

..... **Supplementary Information**.....

**Catalyst and solvent-free solid-solid melt synthesis of multi-colour emissive 2-
functionalized quinoxaline-based fluorophores**

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SI-1: Table S1: Detailed calculations of green chemistry metrics of the model reaction for the synthesis of **3a**.^{1,2}

	1	2a	3a
Mass	0.216 g	0.464 g	0.475 g
Moles	0.002	0.002	0.00198
GMW	108	232	240
Reaction Solvent Mass: Nil			
Mass of Purification Material: 1.1835g [Ethanol (1.5 mL)]			
Total input mass (m_{inputs}) = $m_{\text{1}} + m_{\text{2a}} + m_{\text{solvent (S)}} + m_{\text{catalyst (C)}} + m_{\text{workup materials (WPM)}} + m_{\text{purification materials (PM)}} = 0.216 + 0.464 + 0 + 0 + 0 + 1.1835 = 1.8635 \text{ g}$			
Mass of recovered materials: 0.95(1.2 mL of ethanol recovered from the 1.5 mL used in the purification of the product (3a))			
Evaluation of Green Chemistry Metrics			
Atom Economy (AE) (%)	= 100 (GMW of product / Sum of GMWs of reactants) = 100 (240/340) = 70.6%		
Carbon efficiency (CE) (%)	CE= [Amount of carbon in product/ Total carbon present in reactants] x 100 = [no. of moles of 3a x no. of carbons in 3a / (moles of 1 x carbons in 1 + moles of 2a x carbons in 2a)] x 100 = [0.00198 x 14 / (0.002 x 6+ 0.002 x 8)] x 100 = [0.028/0.028] x 100 = 100%		
E-factor (E)	= Total input mass (m_{inputs}) - Mass of target product (m_{3a}) - Mass of recovered materials/Mass of target product (m_{3a}) = 1.8635 – 0.475 – 0.95/0.475 = 0.92		
Process Mass Intensity (PMI)	= (Total input mass (m_{inputs}) - Mass of recovered materials)/ m_{3a} = 1.8635 – 0.95/0.475 = 1.92 (Or) = 1 + E = 1 + 0.923 = 1.92		
Curzon's Reaction Mass Efficiency (Curzon's RME) (%)	= 100 (mass of 3a /mass of 1 + mass of 2a) = 100 (0.475 /0.216+ 0.464) = 70% (or)		

	$=100$ (Yield of 3a x Atom Economy x 1/Stoichiometric Factor) $= 100 (0.99 \times 0.706 \times 1) = 70\%$ (\because Stoichiometric Factor (SF) = 1)
Generalized Reaction Mass Efficiency (gRME) (%)	$=100 [m_{3a}/(\text{Total input mass (}^m\text{inputs)} - \text{Mass of recovered materials})]$ $= 100[0.475/1.8635 - 0.95] = 52\%$ (Or) $= 100[1/(1+E)] = 100[1/1 + 0.923] = 52\%$

Table S2: Detailed calculations of green chemistry metrics of the model reaction for the synthesis of **3x**.^{1,2}

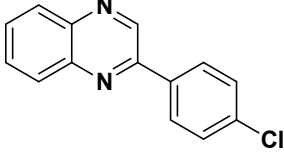
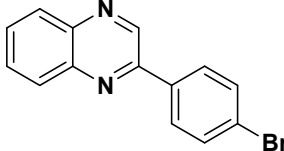
	1	2a	3a
Mass	0.216 g	0.388 g	0.527g
Moles	0.002	0.002	0.00198
GMW	108	194	266
Reaction Solvent Mass: Nil			
Mass of Purification Material: 1.1835g [Ethanol (1.5 mL)]			
Total input mass (m_{inputs}) = $m_1 + m_{2a} + m_{\text{solvent (S)}} + m_{\text{catalyst (C)}} + m_{\text{workup materials (WPM)}} + m_{\text{purification materials (PM)}}$ = 0.216 + 0.388 + 0 + 0 + 0 + 1.1835 = 1.7875 g			
Mass of recovered materials: 0.95 (1.2 mL of ethanol recovered from the 1.5 mL used in the purification of the product (3x))			
Evaluation of Green Chemistry Metrics			
Atom Economy (AE) (%)	$= 100$ (GMW of product / Sum of GMWs of reactants) $= 100 (266/302) = 88.1\%$		
Carbon efficiency (CE) (%)	$CE = [\text{Amount of carbon in product} / \text{Total carbon present in reactants}] \times 100$ $= [\text{no. of moles of } \mathbf{3x} \times \text{no. of carbons in } \mathbf{3x} / (\text{moles of } \mathbf{1} \times \text{carbons in } \mathbf{1} + \text{moles of } \mathbf{4a} \times \text{carbons in } \mathbf{4a})] \times 100$ $= [0.00198 \times 16 / (0.002 \times 6 + 0.002 \times 10)] \times 100 = [0.032/0.032] \times 100 = 100\%$		
E-factor (E)	$= \text{Total input mass (}^m\text{inputs)} - \text{Mass of target product (}^m\mathbf{3x}) - \text{Mass of recovered materials} / \text{Mass of target product (}^m\mathbf{3x})$ $= 1.7875 - 0.527 - 0.95 / 0.527 = 0.59$		

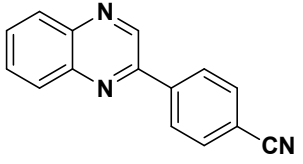
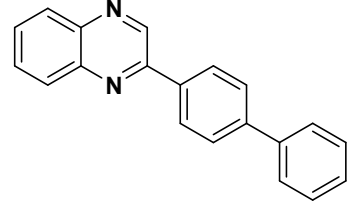
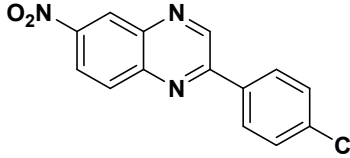
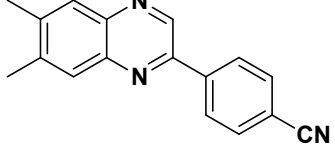
Process Mass Intensity (PMI)	$= (\text{Total input mass (}^m\text{inputs)} - \text{Mass of recovered materials})/m\mathbf{3x}$ $= 1.7875 - 0.95/0.527 = 1.59$ <p>(Or)</p> $= 1 + E = 1 + 0.59 = 1.59$
Curzon's Reaction Mass Efficiency (Curzon's RME) (%)	$= 100 (\text{mass of } \mathbf{3x} / \text{mass of } \mathbf{1} + \text{mass of } \mathbf{4a})$ $= 100 (0.527 / 0.216 + 0.388) = 87.2\%$ <p>(or)</p> $= 100 (\text{Yield of } \mathbf{3x} \times \text{Atom Economy} \times 1 / \text{Stoichiometric Factor})$ $= 100 (0.99 \times 0.881 \times 1) = 87.2\% (\because \text{Stoichiometric Factor (SF)} = 1)$
Generalized Reaction Mass Efficiency (gRME) (%)	$= 100 [m\mathbf{3x} / (\text{Total input mass (}^m\text{inputs)} - \text{Mass of recovered materials})]$ $= 100 [0.527 / 1.7875 - 0.95] = 62.9\%$ <p>(Or)</p> $= 100 [1 / (1 + E)] = 100 [1 / 1 + 0.59] = 62.9\%$

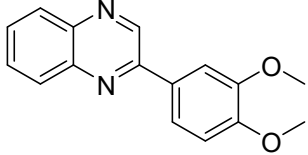
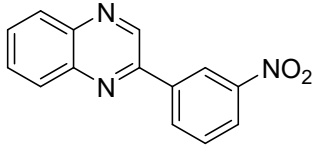
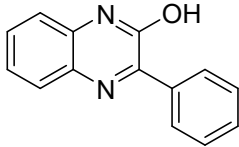
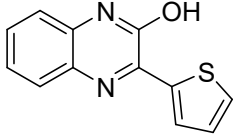
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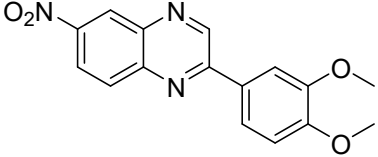
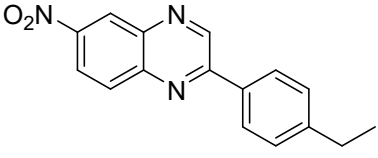
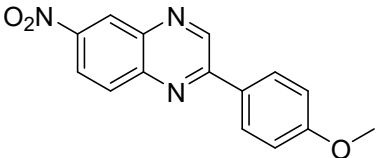
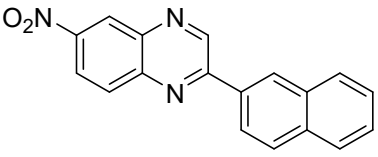
1. J. Andraos, A. Hent, Simplified application of material efficiency green metrics to synthesis plans: pedagogical case studies selected from organic syntheses, *J. Chem. Educ.*, 2015, 92, 1820–1830.
2. A. P. Dicks, A. Hent, Green Chemistry Metrics: A Guide to Determining and Evaluating Process Greenness, First ed., Springer Cham, Switzerland, 2015.

SI-2. Spectral data for selected synthesized 2-arylquinoxalines (3).

 <p>2-(4-chlorophenyl)quinoxaline (3a)</p>	<p>Yellow solid, ¹H NMR (400MHz, CDCl₃): δ (ppm) 9.22 (s, 1H, ArH), 8.08 (d, <i>J</i> = 8.4 Hz, 2H, ArH), 8.04 (dd, ¹<i>J</i> = 8.4 Hz, ²<i>J</i> = 1.2 Hz, 2H, ArH), 7.74-7.66 (m, 2H, ArH), 7.46 (d, <i>J</i>=8.4 Hz, 2H, ArH); ¹³C-NMR (100 MHz, CDCl₃): δ 150.66, 142.67, 142.28, 141.41, 136.69, 135.11, 130.62, 129.80, 129.61, 129.46 (2C), 129.04, 128.81 (2C); MS(ESI): [M+H]⁺ 241.3</p>
	<p>Orange yellow solid, ¹H NMR (400MHz, <i>d</i>₆-DMSO): δ (ppm) 9.61 (s, 1H, ArH), 8.31 (d, <i>J</i>=8.8 Hz, 2H, ArH), 7.84 (td, ¹<i>J</i>=8.0 Hz,</p>

<p>2-(4-bromophenyl)quinoxaline (3d)</p>	<p>$^2J=1.6$ Hz, 2H, ArH), 7.93-7.85 (m, 2H, ArH), 7.82(d, $J=8.4$ Hz, 2H, ArH), MS(ESI): $[M+H]^+$ 285.0, $[M+H+2]^+$ 287.3.</p>
<p></p> <p>4-(quinoxalin-2-yl)benzonitrile (3g)</p>	<p>Yellow solid, 1H NMR (400MHz, $CDCl_3$): δ (ppm) 9.28 (s, 1H, ArH), 8.27(d, $J = 8.4$ Hz, 2H, ArH), 8.04(td, $^1J = 8.2$ Hz, $^2J = 1.8$ Hz, 2H, ArH), 7.79 (d, $J=8.4$, 2H, arom H), 7.77-7.72 (m, 2H, ArH); ^{13}C-NMR (100 MHz, $CDCl_3$): δ 149.53, 142.66, 142.17, 141.96, 140.77, 132.83(2C), 130.80, 130.53, 129.76, 129.19, 127.99 (2C), 118.42, 113.65. MS (ESI): $[M+H]^+$ 232.3.</p>
<p></p> <p>2-([1,1'-biphenyl]-4-yl)quinoxaline (3h)</p>	<p>Orange yellow solid, 1H NMR (400MHz, d_6-DMSO): δ (ppm) 9.66 (s, 1H, ArH), 8.49 (d, $J = 8.4$ Hz, 2H, ArH), 8.16-8.13 (m, , 2H, ArH), 7.94-7.84 (m, 4H, ArH), 7.80 (d, $J = 7.6$ Hz, 2H, ArH), 7.53 (t, $J = 7.6$ Hz, 2H, ArH), 7.43 (t, $J = 7.4$ Hz, 1H, ArH); MS(ESI): $[M+H]^+$ 283.4</p>
<p></p> <p>2-(4-chlorophenyl)-6-nitroquinoxaline (3i)</p>	<p>Brown solid, 1H NMR (400MHz, d_6-DMSO): δ (ppm) 9.82 (s, 1H, ArH), 8.94 (d, $J = 2.4$ Hz, 1H, ArH), 8.59 (dd, $^1J = 9.2$ Hz, $^2J = 2.8$ Hz, 1H, ArH), 8.4-8.36 (m, 3H, ArH), 7.87 (d, $J = 8.8$ Hz, 2H, ArH).</p>
<p></p> <p>4-(6,7-dimethylquinoxalin-2-yl)benzonitrile (3u)</p>	<p>Orange yellow solid, 1H NMR (400MHz, d_6-DMSO): δ (ppm) 9.54 (s, 1H, ArH), 8.49 (d, $J = 8.4$ Hz, 2H, ArH), 8.06 (d, $J = 8.4$ Hz, 2H, ArH), 7.94 (s, 1H, ArH), 7.91 (s, 1H, ArH), 2.50 (s, 6H, -2CH_3); MS(ESI): $[M+H]^+$ 260.08</p>

 <p>2-(3,4-dimethoxyphenyl)quinoxaline (3x)</p>	<p>Pale yellow solid, ^1H NMR (400MHz, d_6-DMSO): δ (ppm) 9.60 (s, 1H, ArH), 8.01 (td, $^1J = 8.8$ Hz, $^2J = 1.6$ Hz, 2H, ArH), 7.97 (dd, $^1J = 8.4$ Hz, $^2J = 2.4$ Hz, 1H, ArH), 7.93 (d, $J = 2.4$ Hz, 1H, ArH), 7.88-7.78 (m, 2H, ArH), 7.17 (d, $J = 8.4$ Hz, 1H, ArH), 3.92 (s, 3H, -OCH₃), 3.87 (s, 3H, -OCH₃); MS(ESI): [M+H]⁺ 267.3</p>
 <p>2-(3-nitrophenyl)quinoxaline (3y)</p>	<p>Off-white solid, ^1H NMR (400MHz, d_6-DMSO): δ (ppm) 9.73 (s, 1H, ArH), 9.11 (d, $J = 1.6$ Hz, 1H, ArH), 8.80 (d, $J = 7.6$ Hz, 1H, ArH), 8.41 (dd, $^1J = 8.0$ Hz, $^2J = 2.0$ Hz, 1H, ArH), 8.23 (dd, $^1J = 7.6$ Hz, $^2J = 2.4$ Hz, 1H, ArH), 8.17 (dd, $^1J = 7.2$ Hz, $^2J = 2.4$ Hz, 1H, ArH), 7.96-7.89 (m, 3H, ArH); MS(ESI): [M+H]⁺ 252.3</p>
 <p>3-phenylquinoxalin-2-ol (3ab)</p>	<p>White solid, ^1H NMR (400MHz, d_6-DMSO): δ (ppm) 12.57 (s, 1H, -OH), 8.32-8.28 (m, 2H, ArH), 7.84 (d, $J = 8.0$ Hz, 1H, ArH), 7.56-7.49 (m, 4H, ArH), 7.35-7.30 (m, 2H, ArH); MS(ESI): [M+H]⁺ 223.3</p>
 <p>3-(thiophen-2-yl)quinoxalin-2-ol (3ac)</p>	<p>Green solid, ^1H NMR (400MHz, d_6-DMSO): δ (ppm) 12.70 (s, 1H, -OH), 8.41 (dd, $^1J = 4.0$ Hz, $^2J = 1.6$ Hz, 1H, ArH), 7.84 (dd, $^1J = 5.0$ Hz, $^2J = 1.0$ Hz, 1H, ArH), 7.78 (d, $J = 8.0$ Hz, 1H, ArH), 7.52 (td, $^1J = 7.8$ Hz, $^2J = 1.2$ Hz, 1H, ArH), 7.36-7.31 (m, 2H, ArH), 7.24 (dd, $^1J = 5.0$ Hz, $^2J = 4.2$ Hz, 1H, ArH); MS(ESI): [M+H]⁺ 229.2</p>

