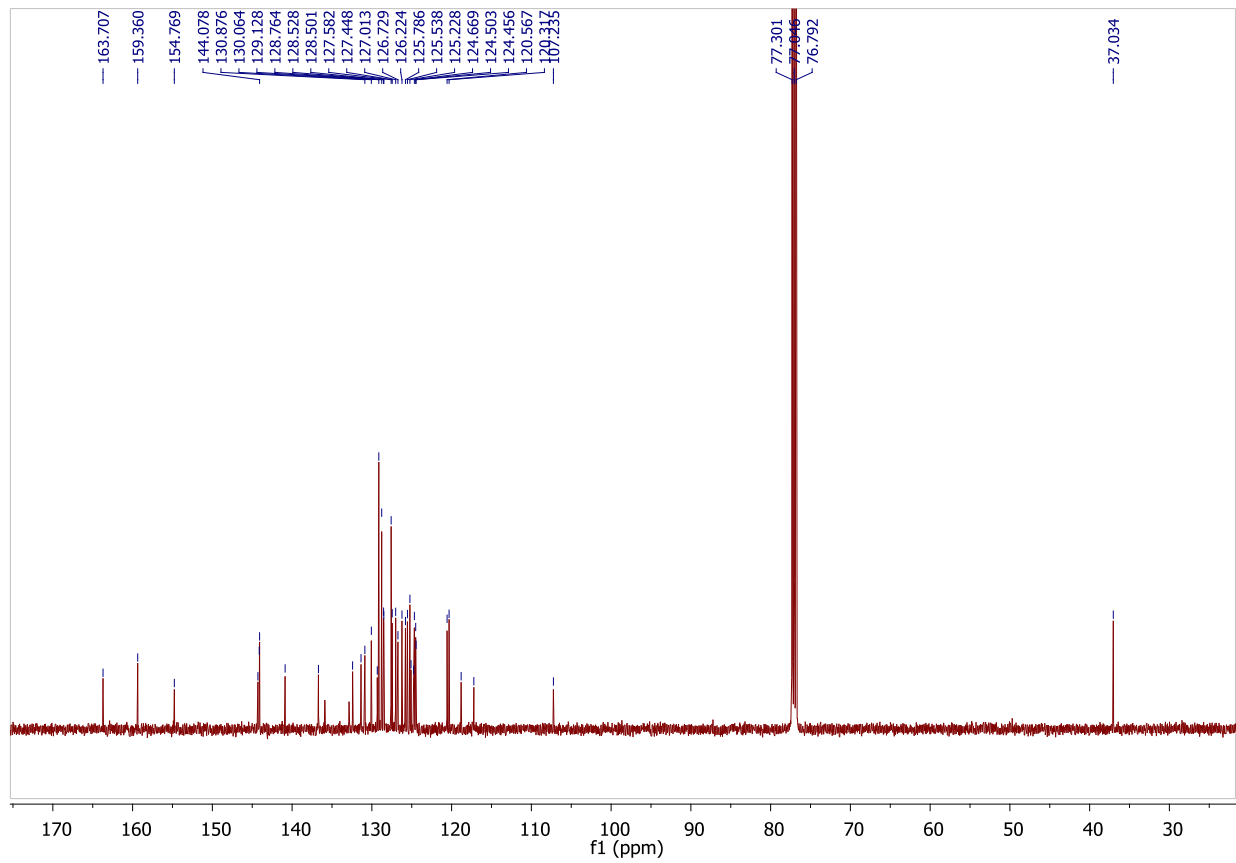
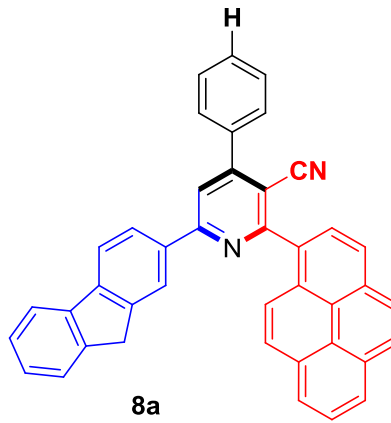
DEPT-135 NMR spectrum of 2,6-di(9H-fluoren-2-yl)-4-(4-nitrophenyl)nicotinonitrile (7f)



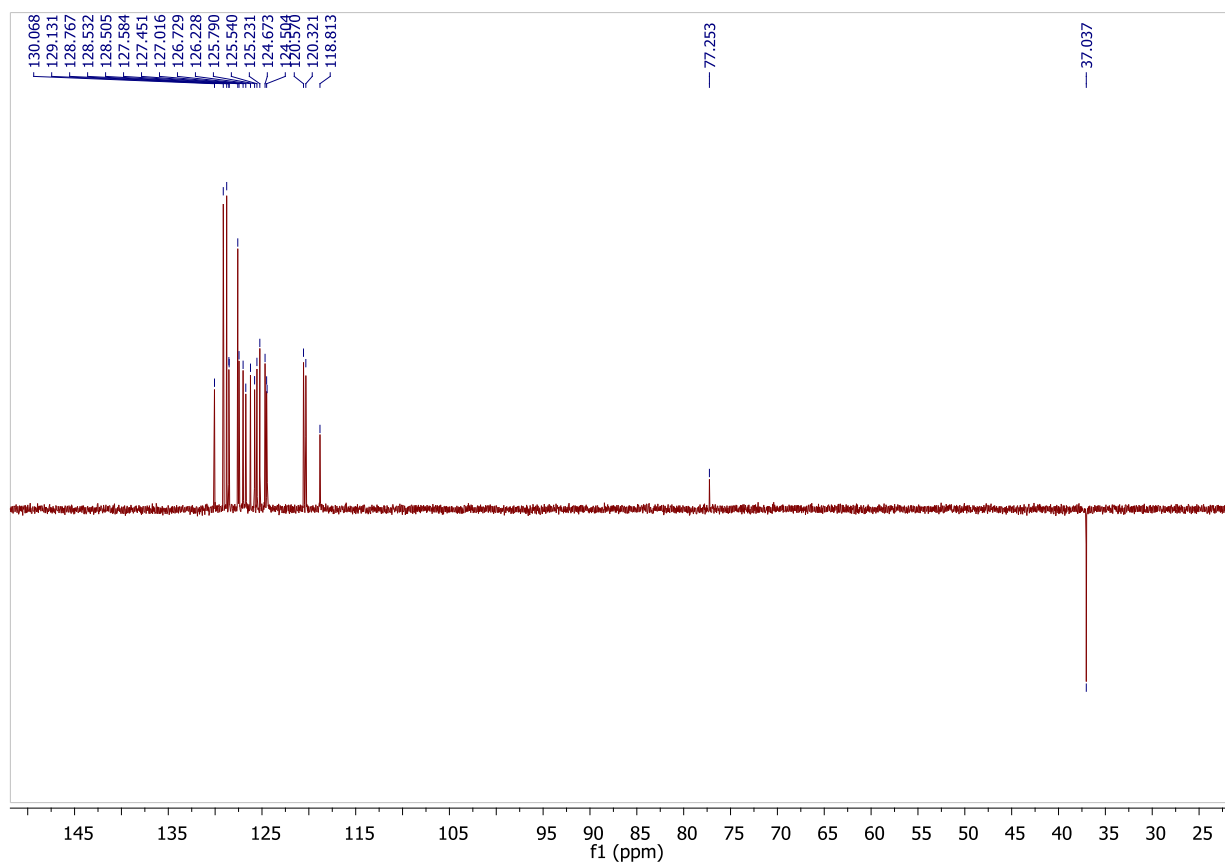
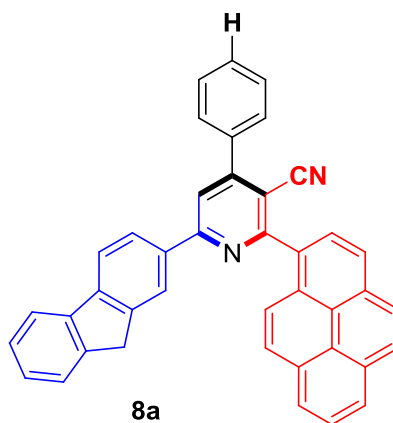
¹H NMR spectrum of 6-(9H-fluoren-2-yl)-4-phenyl-2-(pyren-1-yl)nicotinonitrile (8a)



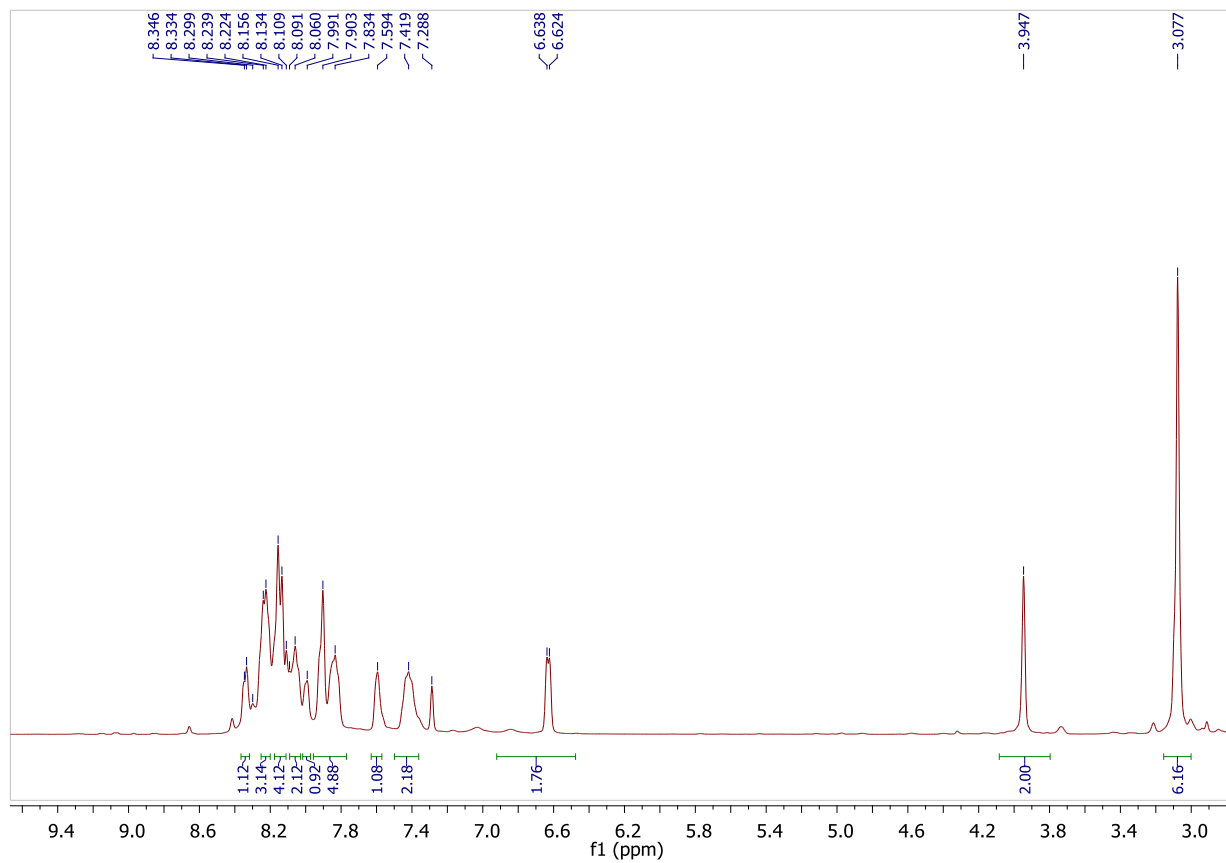
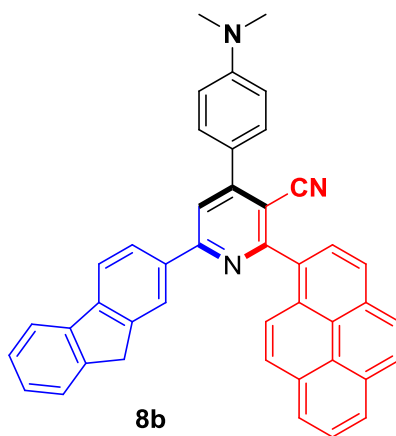
¹³C NMR spectrum of 6-(9H-fluoren-2-yl)-4-phenyl-2-(pyren-1-yl)nicotinonitrile (8a)



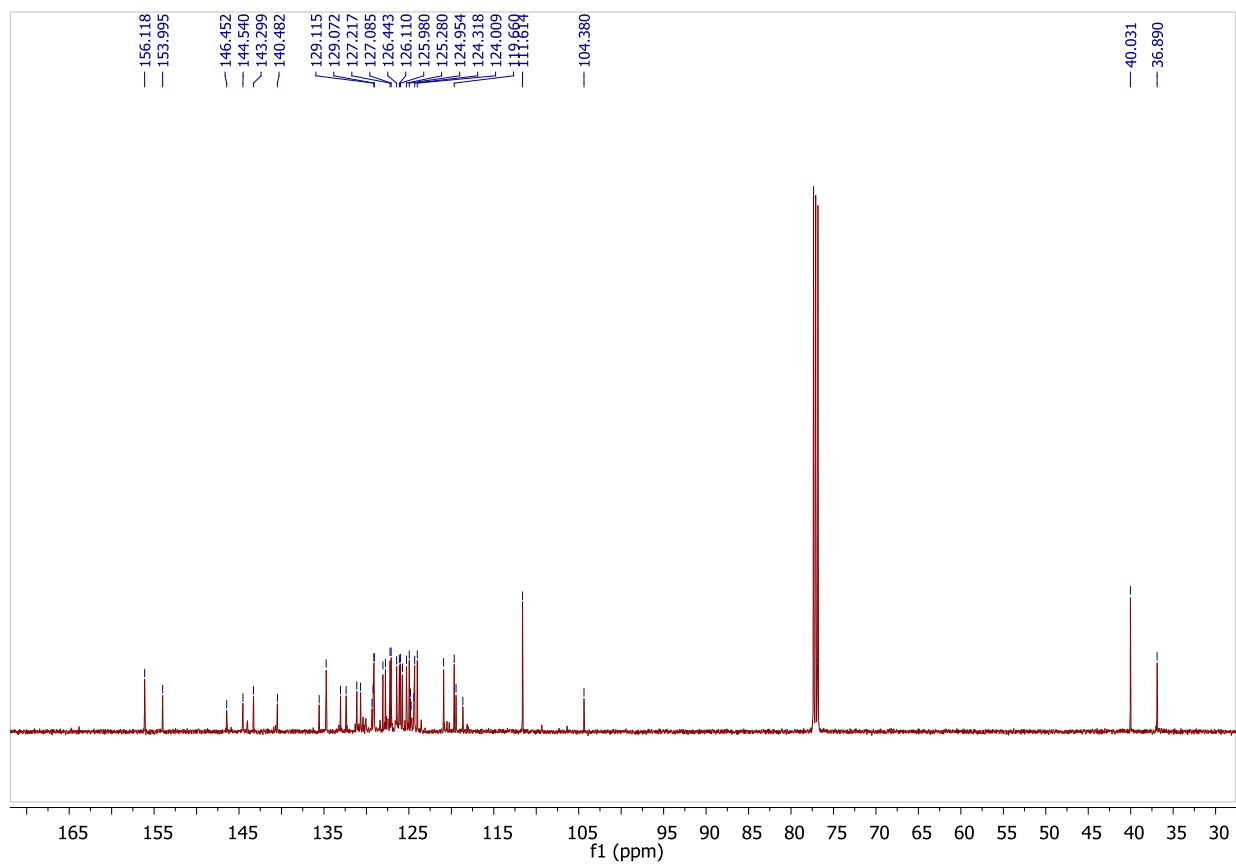
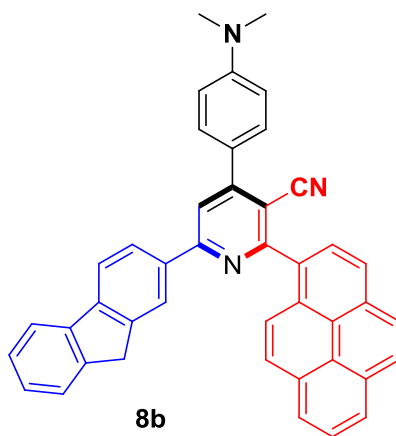
DEPT-135 NMR spectrum of 6-(9H-fluoren-2-yl)-4-phenyl-2-(pyren-1-yl)nicotinonitrile (8a)