 <p>2-(3,4-dimethoxyphenyl)-6-nitroquinoxaline (3ad)</p>	<p>Yellow solid, ^1H NMR (400MHz, d_6-DMSO): δ (ppm) 9.81 (d, $J = 5.2$ Hz, 1H, ArH), 8.88 (d, $J = 2.4$ Hz, 1H, ArH), 8.56-8.47(m, 1H, ArH), 8.33-8.29 (m, 1H, ArH), 8.09-8.03 (m, 1H, ArH), 7.98 (d, $J = 2.0$ Hz, 1H, ArH), 7.20 (dd, $^1J = 8.6$ Hz, $^2J = 2.6$ Hz, 1H, ArH), 3.93 (s, 3H, -OCH₃), 3.89 (s, 3H, -OCH₃); MS(ESI): [M+H]⁺ 312.4</p>
 <p>2-(4-ethylphenyl)-6-nitroquinoxaline (3ae)</p>	<p>Off-white solid, ^1H NMR (400MHz, d_6-DMSO): δ (ppm) 9.79(s, 1H, ArH), 8.91 (d, $J = 2.4$ Hz, 1H, ArH), 8.57 (dd, $^1J = 8.8$ Hz, $^2J = 2.6$ Hz, 1H, ArH), 8.37-8.32 (m, 3H, ArH), 7.49 (d, $J = 8.4$ Hz, 2H, ArH), 2.73 (q, $J = 7.6$ Hz, 2H, -CH₂), 1.25 (t, $J = 7.6$ Hz, 3H, -CH₃); MS(ESI): [M+H]⁺ 280.4</p>
 <p>3-(4-methoxyphenyl)-7-nitro-1,2-dihydroquinoxaline (3ag)</p>	<p>Yellow solid, ^1H NMR (400MHz, d_6-DMSO): δ (ppm) 9.77 (d, $J = 5.2$ Hz, 1H, ArH), 8.88 (dd, $^1J = 6.8$ Hz, $^1J = 2.4$ Hz, 1H, ArH), 8.56-8.47 (m, 1H, ArH), 8.44-8.39 (m, 2H, ArH), 8.33-8.28 (m, 1H, ArH), 7.19 (d, $J = 8.8$ Hz, 2H, ArH), 3.89 (s, 3H, -OCH₃); MS(ESI): [M+H]⁺ 282.3</p>
 <p>2-(naphthalen-2-yl)-6-nitroquinoxaline (3ai)</p>	<p>Yellow solid, ^1H NMR (400MHz, d_6-DMSO): δ (ppm) 9.50 (s, 1H, ArH), 9.02 (d, $J = 2.4$ Hz, 1H, ArH), 8.64 (dd, $^1J = 9.0$ Hz, $^2J = 2.4$ Hz, 1H, ArH), 8.42 (d, $J = 9.2$ Hz, 1H, ArH), 8.30 (d, $J = 8.0$ Hz, 1H, ArH), 8.20 (d, $J = 8.4$ Hz, 1H, ArH), 8.12 (dd, $^1J = 7.6$ Hz, $^2J = 1.6$ Hz, 1H, ArH), 7.99 (dd, $^1J = 7.0$ Hz, $^2J = 1.0$ Hz, 1H, ArH), 7.77-7.73 (m, 1H, ArH), 7.67-7.59 (m, 2H, ArH); MS(ESI): [M+H]⁺ 302.3</p>

SI-3: Copies of ^1H NMR, ^{13}C NMR and MS spectra of selected 2-arylquinoxalines (3)

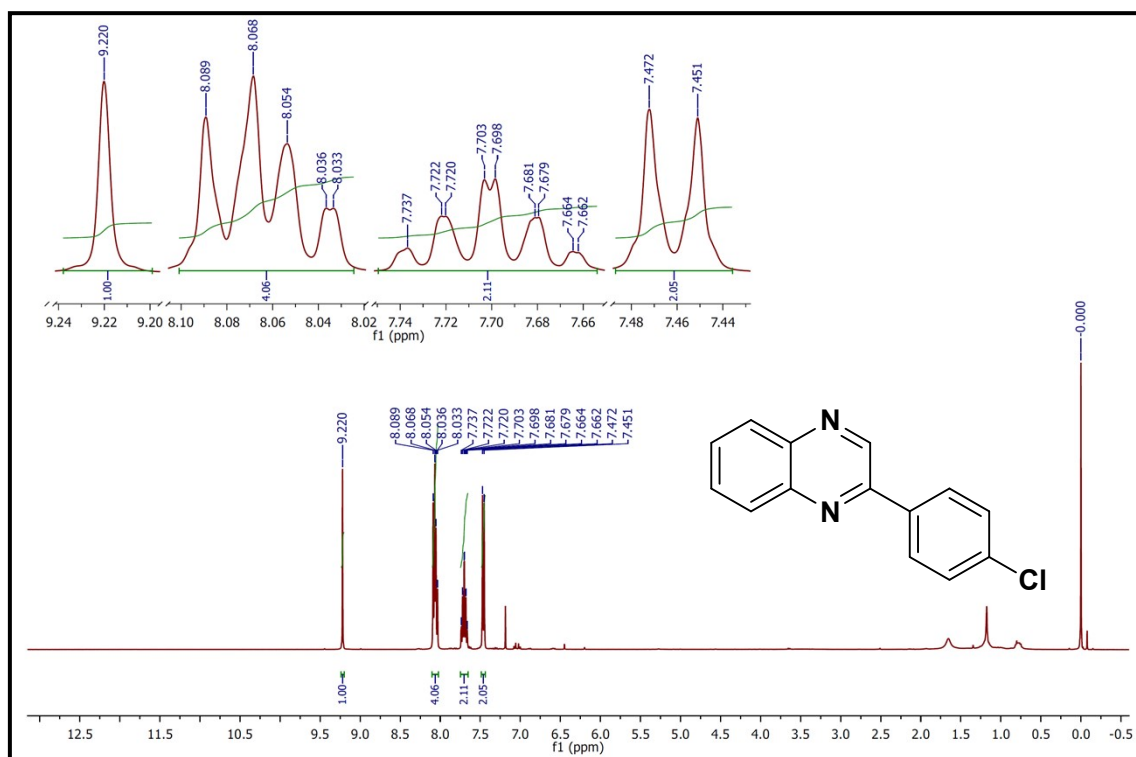


Figure S1. ^1H NMR spectrum of 2-(4-chlorophenyl)quinoxaline (3a).

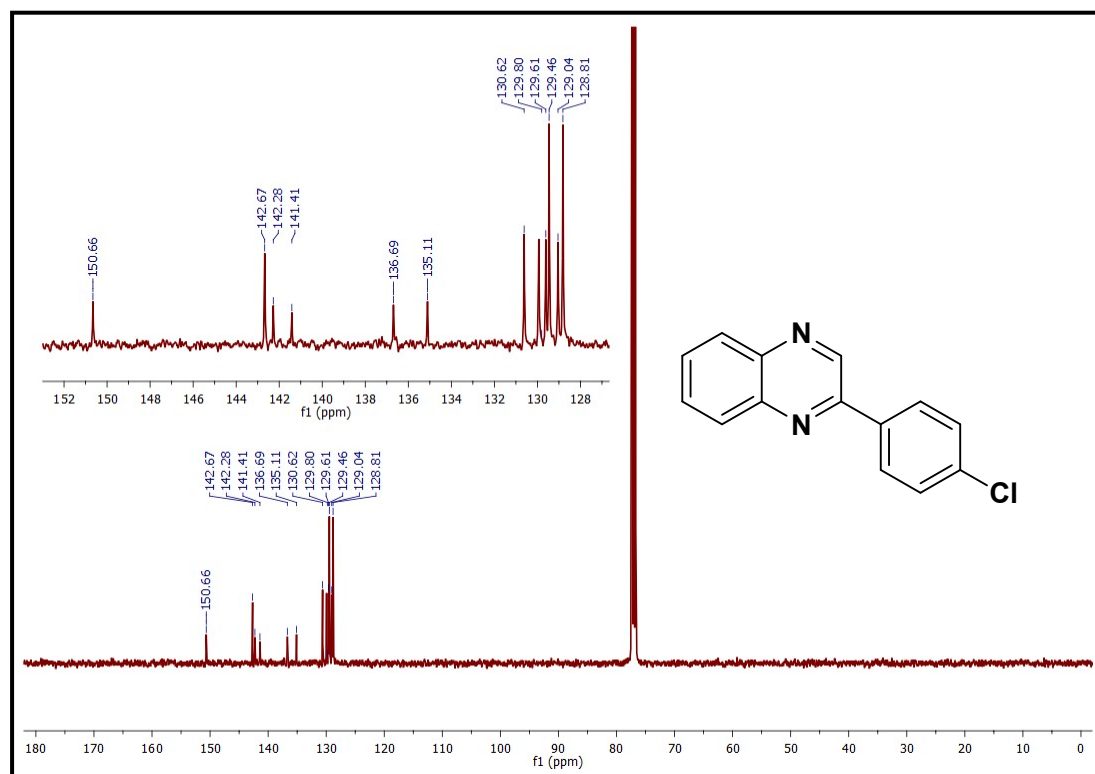


Figure S2. ^{13}C -NMR spectrum of 2-(4-chlorophenyl)quinoxaline (3a).

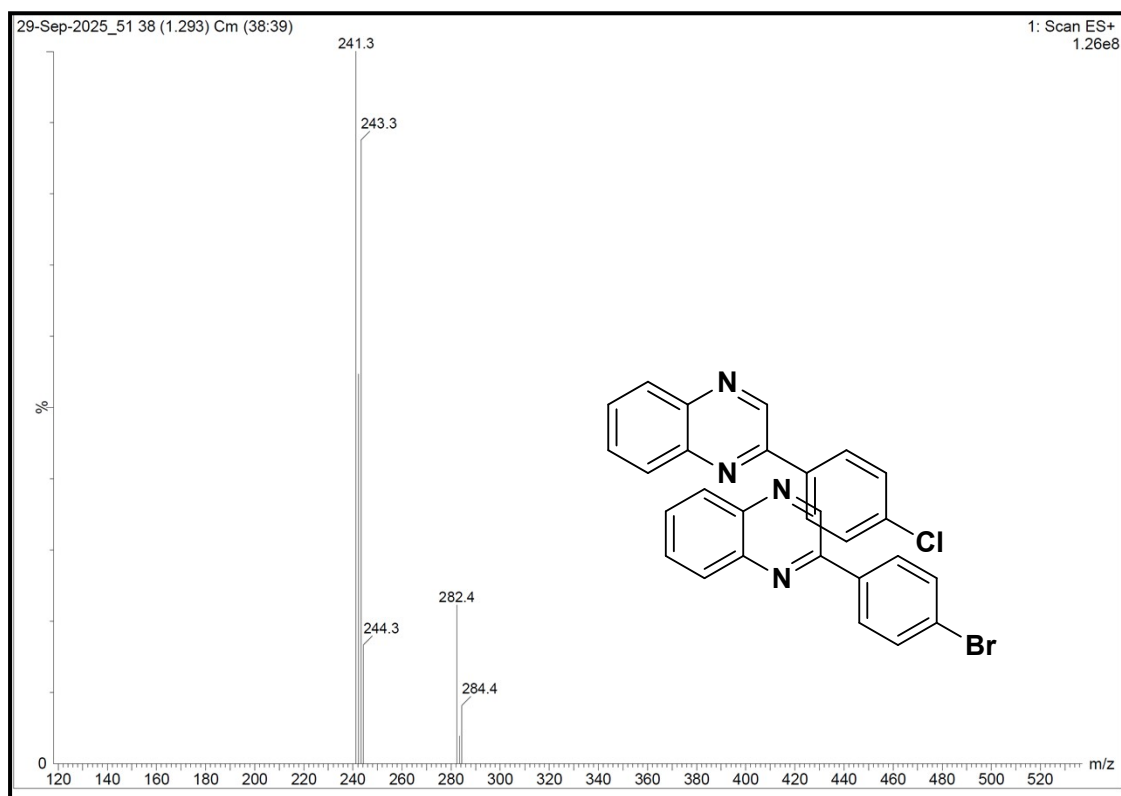


Figure S3. Mass spectrum of 2-(4-chlorophenyl)quinoxaline (**3a**).

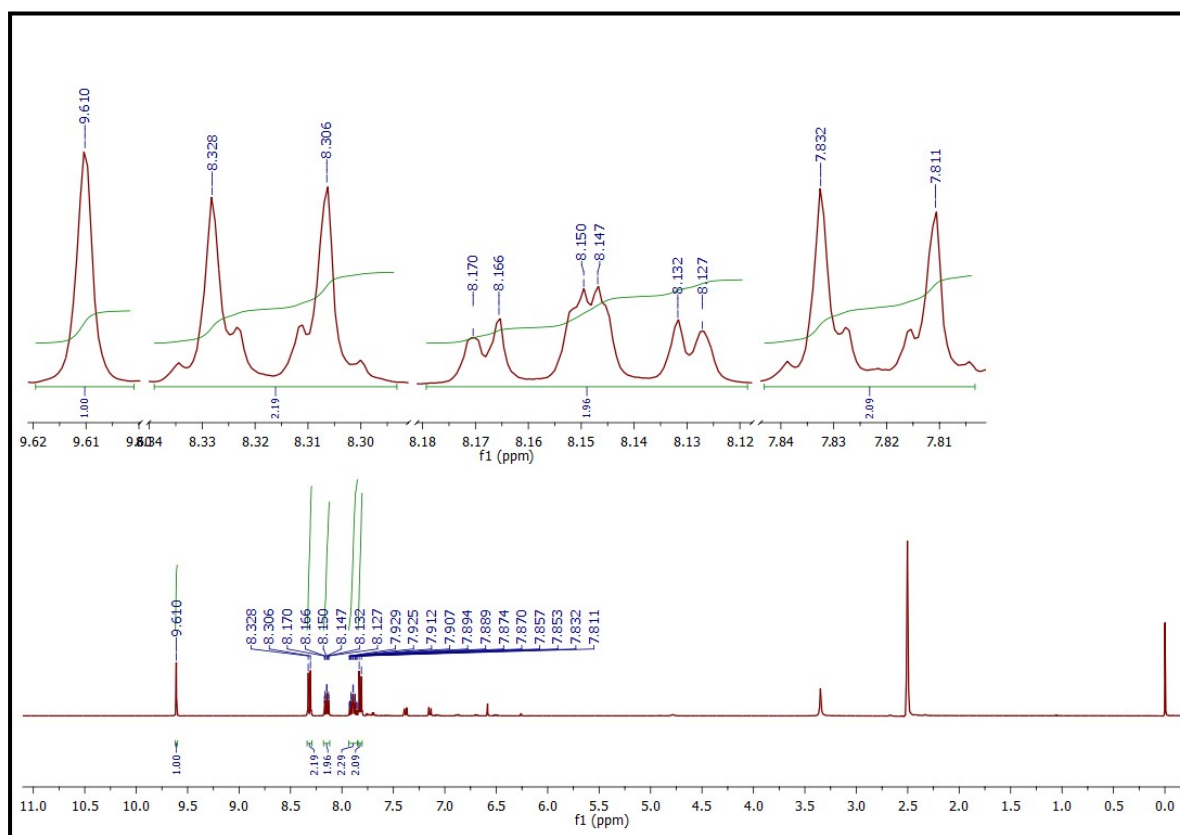


Figure S4. $^1\text{H-NMR}$ spectrum of 2-(4-bromophenyl)quinoxaline (**3d**).