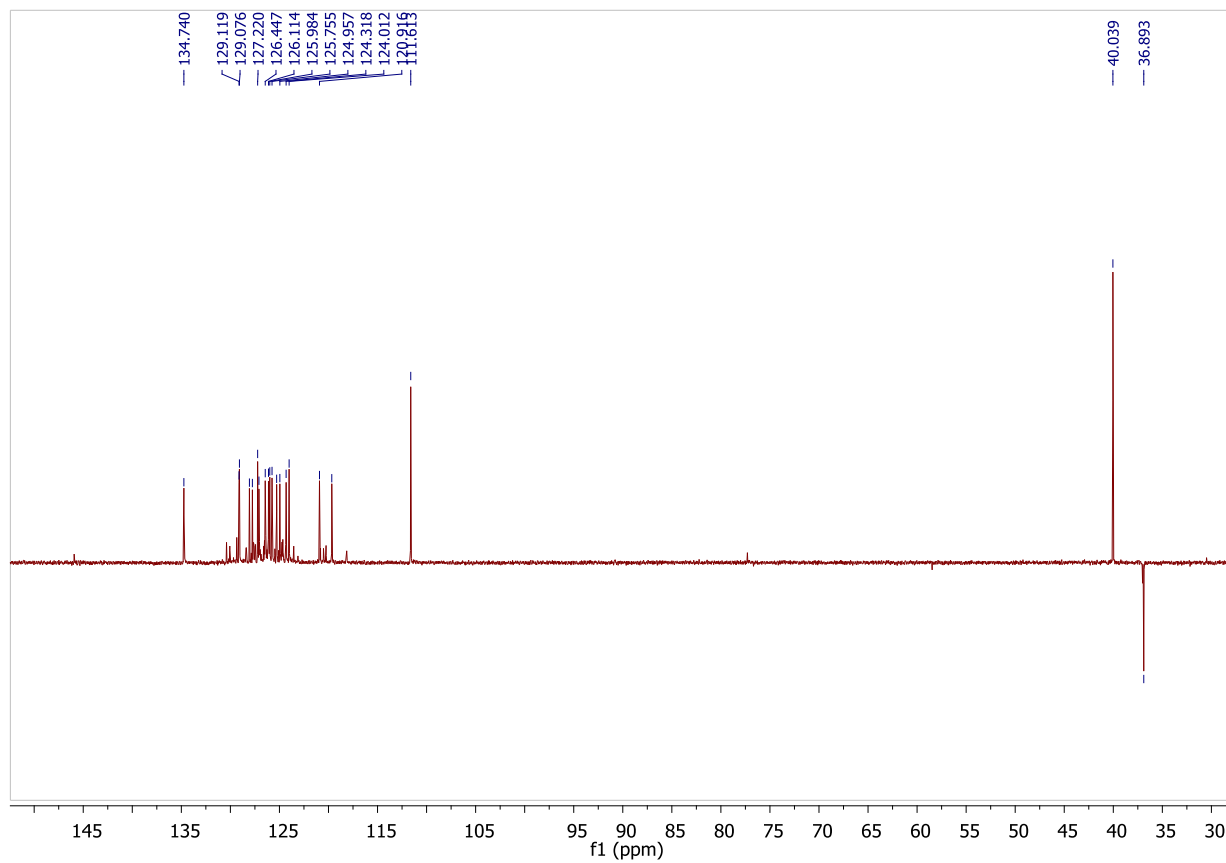
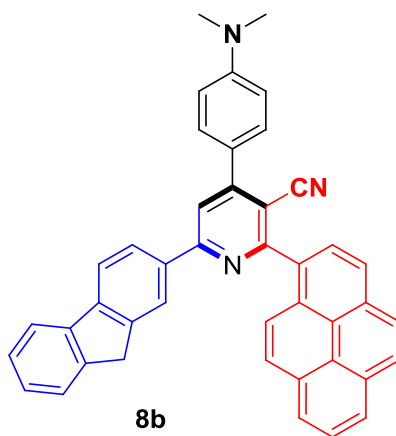
¹H NMR spectrum of 4-(4-(dimethylamino)phenyl)-6-(9H-fluoren-2-yl)-2-(pyren-1-yl)nicotinonitrile (8b)



¹³C NMR spectrum of 4-(4-(dimethylamino)phenyl)-6-(9H-fluoren-2-yl)-2-(pyren-1-yl)nicotinonitrile (8b)

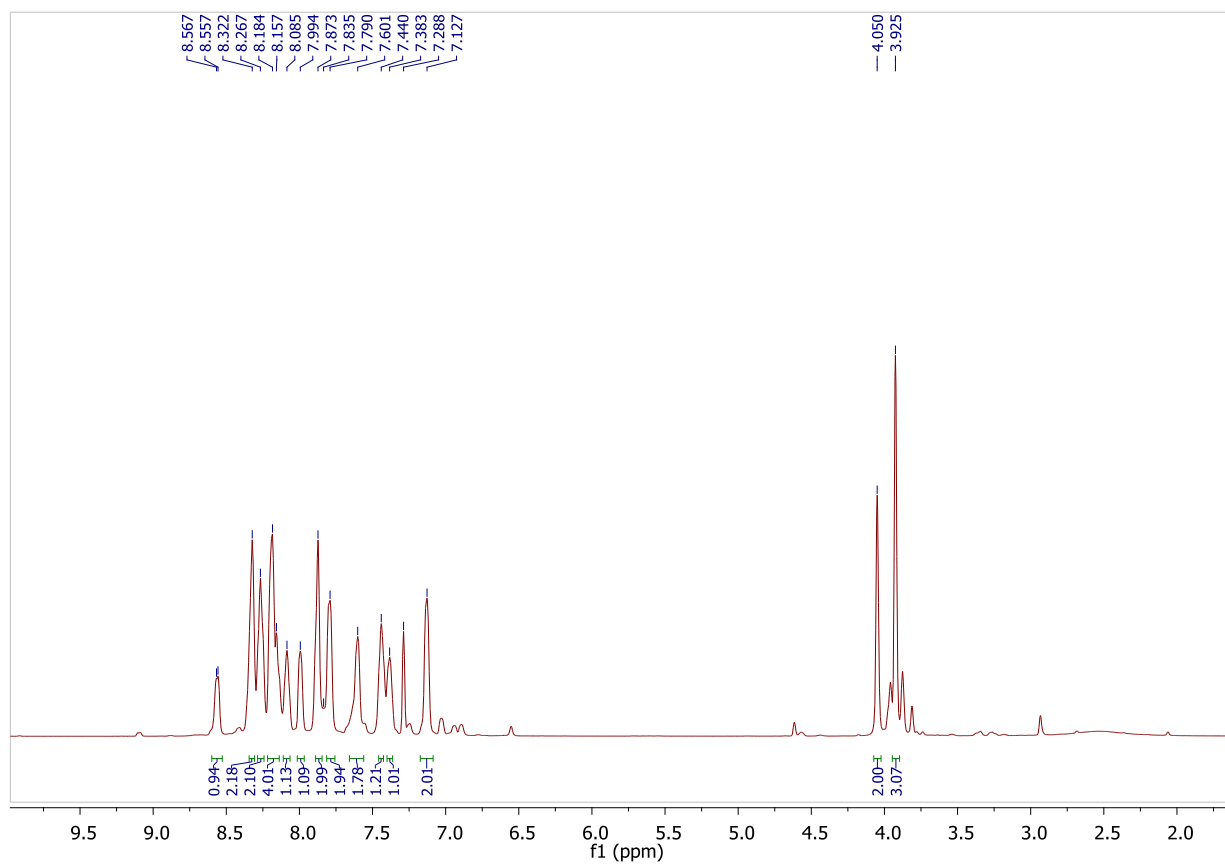
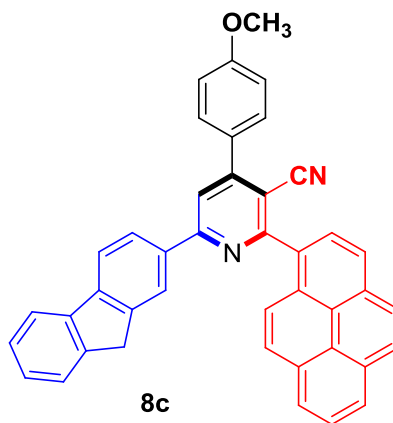


DEPT-135 spectrum of 4-(4-(dimethylamino)phenyl)-6-(9H-fluoren-2-yl)-2-(pyren-1-yl)nicotinonitrile (8b)

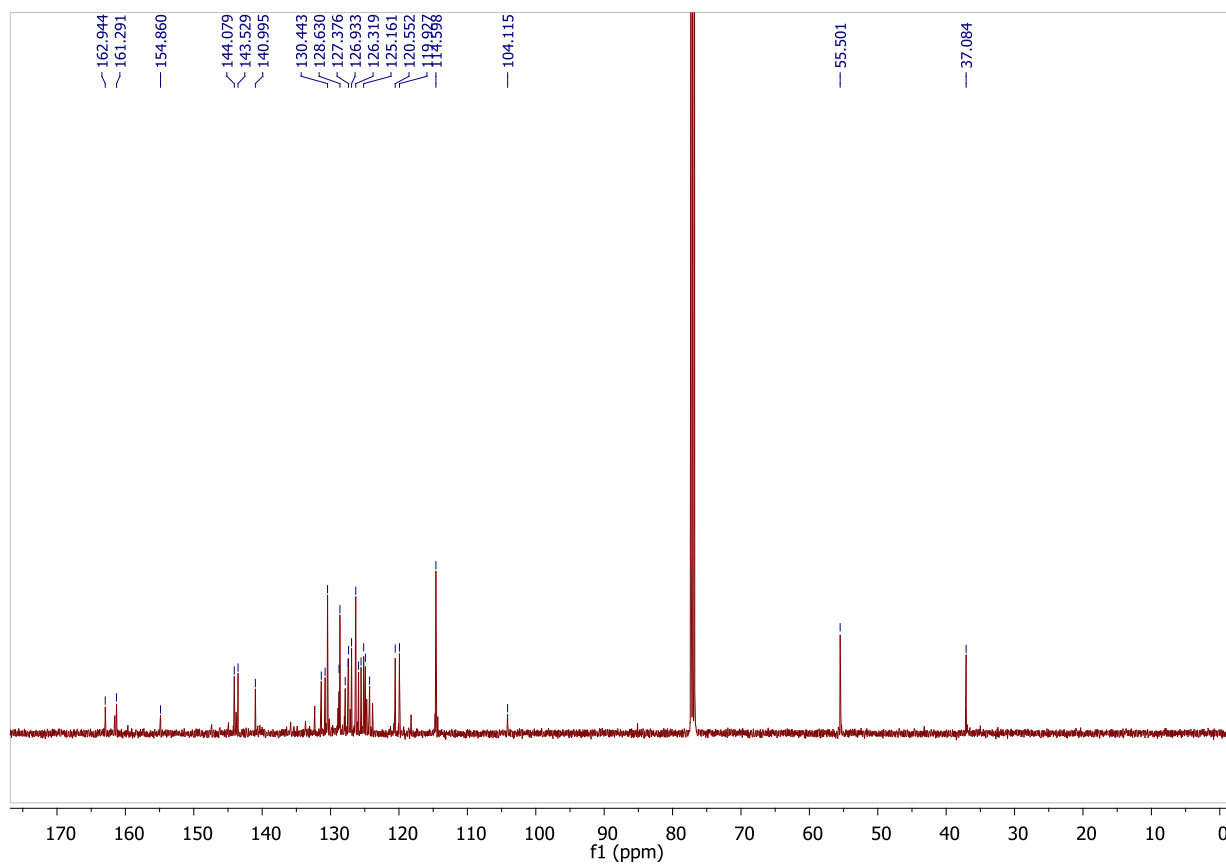
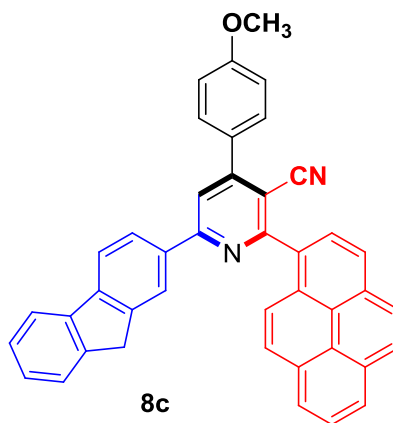


¹H NMR spectrum of 6-(9H-fluoren-2-yl)-4-(4-methoxyphenyl)-2-(pyren-1-yl)nicotinonitrile

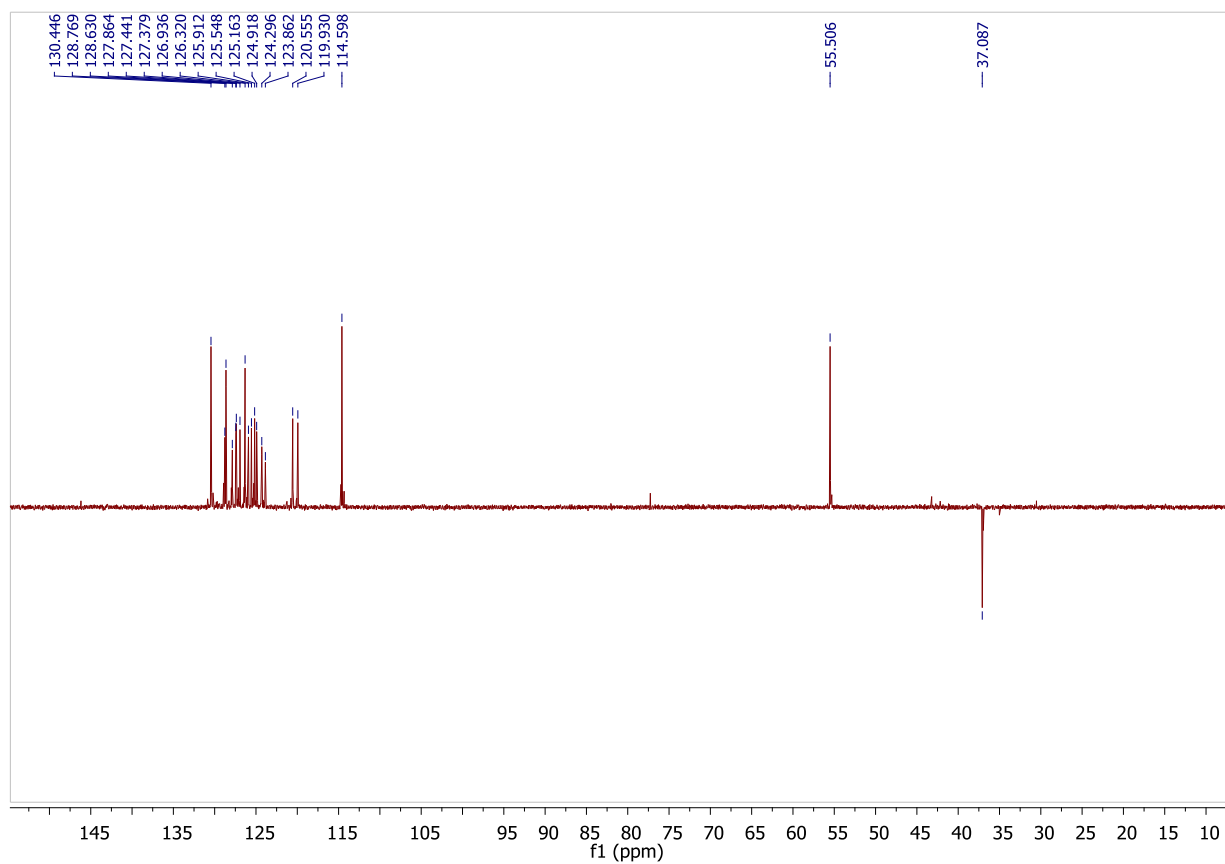
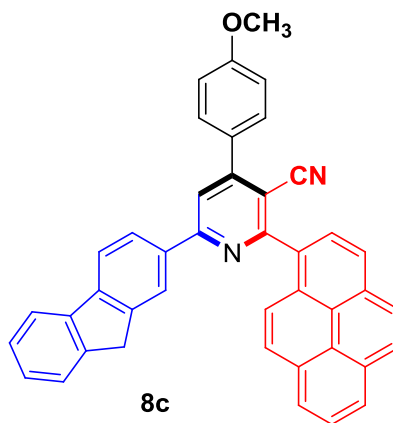
(8c)



¹³C NMR spectrum of 6-(9H-fluoren-2-yl)-4-(4-methoxyphenyl)-2-(pyren-1-yl)nicotinonitrile (8c)