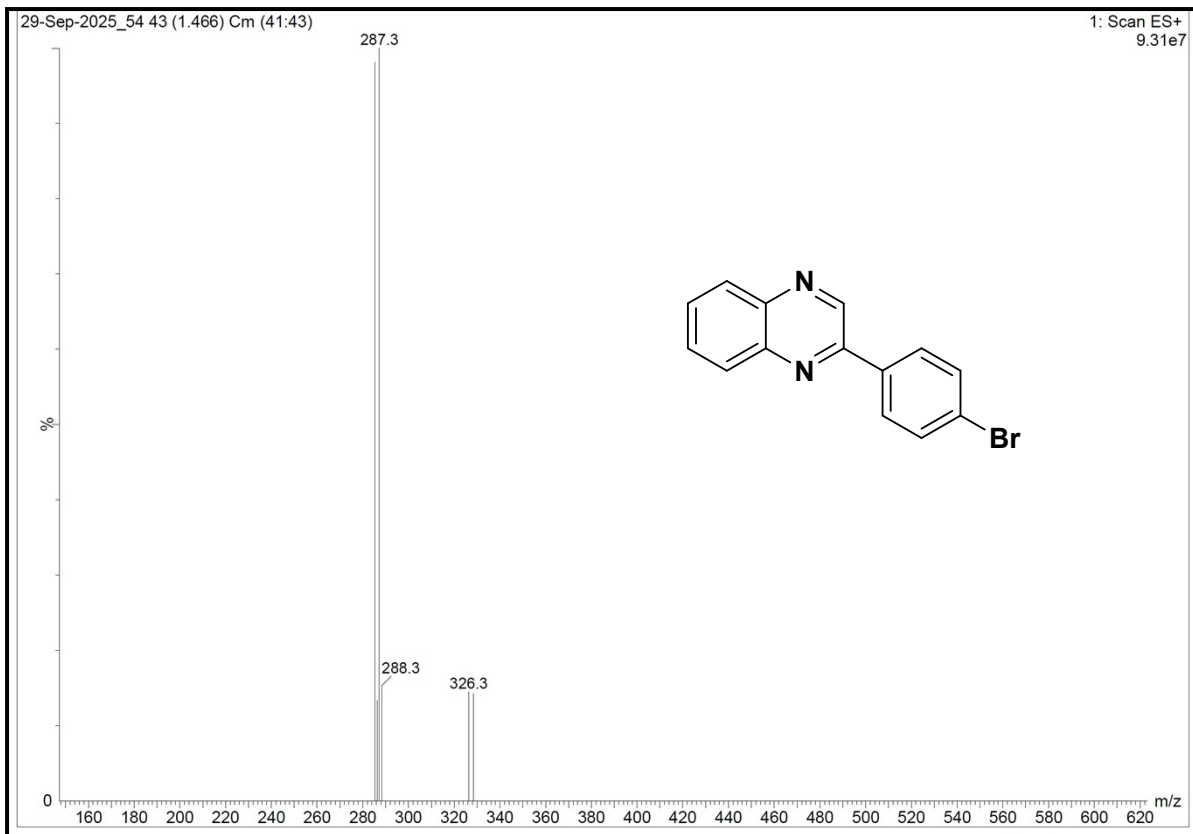


Figure S5. Mass spectrum of 2-(4-bromophenyl)quinoxaline (**3d**)

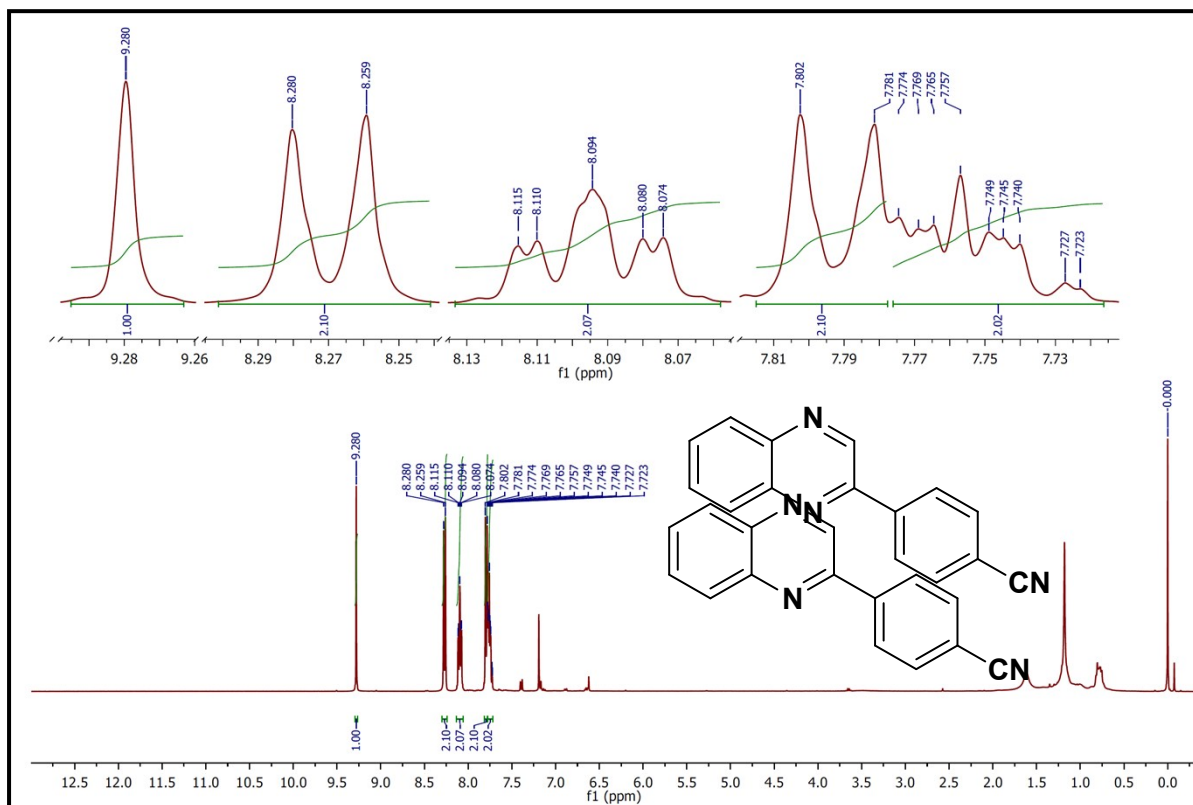


Figure S6. $^1\text{H-NMR}$ spectrum of 4-(quinoxalin-2-yl)benzotrile (**3g**).

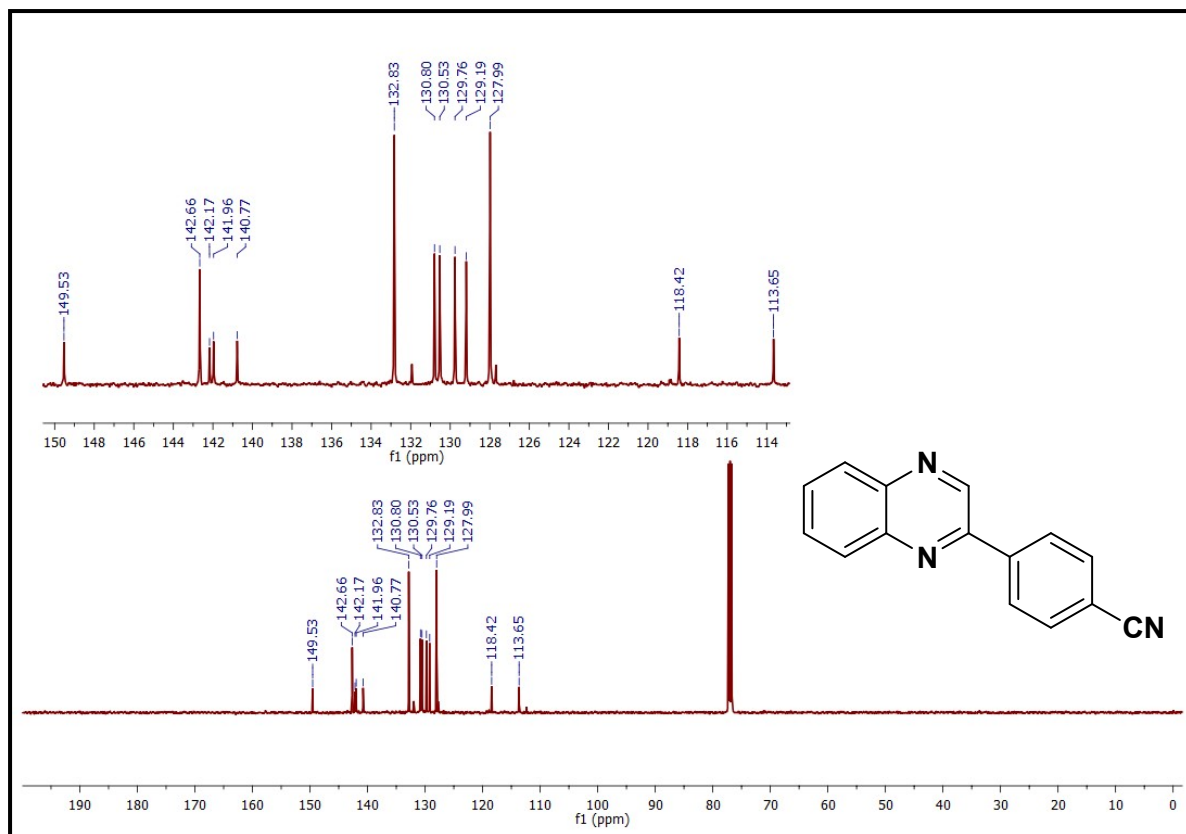


Figure S7. ^{13}C -NMR spectrum of 4-(quinoxalin-2-yl)benzonitrile (**3g**).

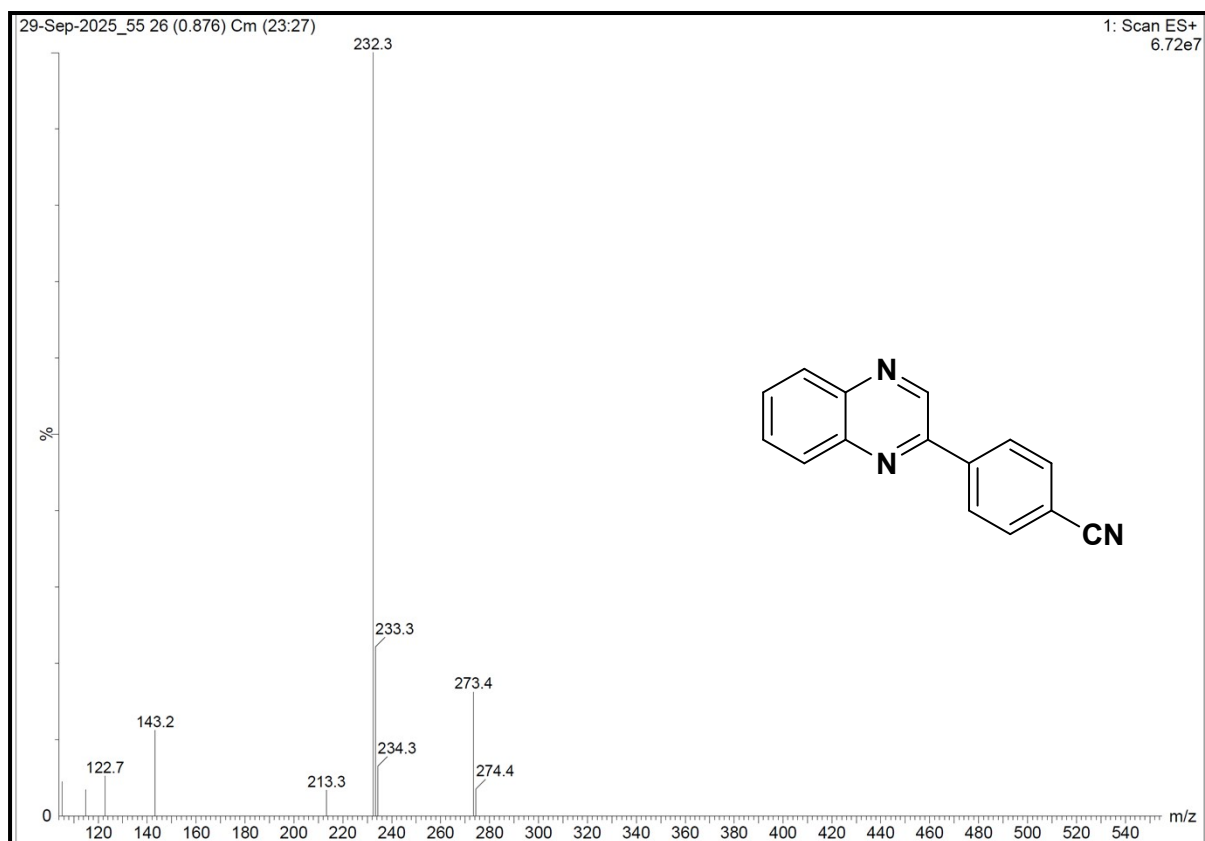


Figure S8. Mass spectrum of 4-(quinoxalin-2-yl)benzonitrile (**3g**).

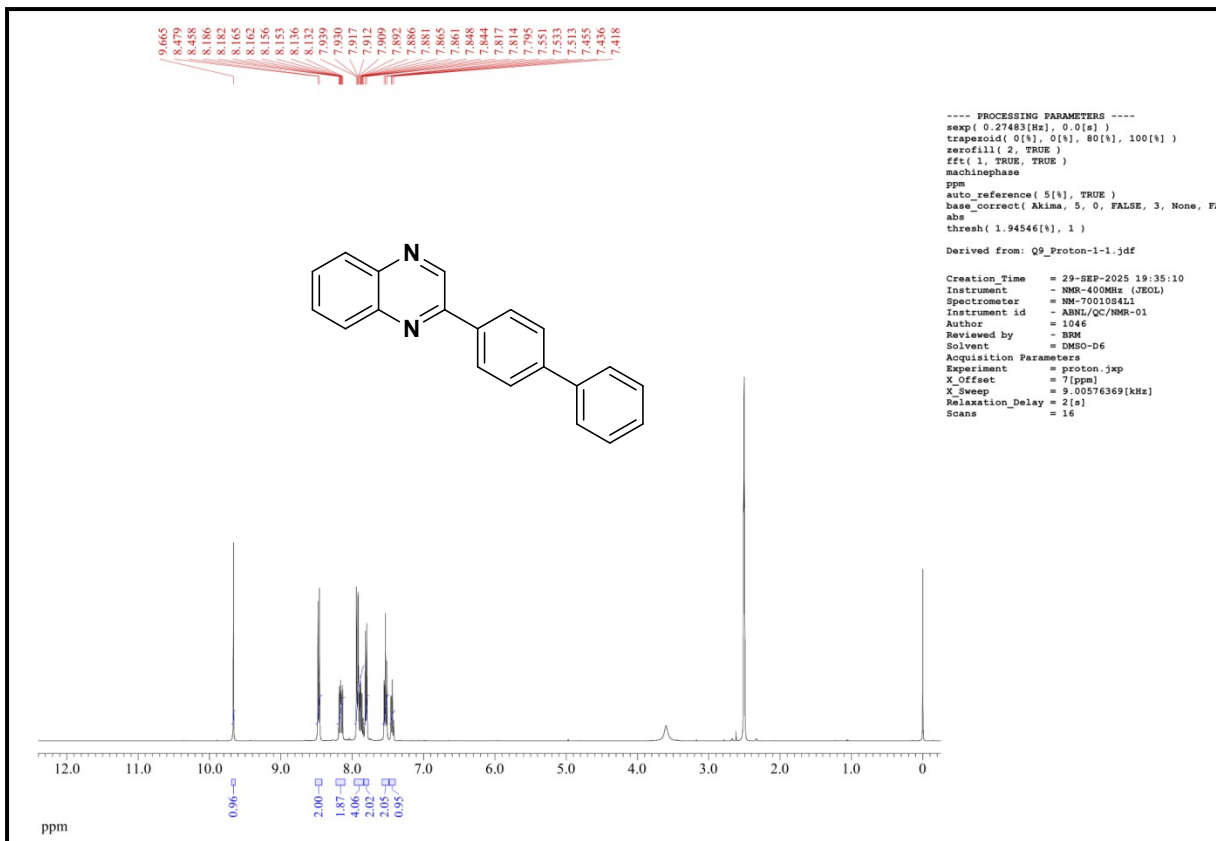


Figure S9. $^1\text{H-NMR}$ Spectrum of 2-([1,1'-biphenyl]-4-yl)quinoxaline (3h).