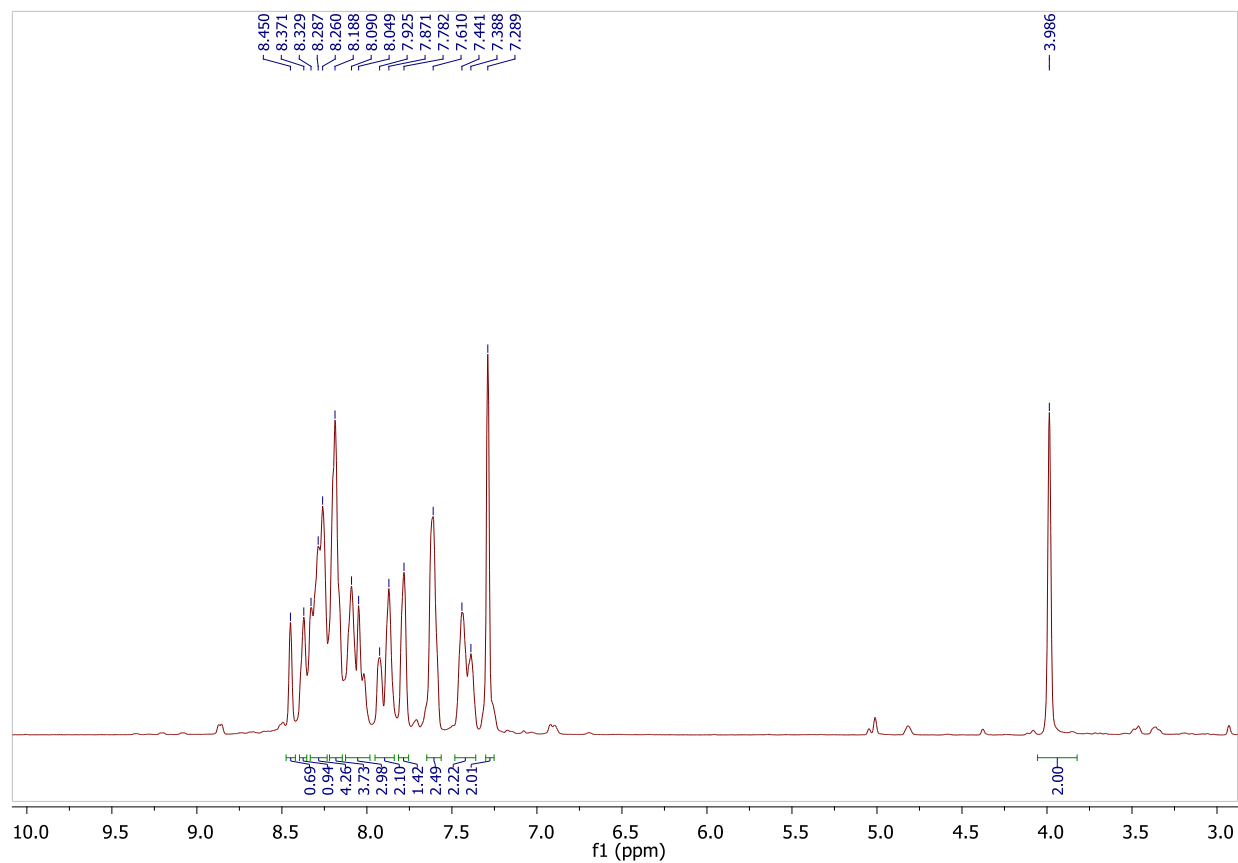
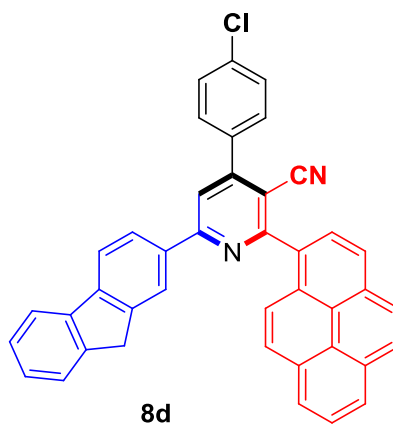


DEPT-135 NMR spectrum of 6-(9H-fluoren-2-yl)-4-(4-methoxyphenyl)-2-(pyren-1-yl)nicotinonitrile (8c)



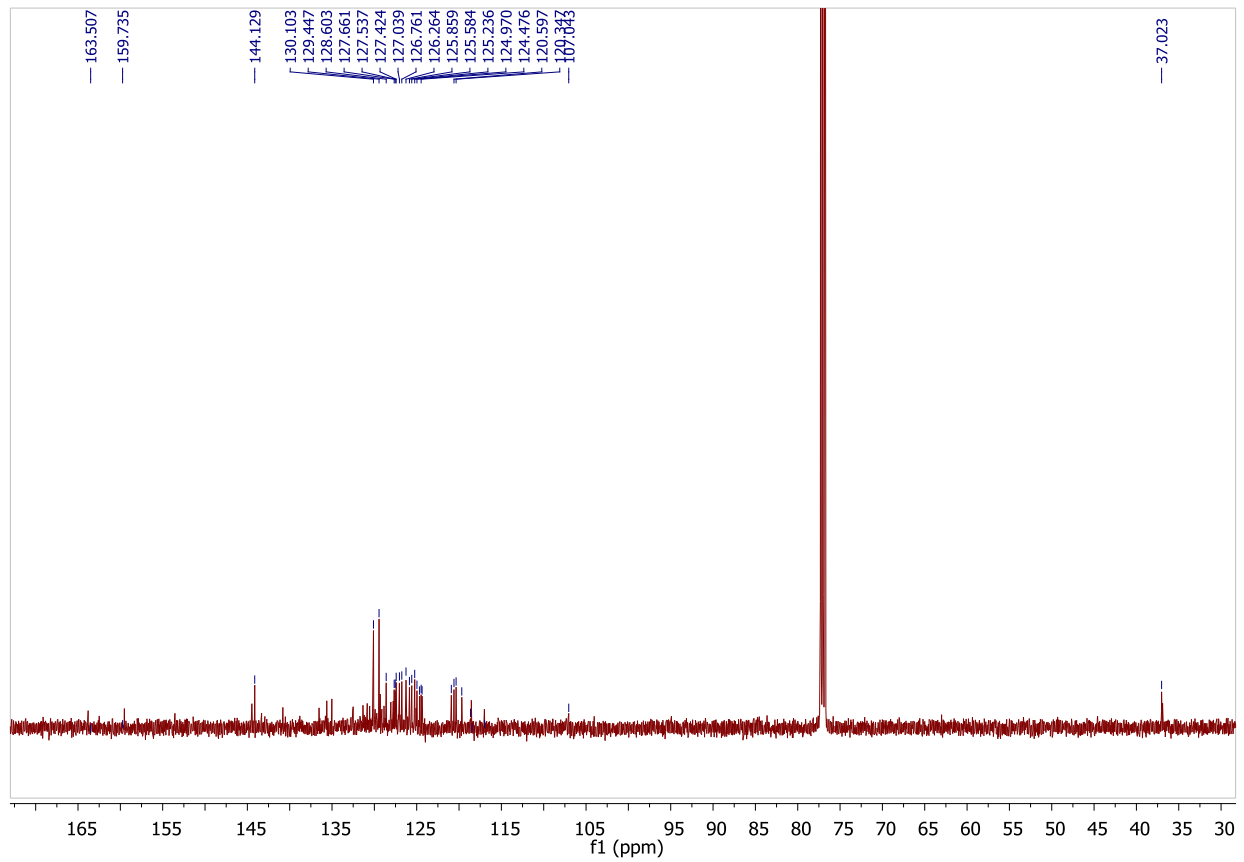
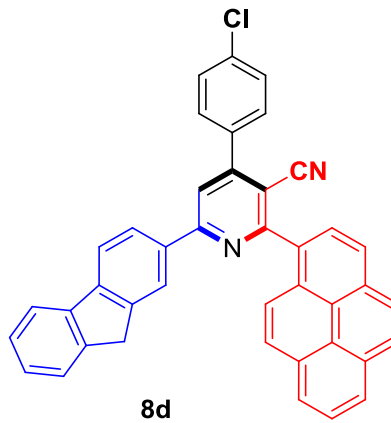
¹H NMR spectrum of 4-(4-chlorophenyl)-6-(9H-fluoren-2-yl)-2-(pyren-1-yl)nicotinonitrile

(8d)