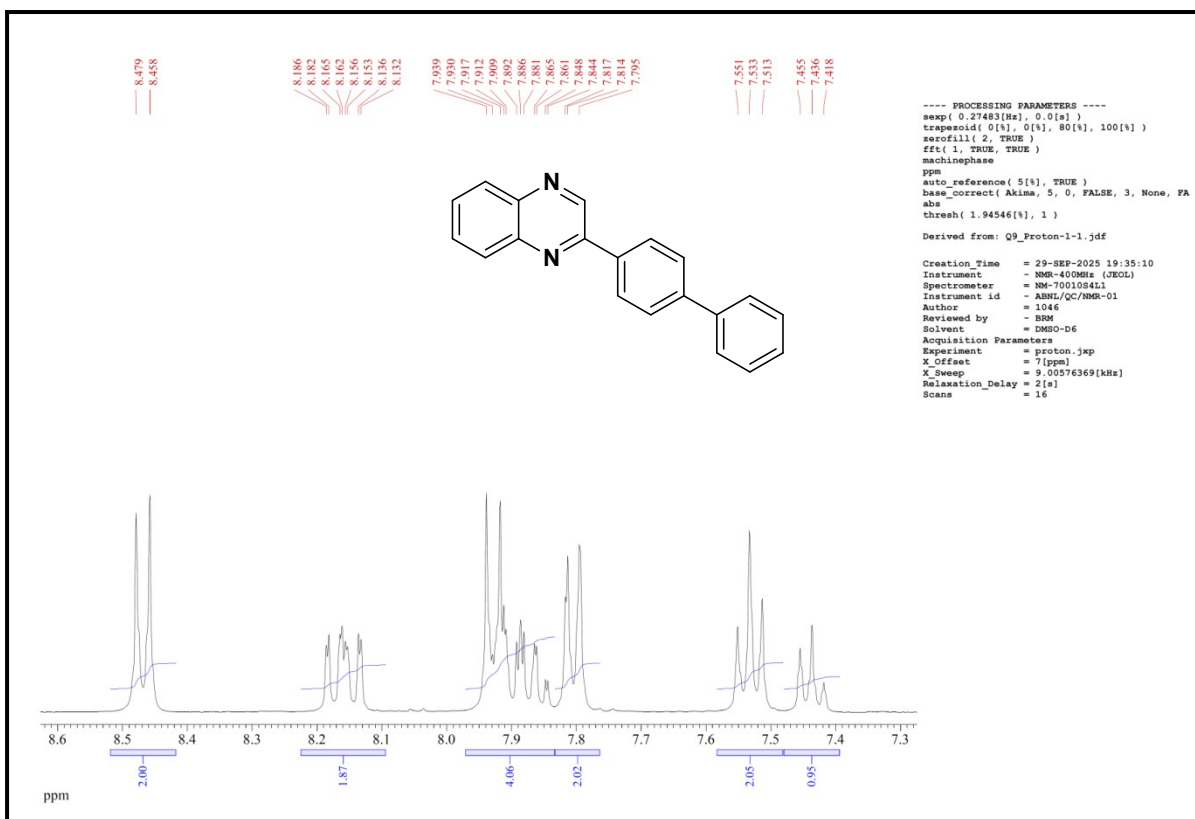


Figure S10. Expanded $^1\text{H-NMR}$ Spectrum of 2-([1,1'-biphenyl]-4-yl)quinoxaline (3h).

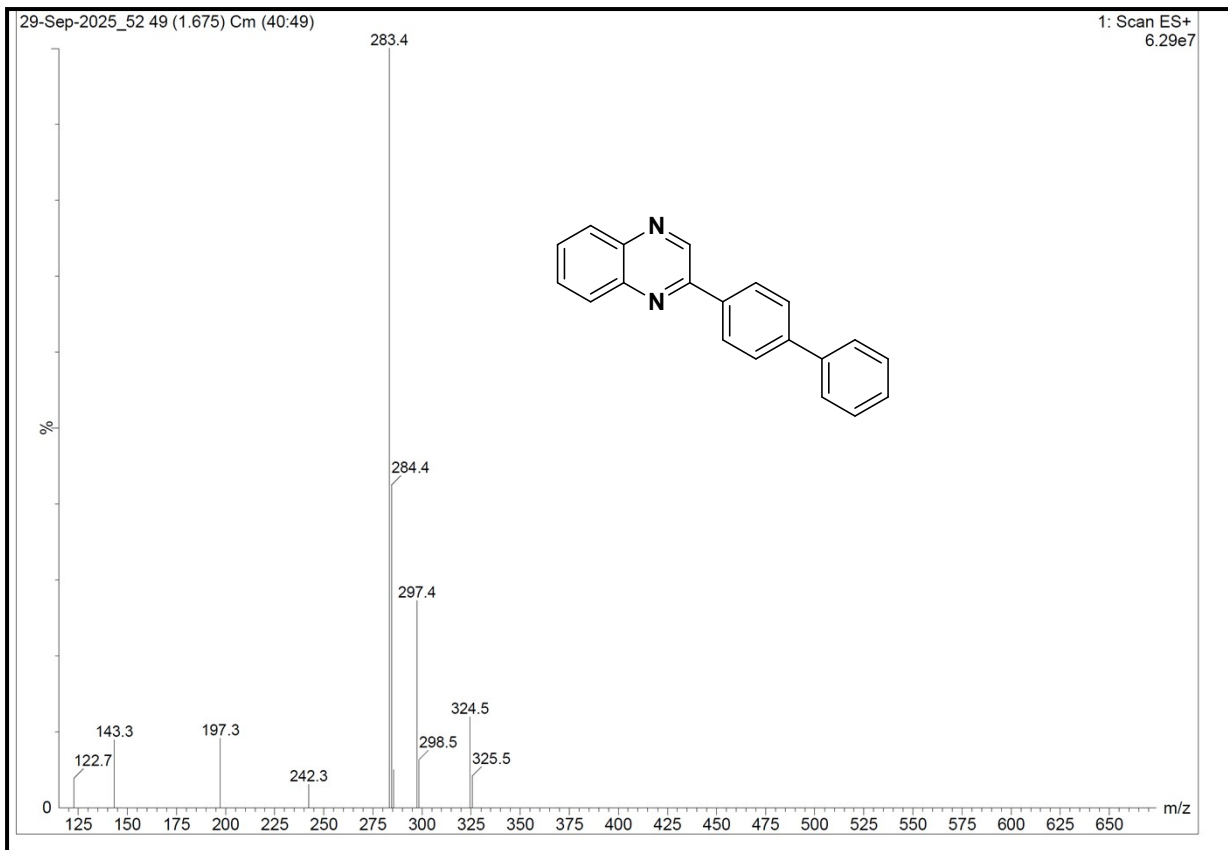


Figure S11. Mass spectrum of 2-([1,1'-biphenyl]-4-yl)quinoxaline (**3h**).

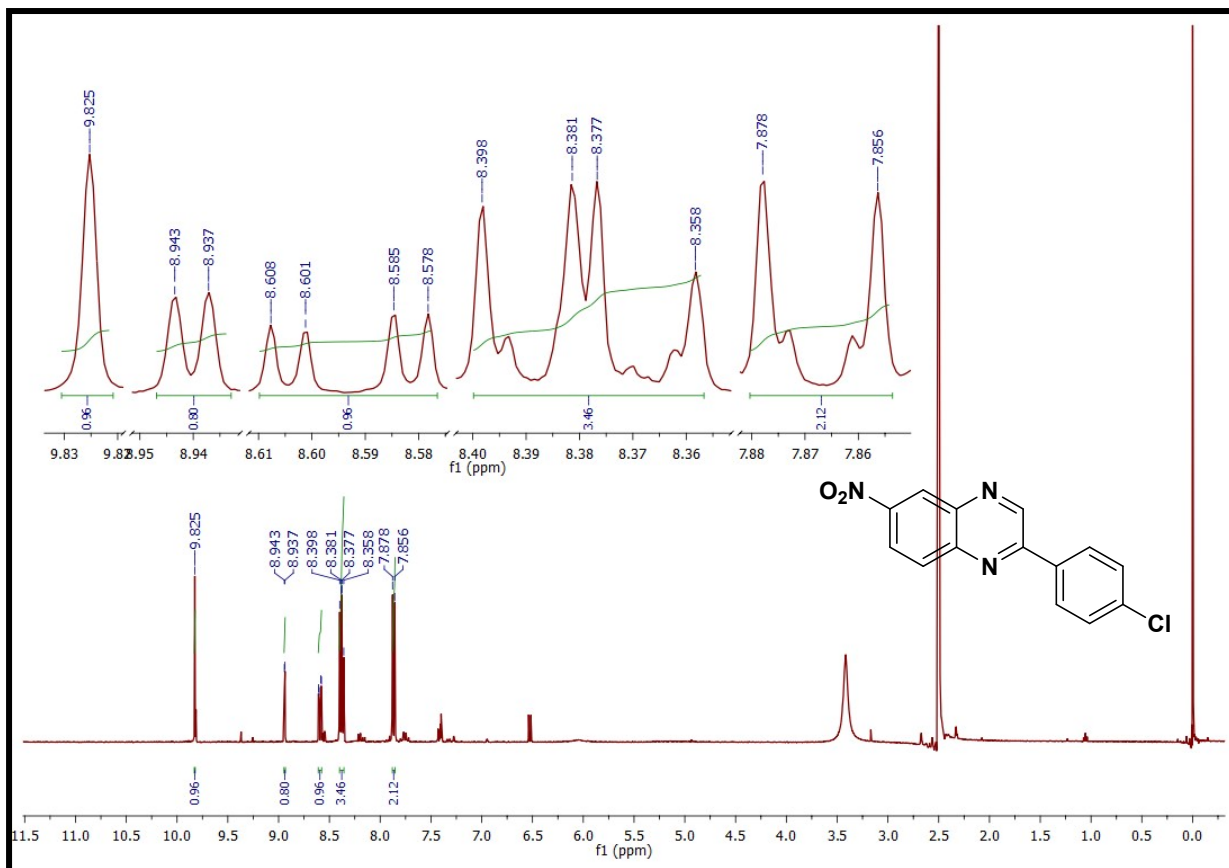


Figure S12. $^1\text{H-NMR}$ spectrum of 2-(4-chlorophenyl)-6-nitroquinoxaline (**3i**)

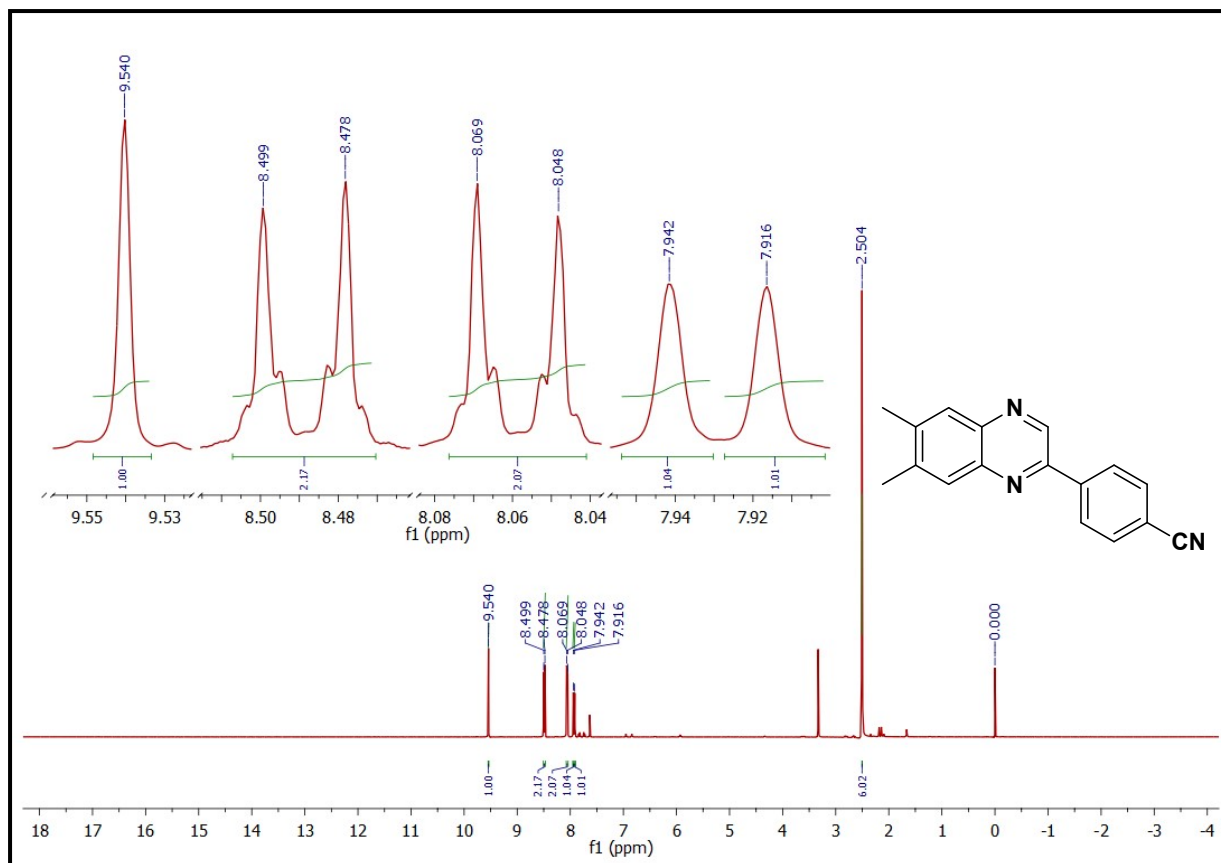


Figure S13. ¹H-NMR spectrum of 4-(6,7-dimethylquinoxalin-2-yl)benzonitrile (**3u**).

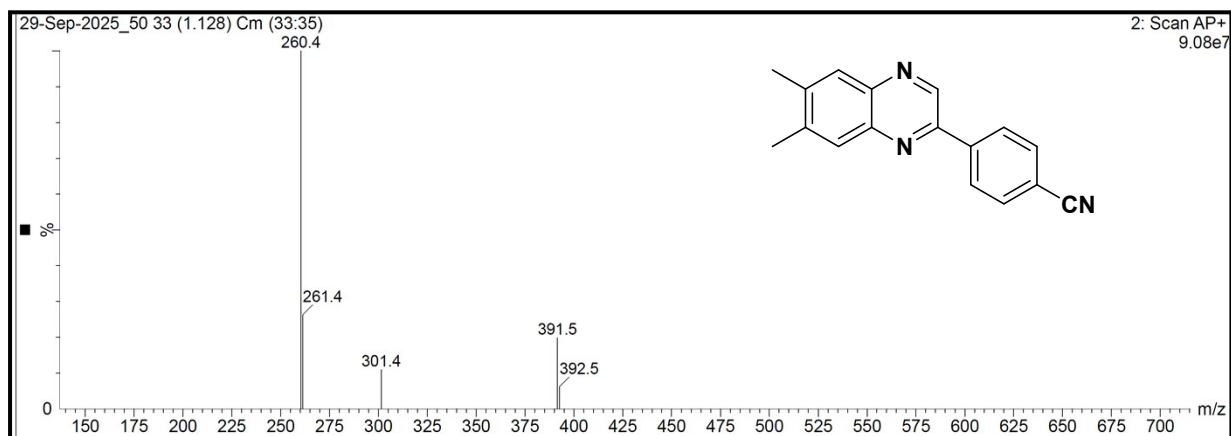


Figure S14. Mass spectrum of 4-(6,7-dimethylquinoxalin-2-yl)benzonitrile (**3u**).

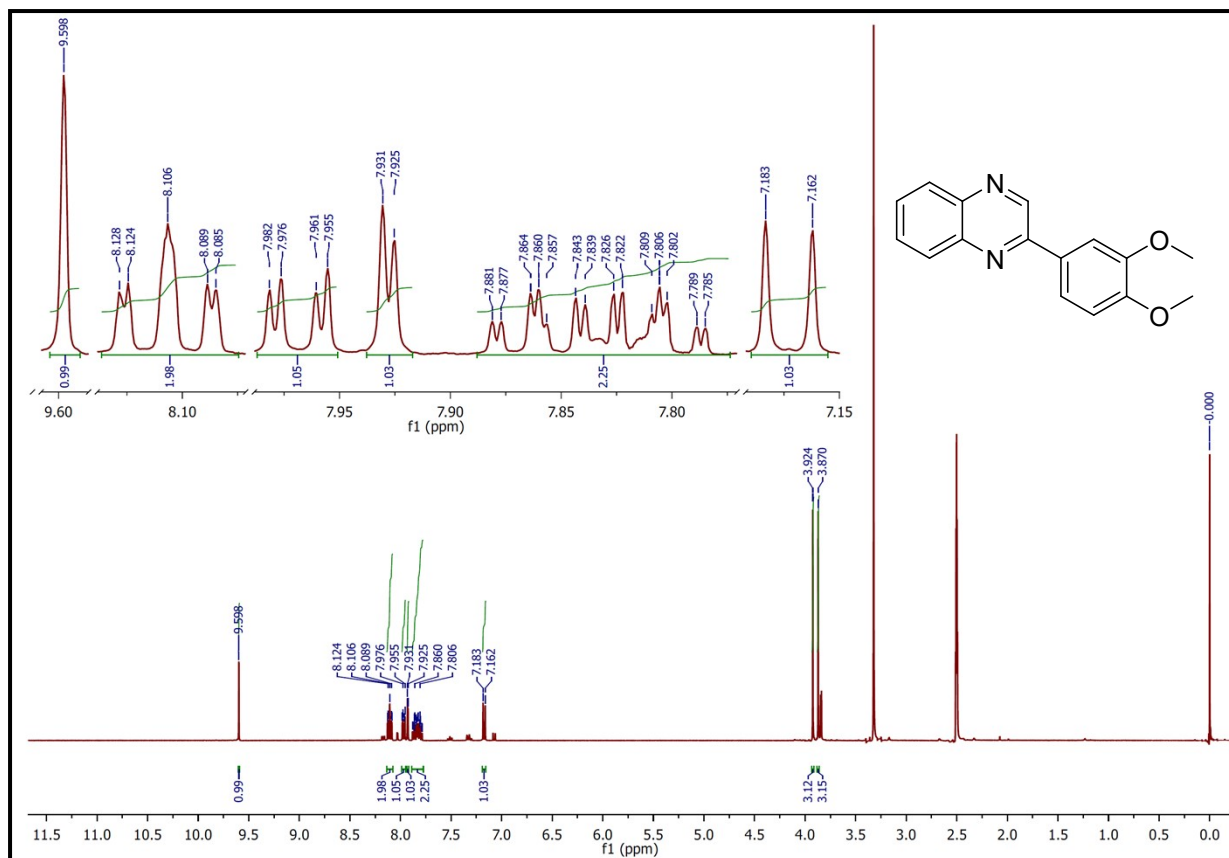


Figure S15. $^1\text{H-NMR}$ spectrum of 2-(3,4-dimethoxyphenyl)quinoxaline (**3x**).

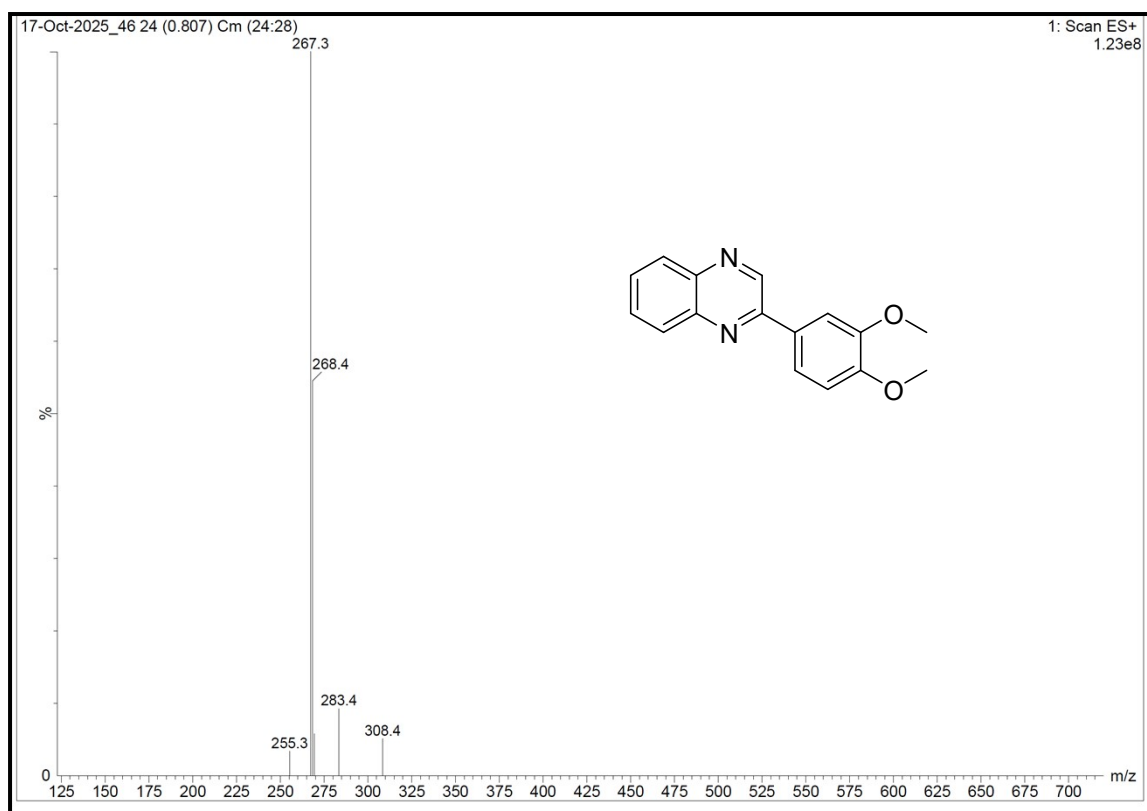


Figure S16. Mass spectrum of 2-(3,4-dimethoxyphenyl)quinoxaline (**3x**).

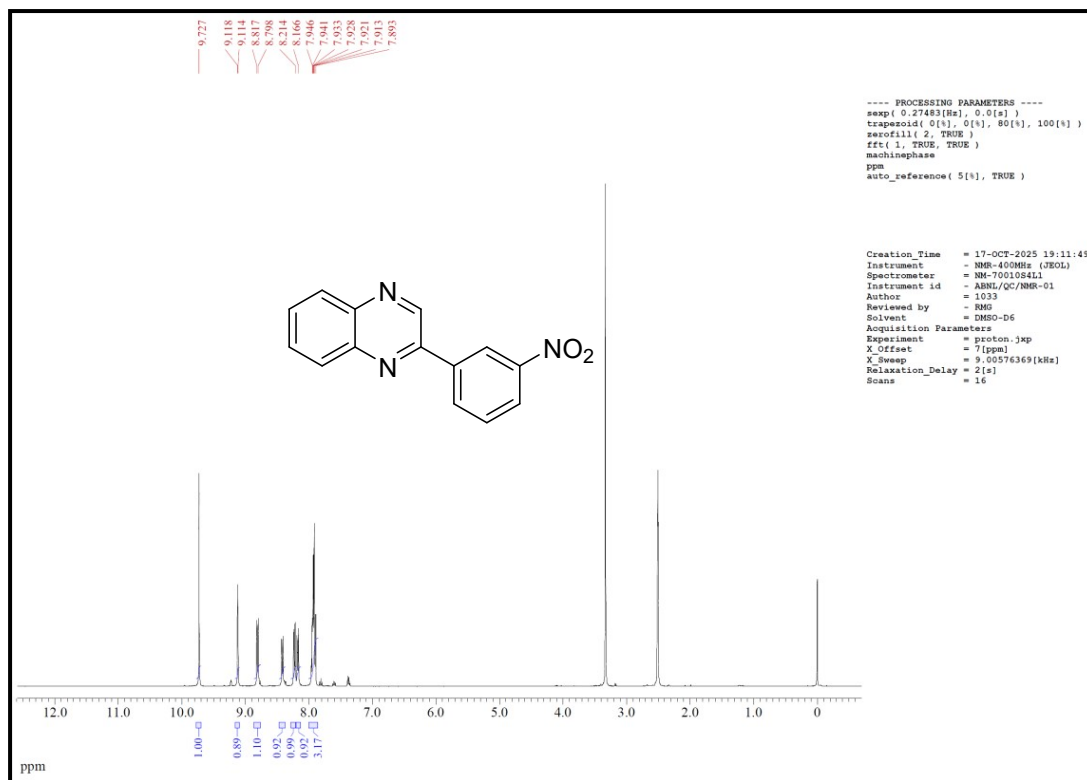


Figure S17. $^1\text{H-NMR}$ spectrum of 2-(3-nitrophenyl)quinoxaline (**3y**).

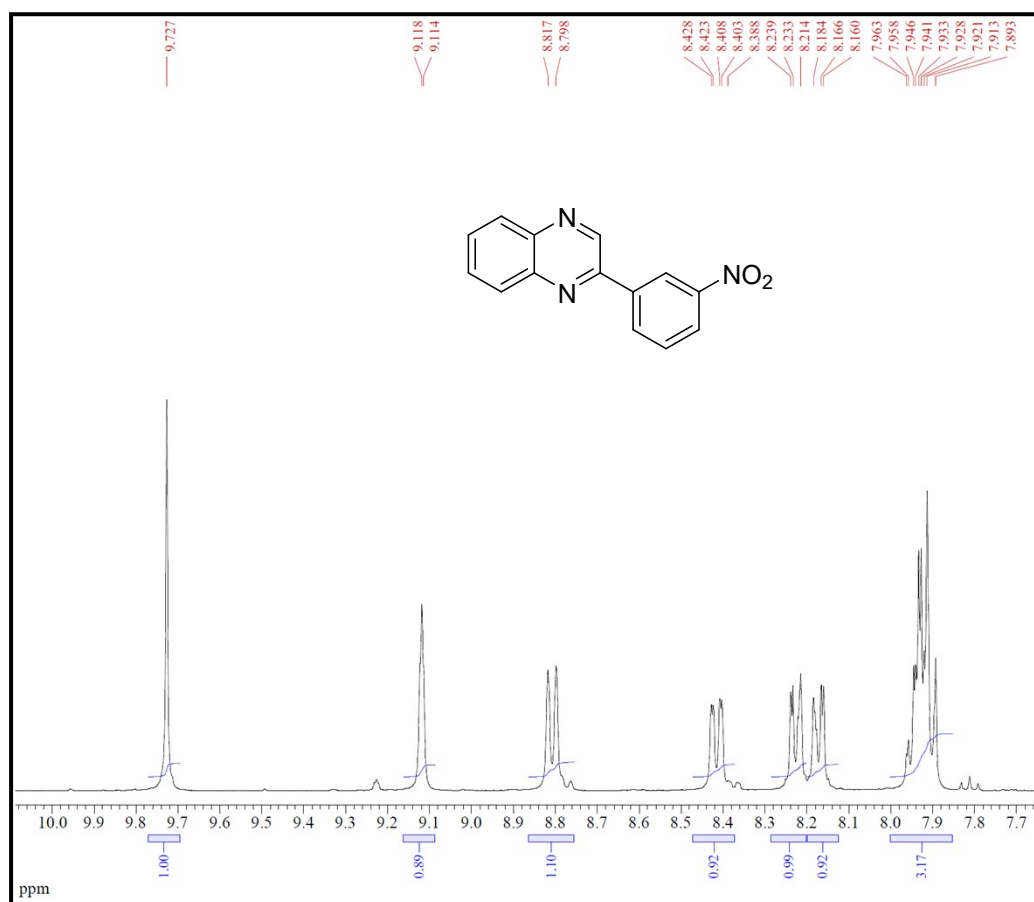


Figure S18. Expanded $^1\text{H-NMR}$ spectrum of 2-(3-nitrophenyl)quinoxaline (**3y**).

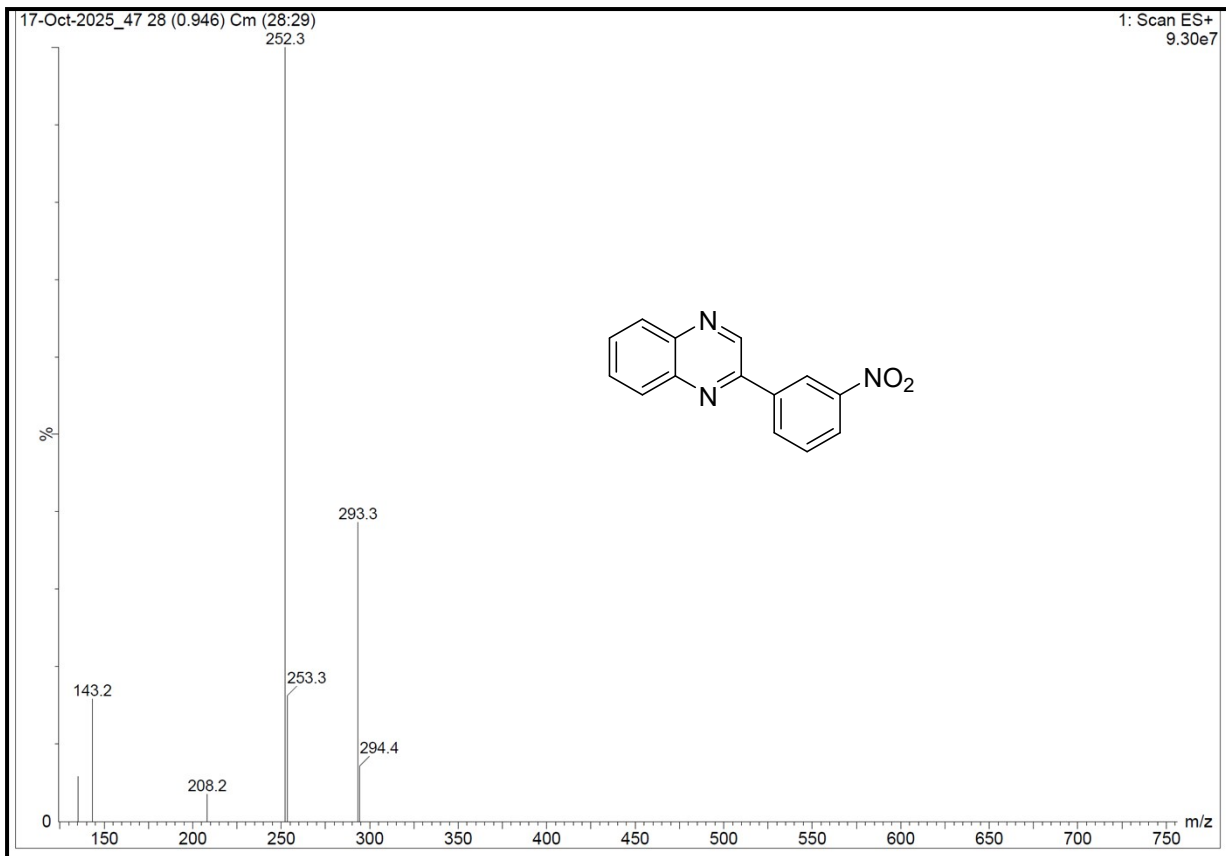


Figure S19. Mass spectrum of 2-(3-nitrophenyl)quinoxaline (**3y**).

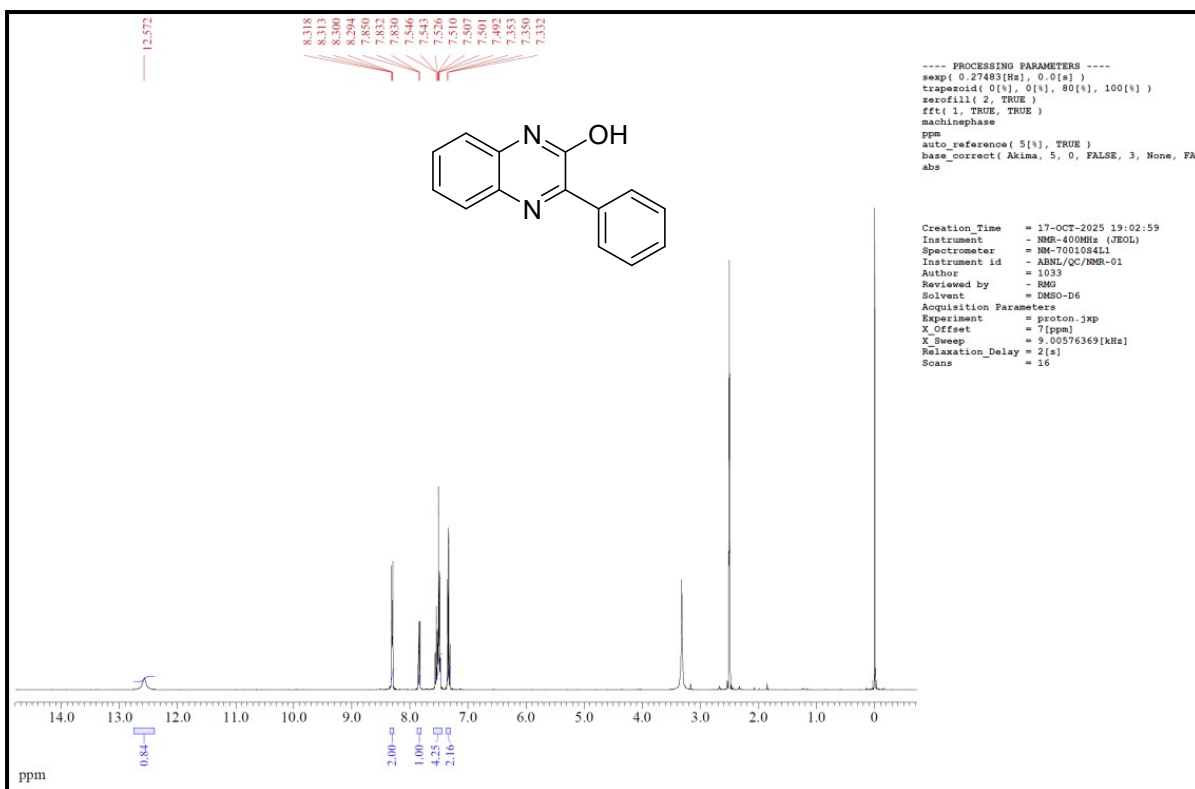


Figure S20. $^1\text{H-NMR}$ spectrum of 3-phenylquinoxalin-2-ol (**3ab**).