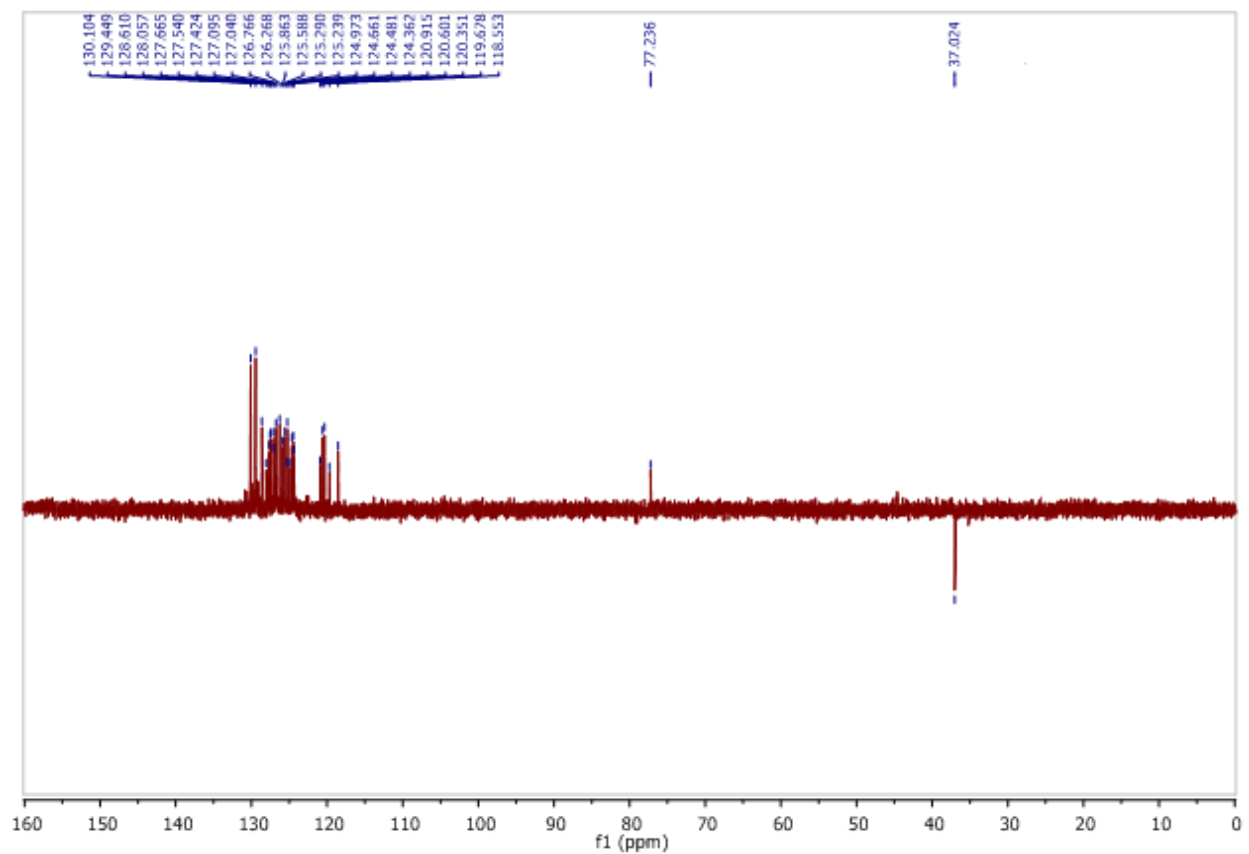
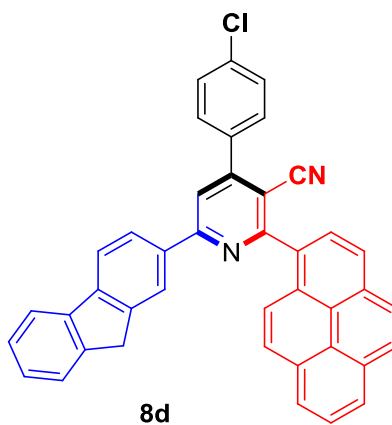


^{13}C -NMR spectrum of 4-(4-chlorophenyl)-6-(9H-fluoren-2-yl)-2-(pyren-1-yl)nicotinonitrile

(8d)

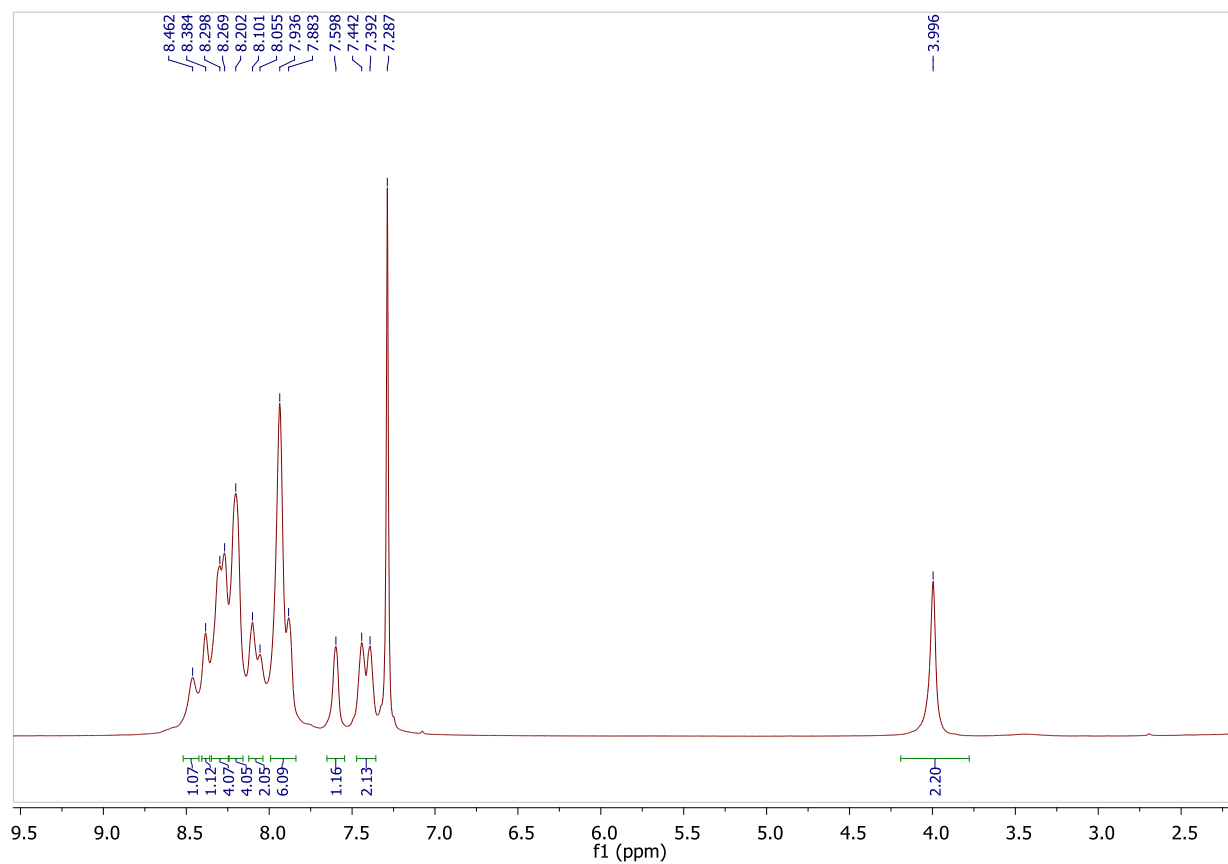
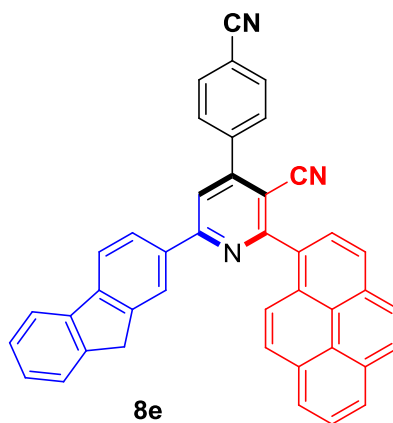


DEPT-135 NMR spectrum of 4-(4-chlorophenyl)-6-(9H-fluoren-2-yl)-2-(pyren-1-yl)nicotinonitrile (8d)