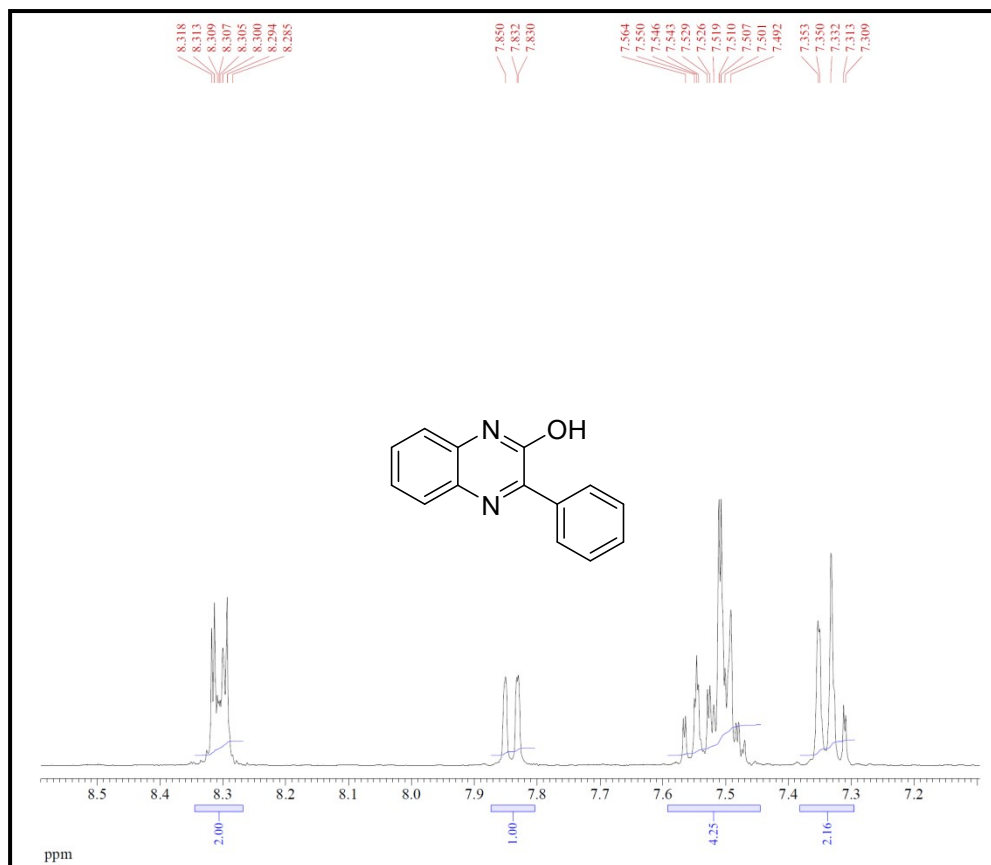


Figure S21. Expanded $^1\text{H-NMR}$ spectrum of 3-phenylquinoxalin-2-ol (**3ab**).

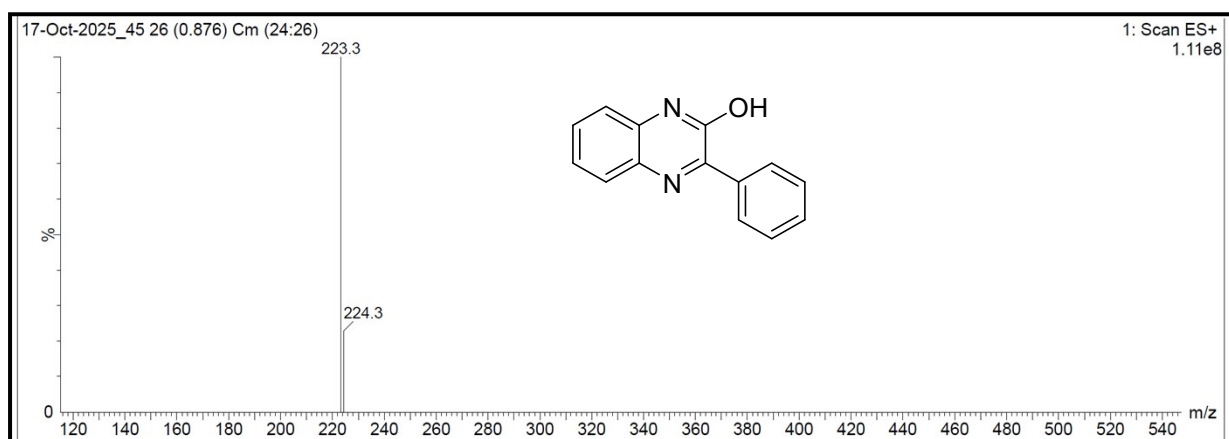


Figure S22. Mass spectrum of 3-phenylquinoxalin-2-ol (**3ab**).

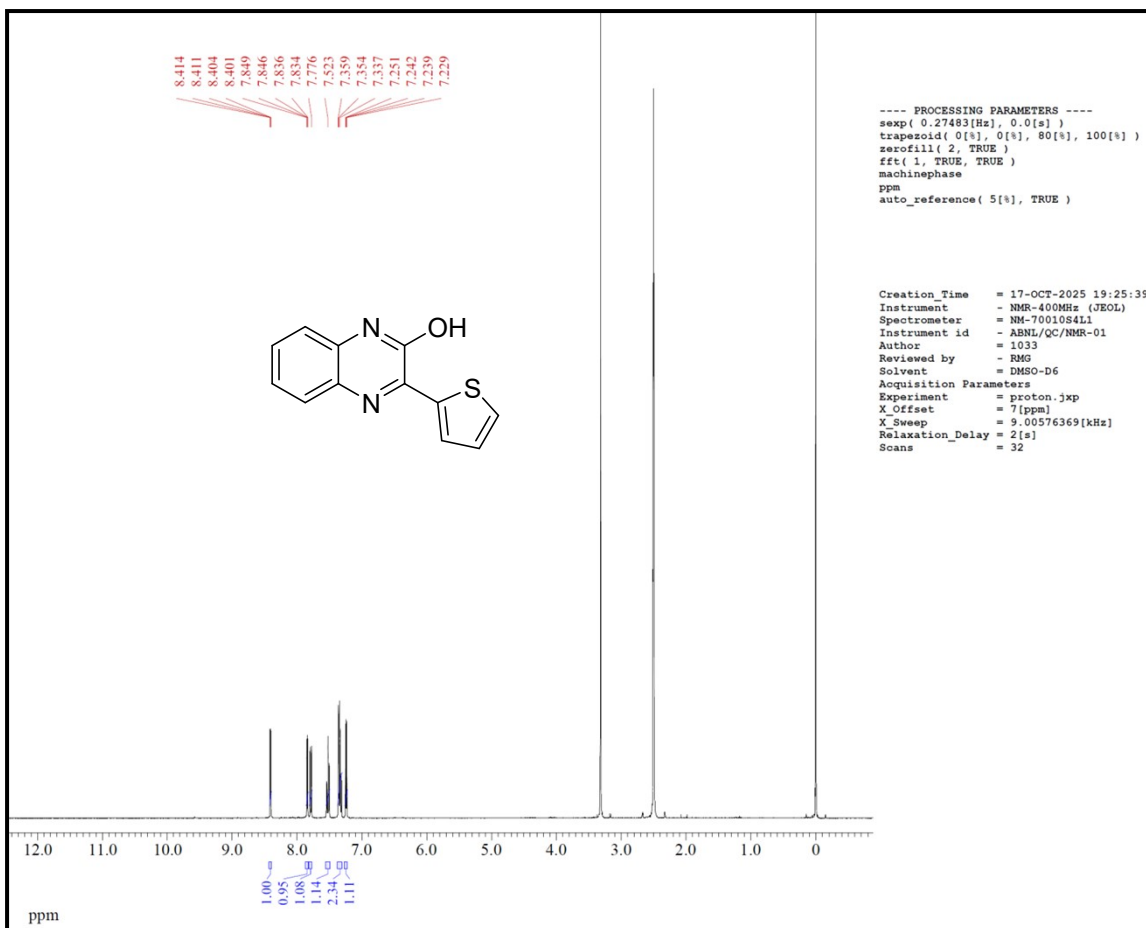


Figure S23. $^1\text{H-NMR}$ spectrum of 3-(thiophen-2-yl)quinoxalin-2-ol (**3ac**).

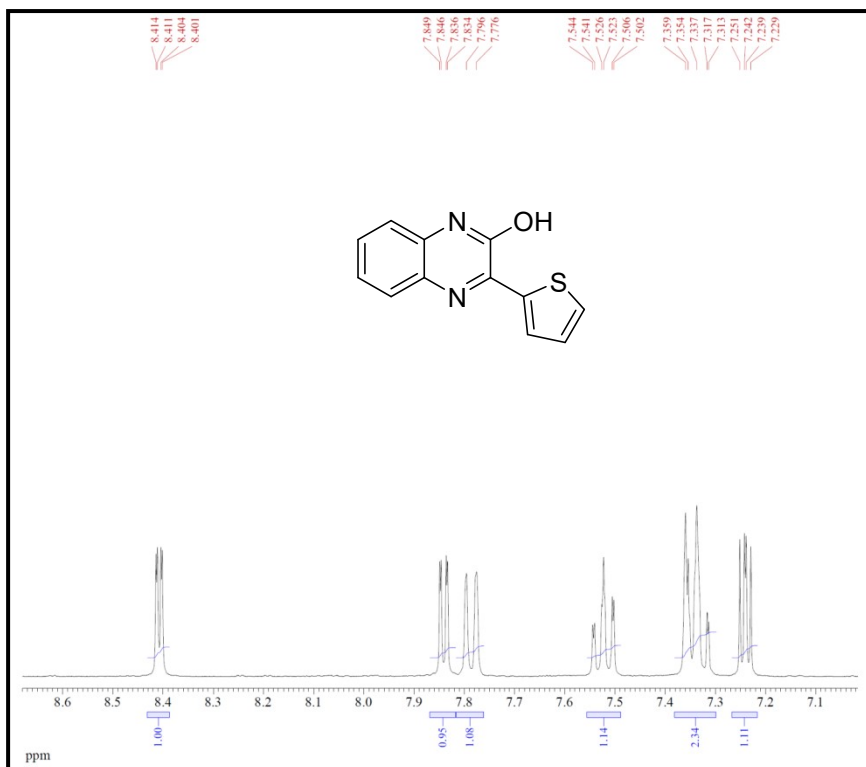


Figure S24. Expanded $^1\text{H-NMR}$ spectrum of 3-(thiophen-2-yl)quinoxalin-2-ol (**3ac**).

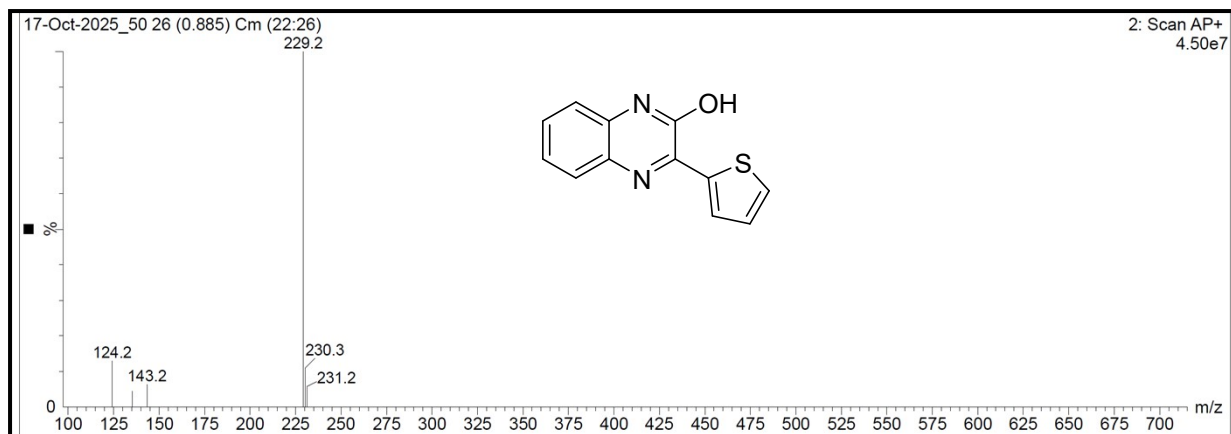


Figure S25. Mass spectrum of 3-(thiophen-2-yl)quinoxalin-2-ol (**3ac**).

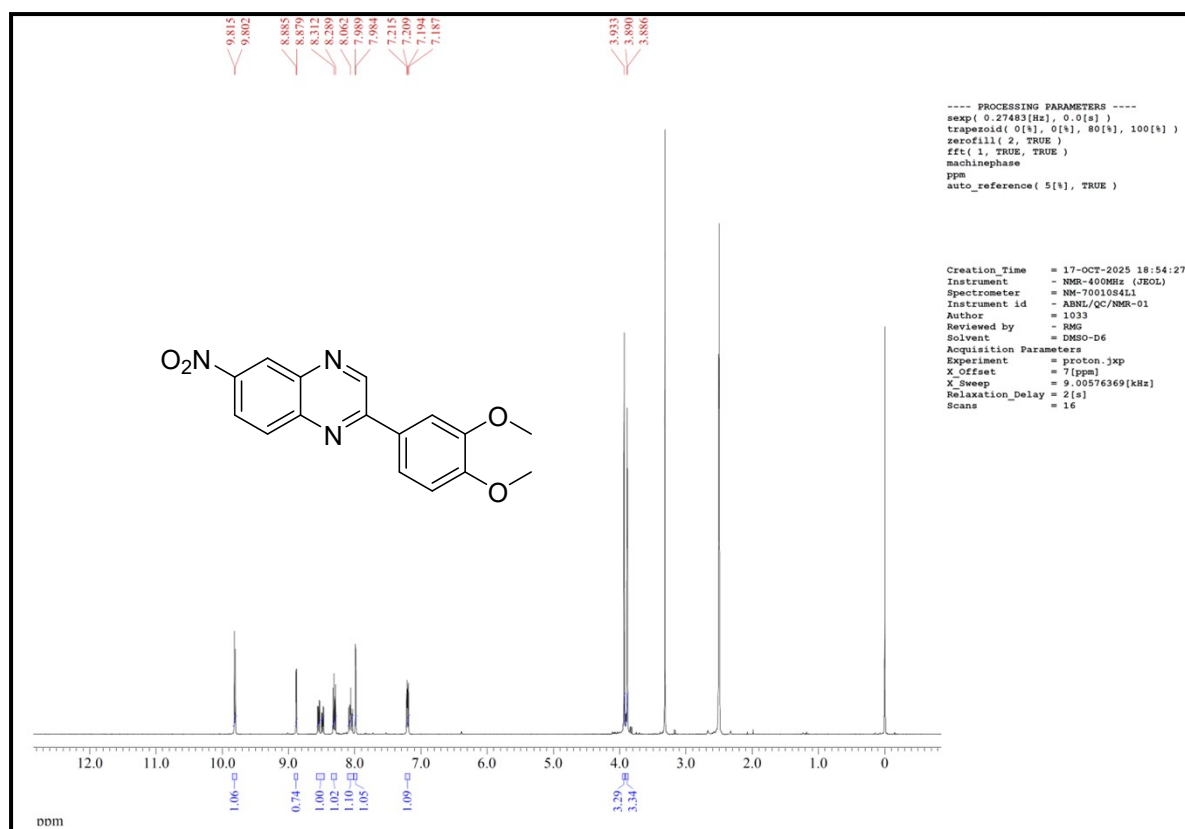


Figure S26. $^1\text{H-NMR}$ spectrum of 2-(3,4-dimethoxyphenyl)-6-nitroquinoxaline (**3ad**).

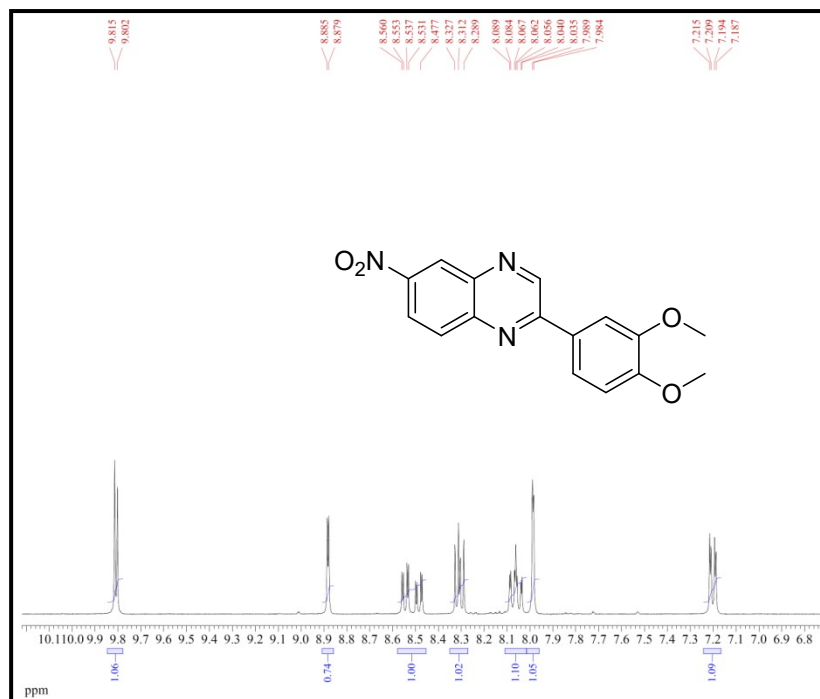


Figure S27. Expanded $^1\text{H-NMR}$ spectrum of 2-(3,4-dimethoxyphenyl)-6-nitroquinoxaline (**3ad**).

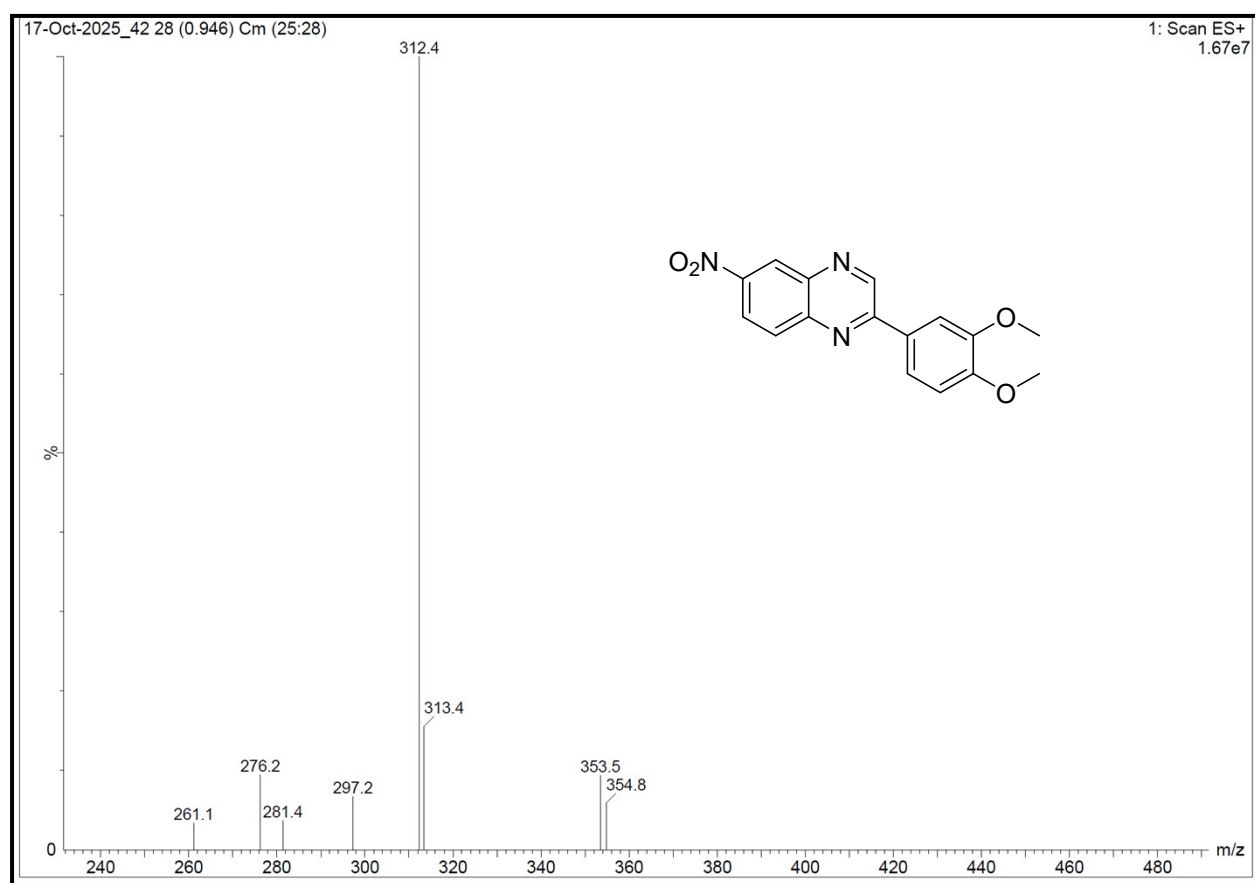


Figure S28. Mass spectrum of 2-(3,4-dimethoxyphenyl)-6-nitroquinoxaline (**3ad**).

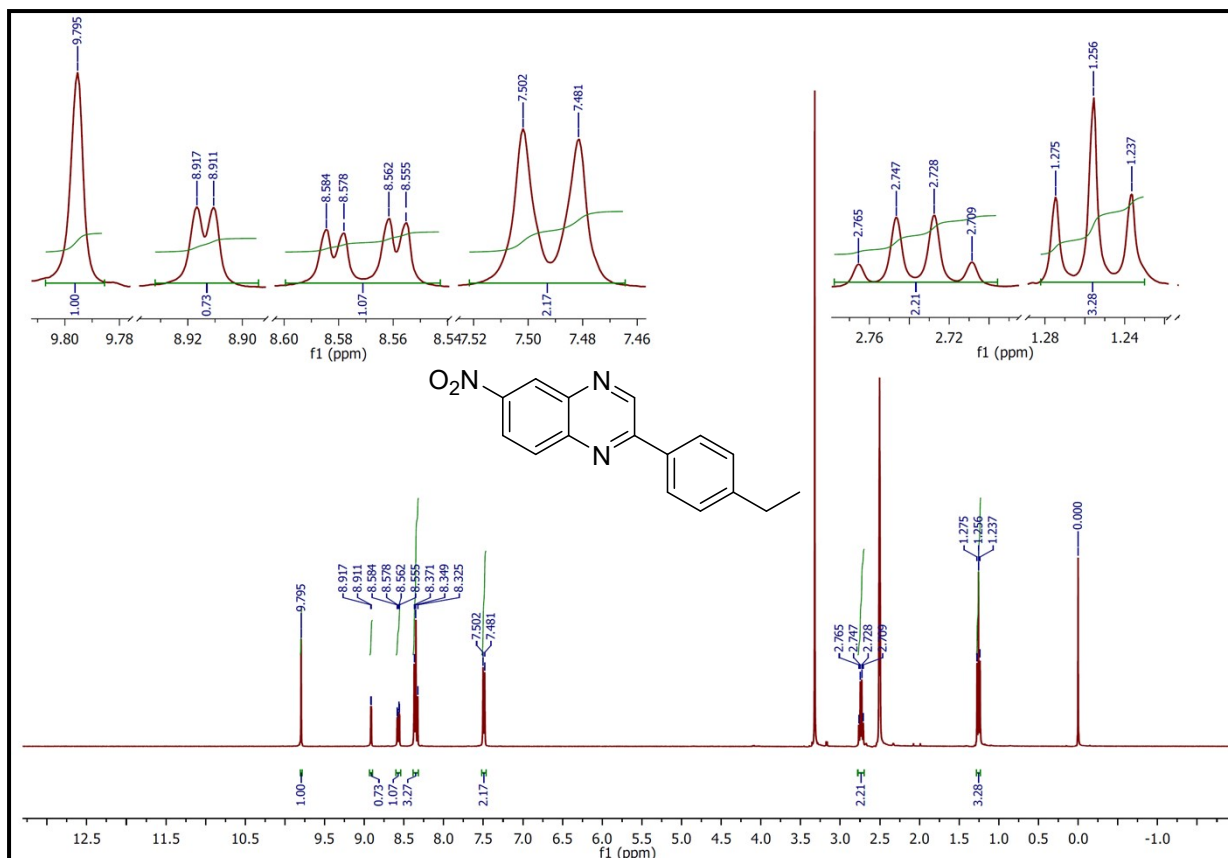


Figure S29. $^1\text{H-NMR}$ spectrum of 2-(4-ethylphenyl)-6-nitroquinoxaline (**3ae**).

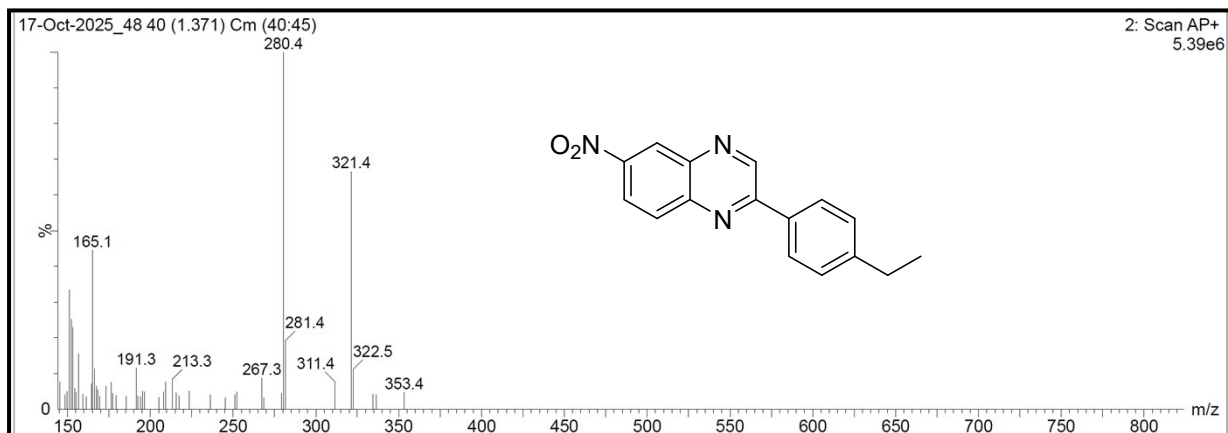


Figure S30. Mass spectrum of 2-(4-ethylphenyl)-6-nitroquinoxaline (**3ae**).

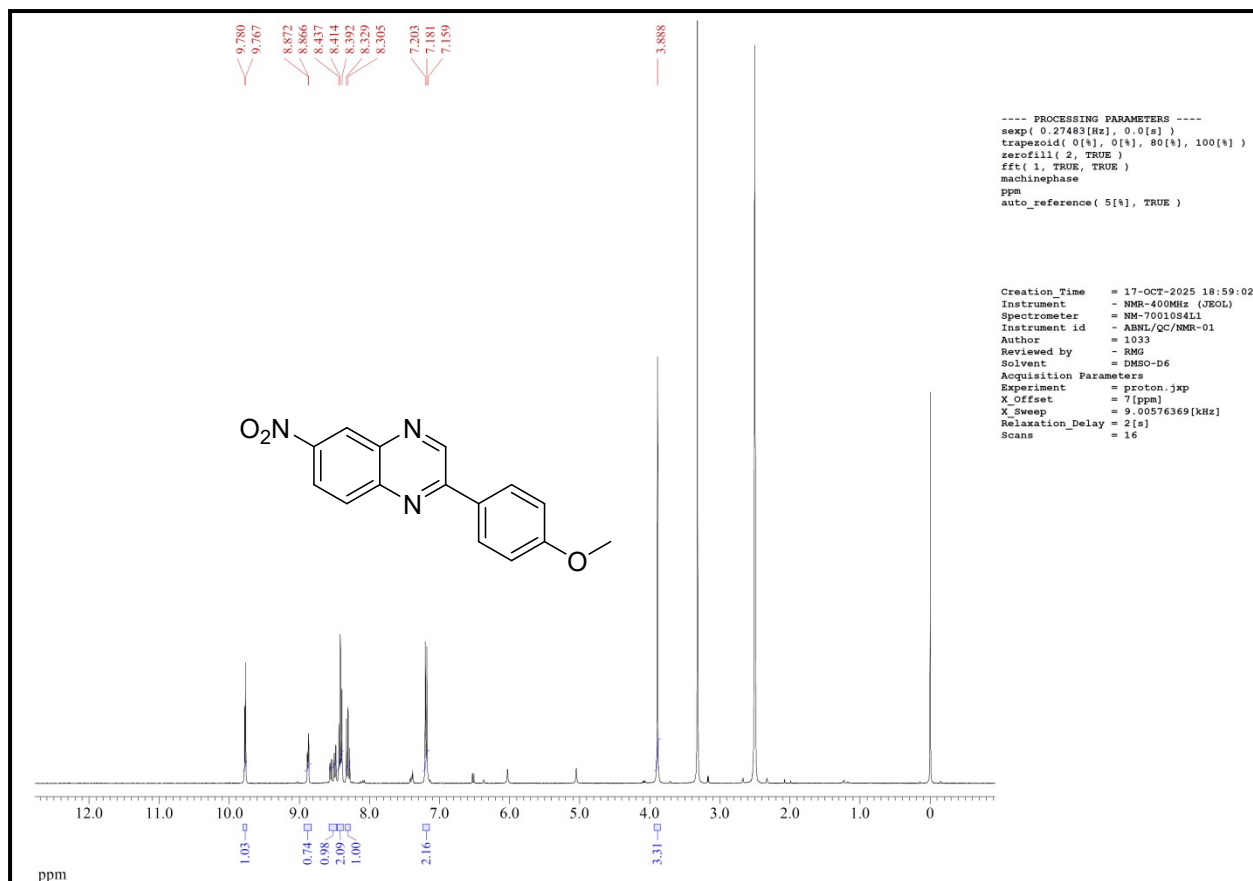


Figure S31. $^1\text{H-NMR}$ spectrum of 3-(4-methoxyphenyl)-7-nitro-1,2-dihydroquinoxaline (**3ag**).

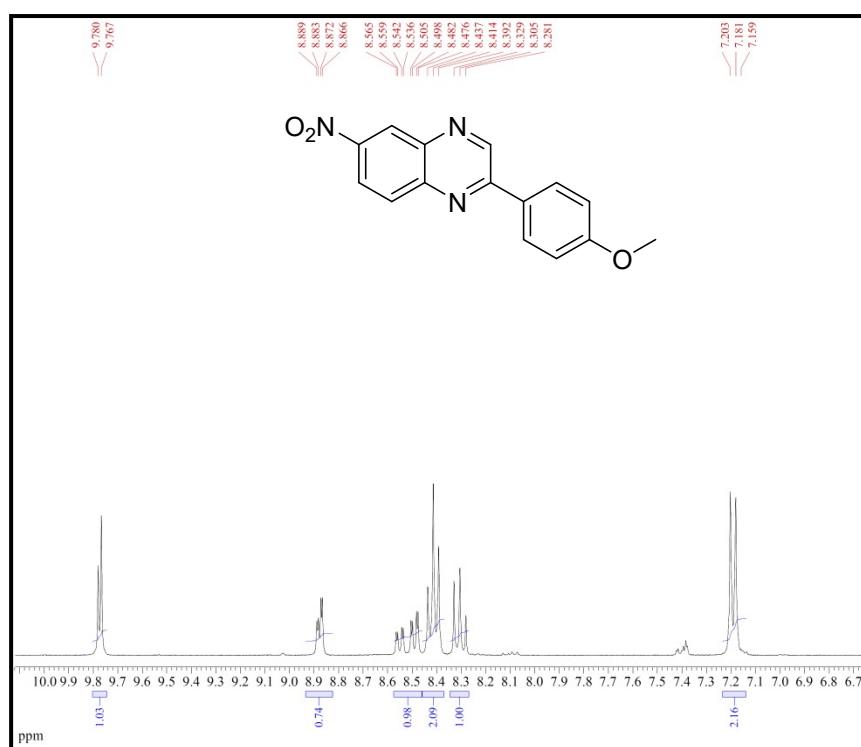


Figure S32. Expanded $^1\text{H-NMR}$ spectrum of 3-(4-methoxyphenyl)-7-nitro-1,2-dihydroquinoxaline (**3ag**).