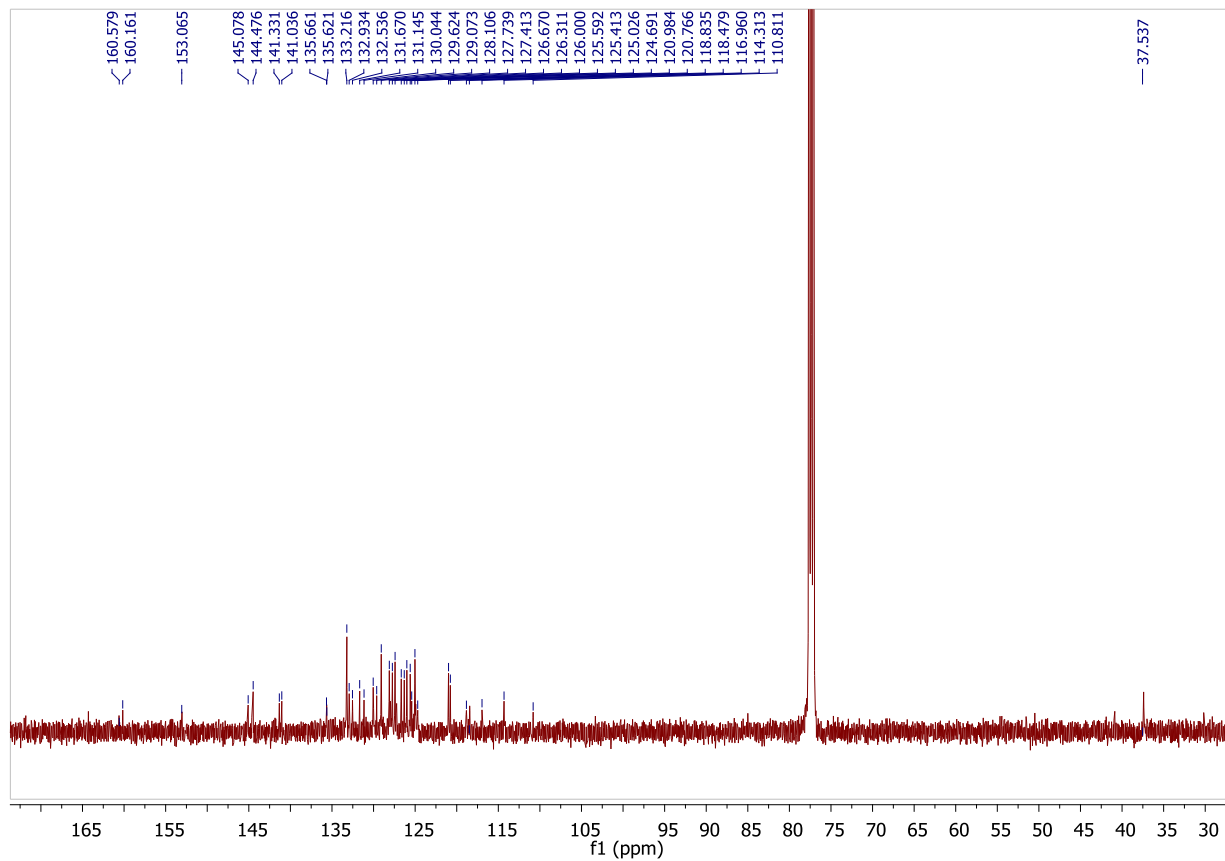
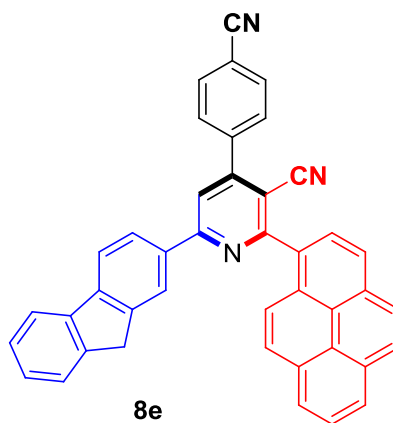
¹H NMR spectrum of 4-(4-cyanophenyl)-6-(9H-fluoren-2-yl)-2-(pyren-1-yl)nicotinonitrile

(8e)

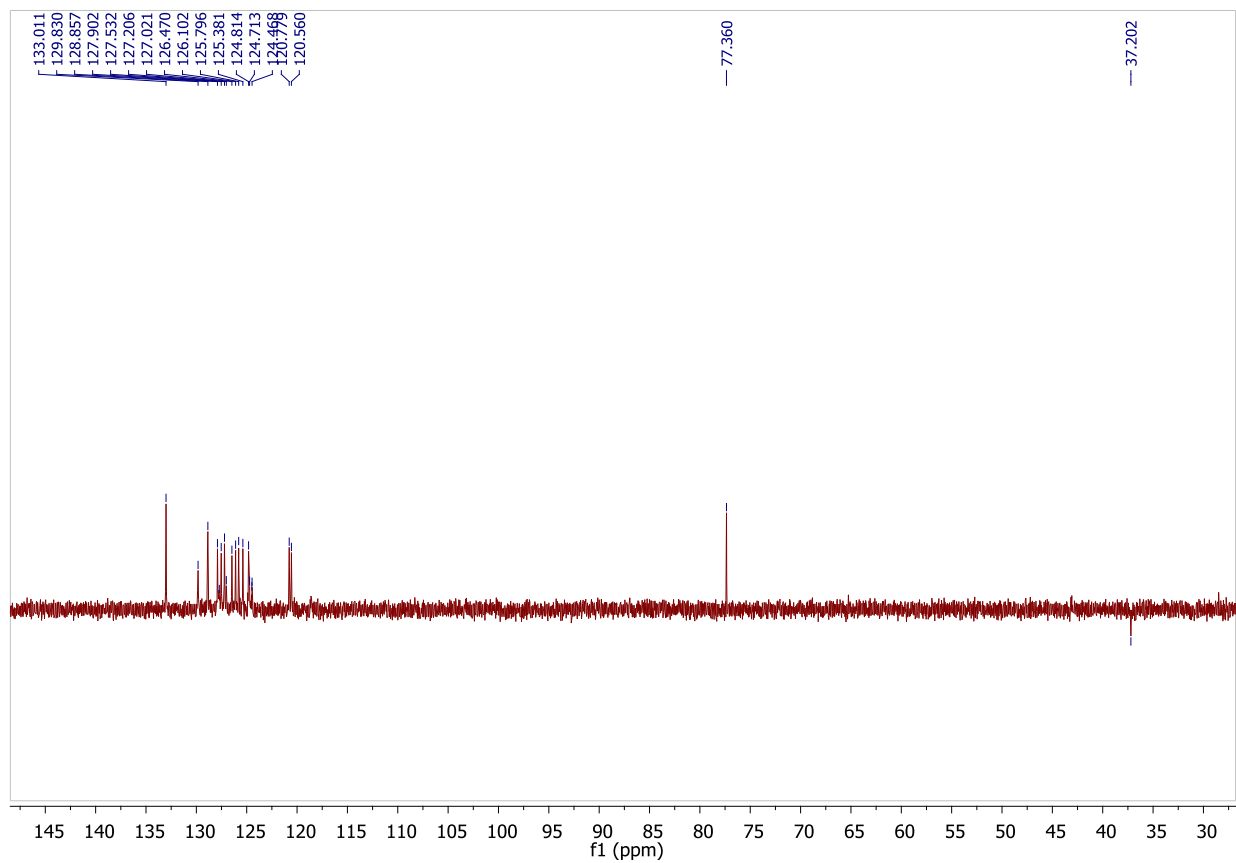
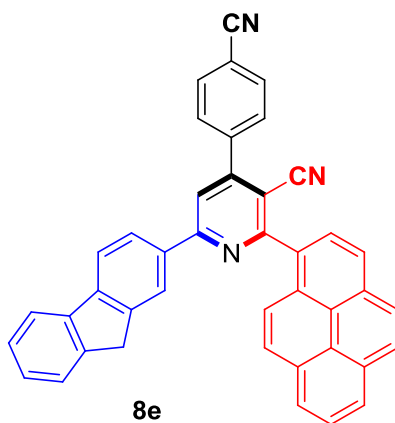


¹³C NMR spectrum of 4-(4-cyanophenyl)-6-(9H-fluoren-2-yl)-2-(pyren-1-yl)nicotinonitrile