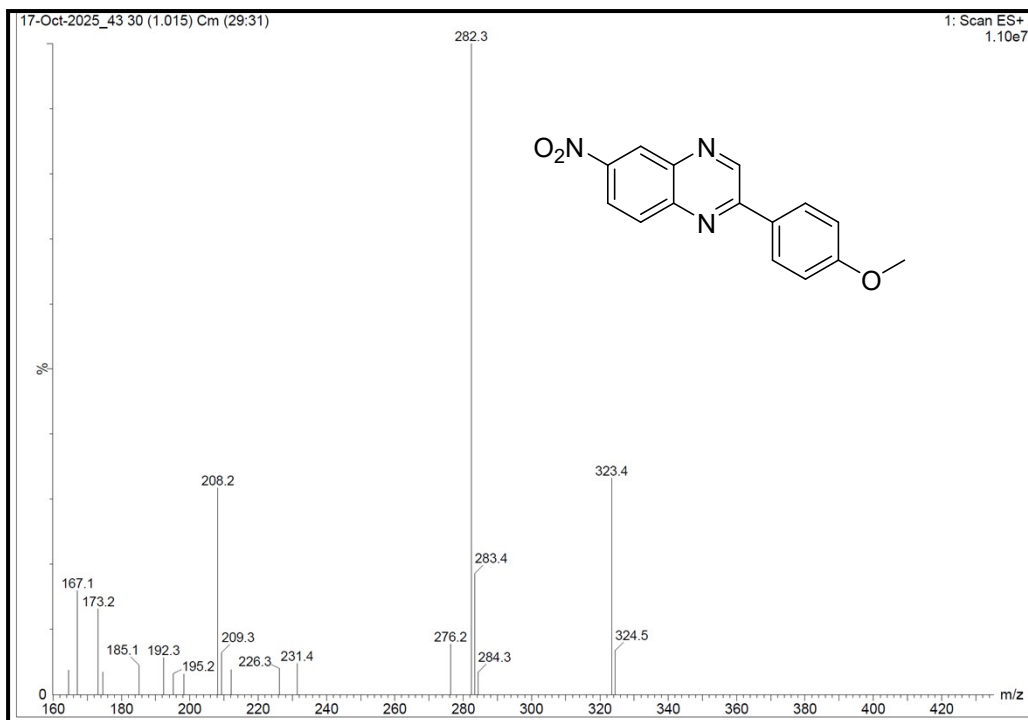


Figure S33. Mass spectrum of 3-(4-methoxyphenyl)-7-nitro-1,2-dihydroquinoxaline (**3ag**).

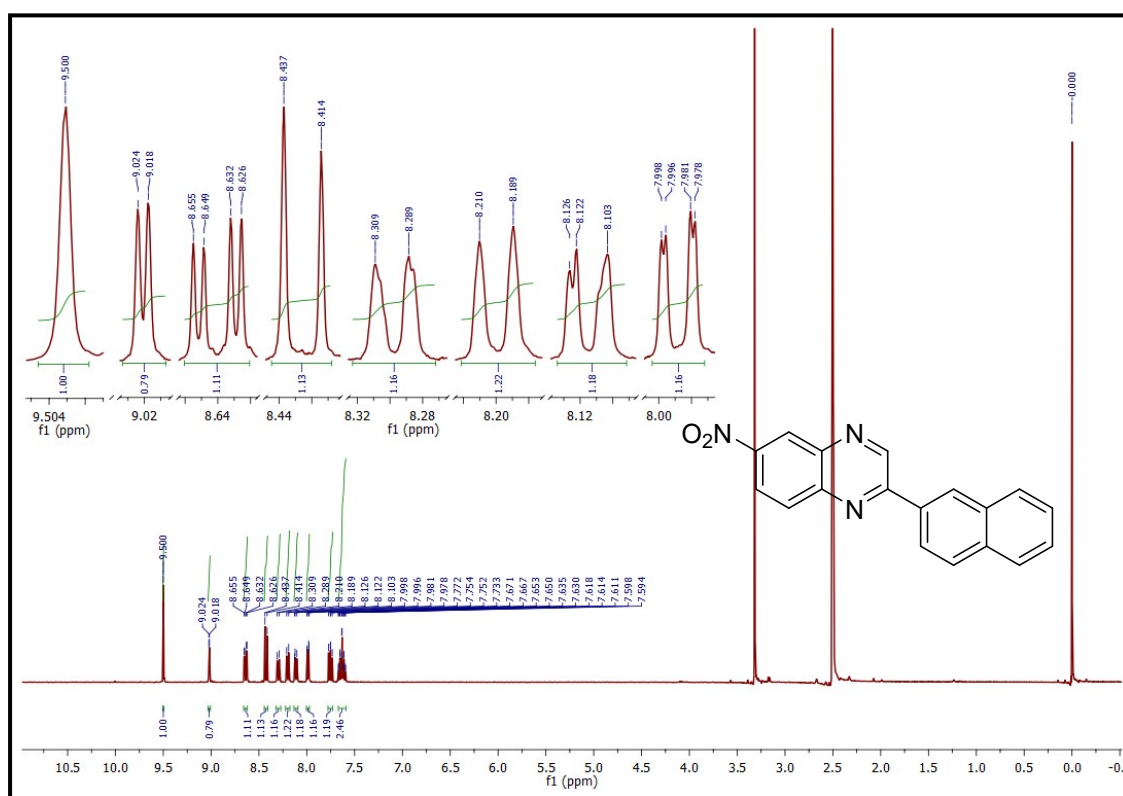


Figure S34. ¹H-NMR spectrum of 2-(naphthalen-2-yl)-6-nitroquinoxaline (**3ai**).

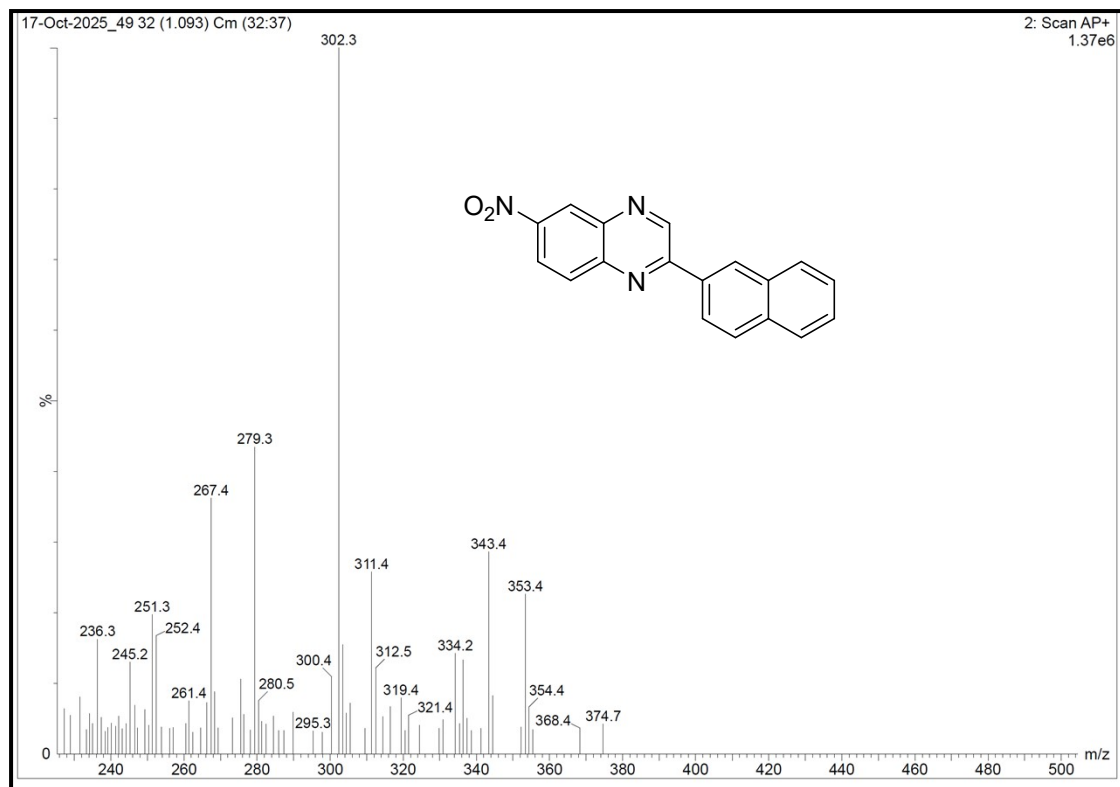
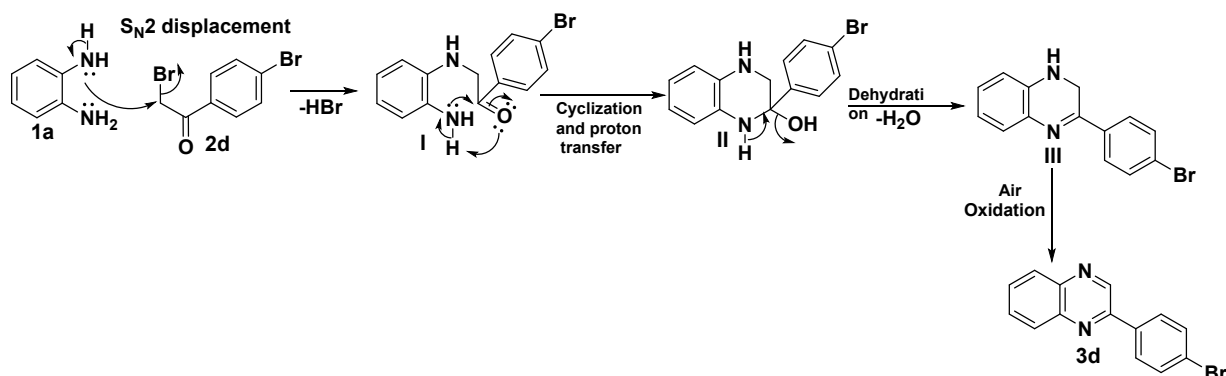


Figure S35. Mass spectrum of 2-(naphthalen-2-yl)-6-nitroquinoxaline (**3ai**).

SI-4: Mass spectral Evidence for the formation of intermediates **I** and **III** in the synthesis of 2-(4-bromophenyl)quinoxaline (**3d**) *via* the reaction between *o*-phenylenediamine (**1a**) and 4-bromophenacyl bromide (**2d**) under a nitrogen atmosphere at 55–60°C.

Plausible Mechanistic Pathway:



To support the mechanistic pathway, a control experiment was conducted using *o*-phenylenediamine (**1a**) and 4-bromophenacyl bromide (**2d**) under a nitrogen atmosphere at 55–60°C. The reaction was carefully monitored to detect the formation of the proposed intermediates, **I** and **III**. The samples of the crude reaction mixture were collected at very short time intervals (25–30 sec, sample 1; 40–45 sec, sample 2) and immediately analyzed by

mass spectrometry. The corresponding mass spectra for samples 1 and 2 are provided in the Supporting Information (Figures S36 and S37).

The mass analysis of sample 1 showed a prominent peak at m/z 305 ($[M+H]^+$), corresponding to intermediate **I**, along with a minor peak at m/z 289.3 ($[M+H+2]^+$), indicating the formation of intermediate **III**. In sample 2, the relative intensity of the peak at m/z 289.1 ($[M+H+2]^+$) increased significantly, while the peak at m/z 305.1 ($[M+H]^+$) decreased, inferring the progression of the reaction from intermediate **I** to **III**. Additionally, a low-intensity peak at m/z 287.1 ($[M+H+2]^+$) was attributable to the final product (**3d**). These observations provide experimental support for the formation of key intermediates **I** & **III** and are consistent with the proposed reaction pathway, including the rapid oxidative aromatization step that occurs likely upon exposure to ambient air.

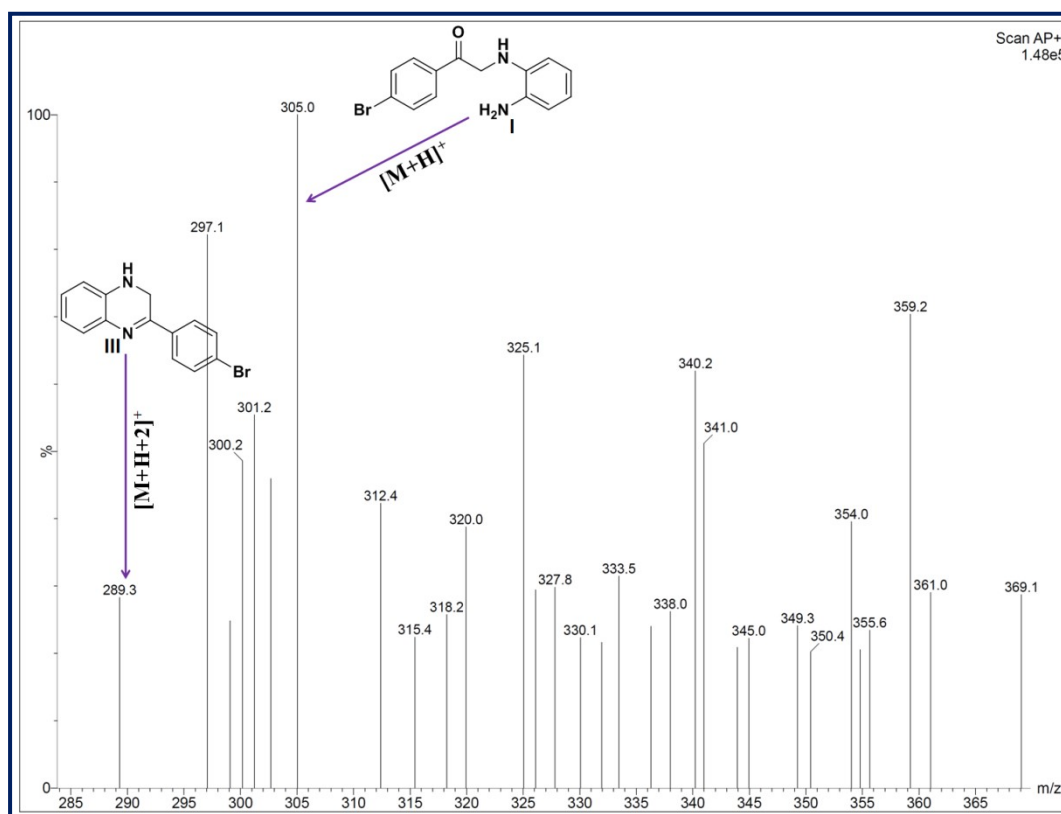


Figure S36. Mass spectrum of sample 1.

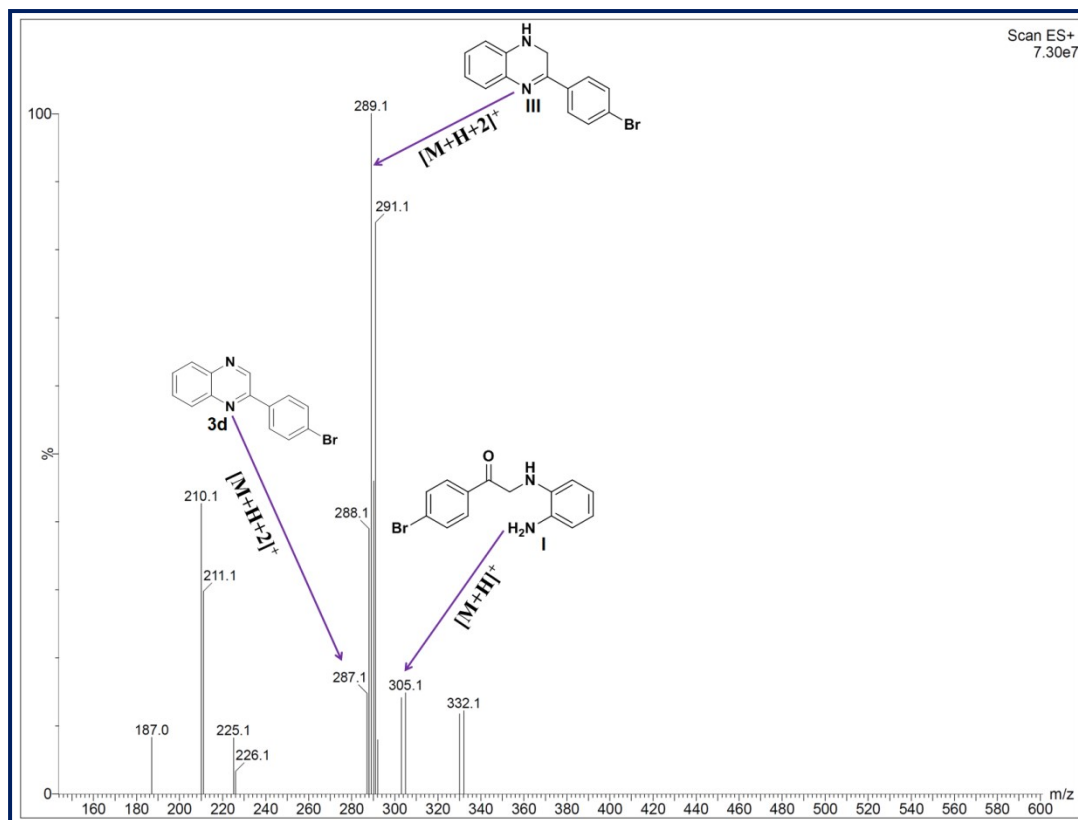


Figure S37. Mass spectrum of sample 2.