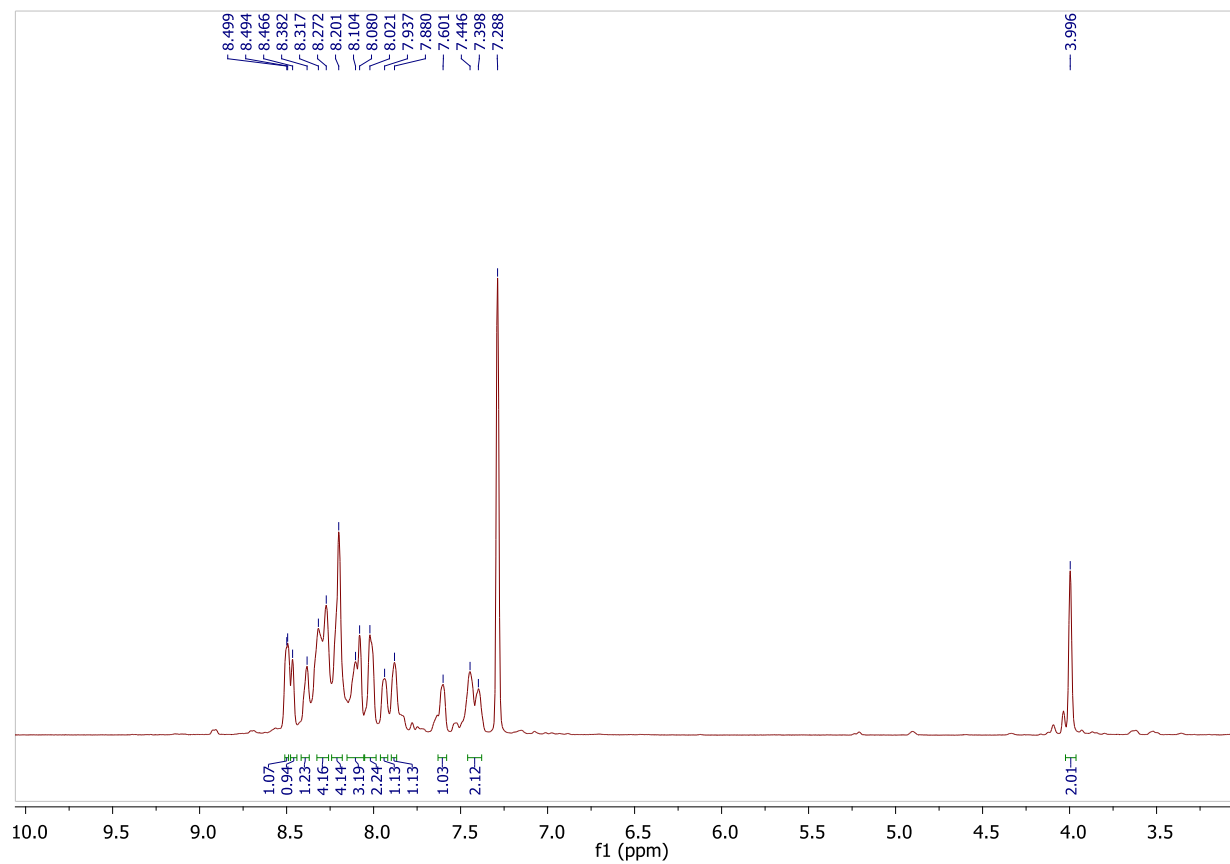
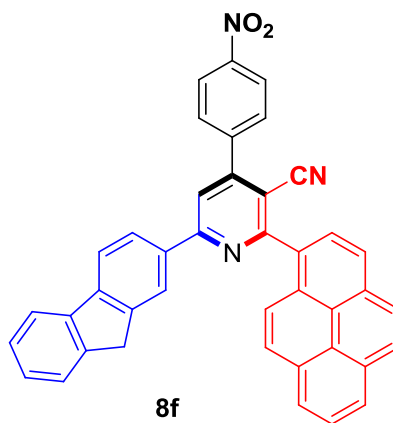
(8e)



DEPT 135 NMR spectrum of 4-(4-cyanophenyl)-6-(9H-fluoren-2-yl)-2-(pyren-1-yl)nicotinonitrile (8e)

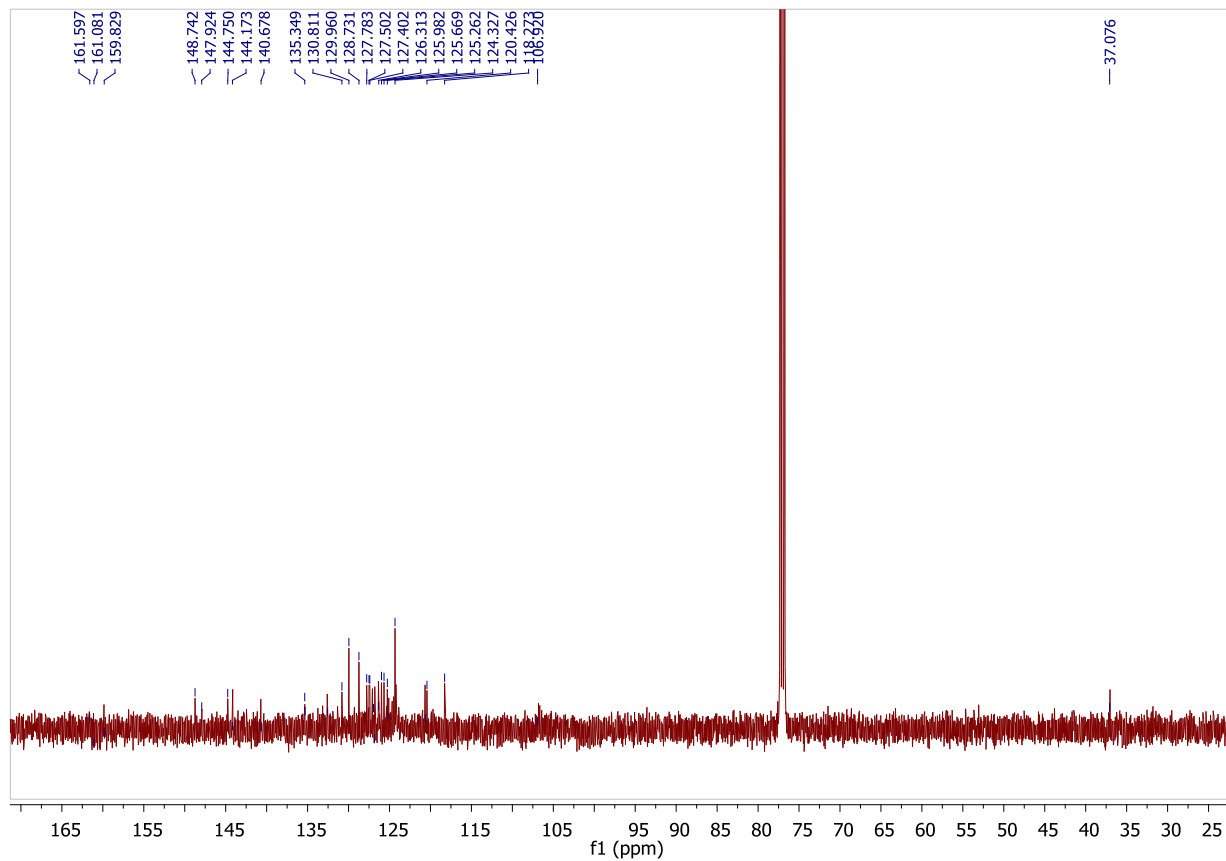
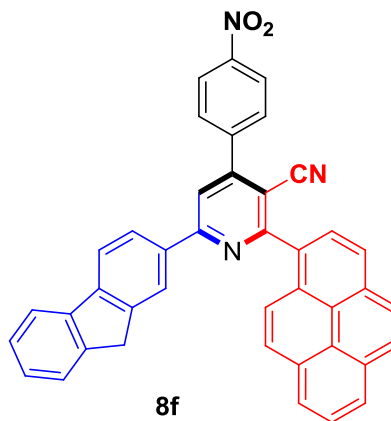


¹H NMR spectrum of 6-(9H-fluoren-2-yl)-4-(4-nitrophenyl)-2-(pyren-1-yl)nicotinonitrile (8f)



¹³C NMR spectrum of 6-(9H-fluoren-2-yl)-4-(4-nitrophenyl)-2-(pyren-1-yl)nicotinonitrile

(8f)



DEPT-135 NMR spectrum of 6-(9H-fluoren-2-yl)-4-(4-nitrophenyl)-2-(pyren-1-yl)nicotinonitrile (8f)

