**Supporting Information for:**

# A NEW CLASS OF STRUCTURALLY SIMPLE AND HIGHLY EMISSIVE FLUOROPHORES WITH A PYRIDINE–ACETYLENE–PHENOL CONJUGATE

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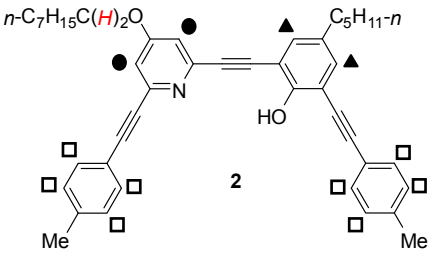
Contents

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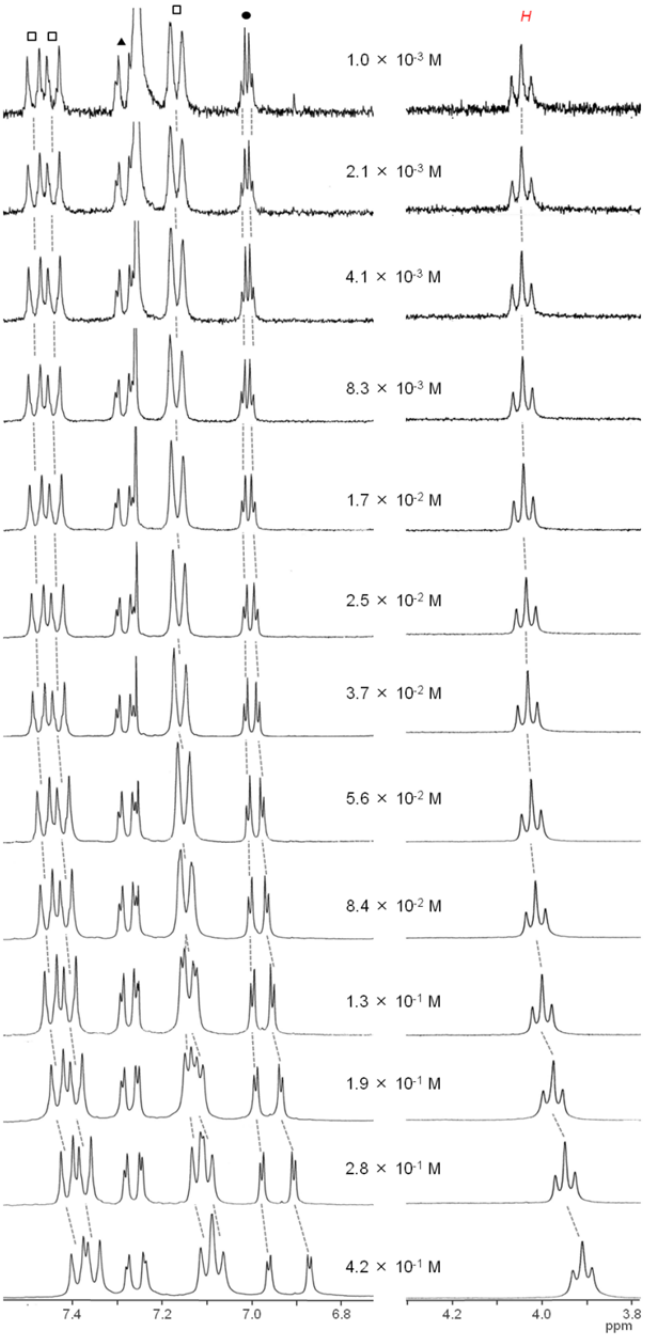



Figure S1. $^{1}$H NMR spectra of **2** at the various concentrations. Signals shown were assigned to the aromatic protons at pyridine (filled circle), phenol (filled triangle), and tolyl moieties (open square), and –C*H*$_2$O- in octyloxy group (*H*). Conditions: 300 MHz, [**2**] = $1.0 \times 10^{-3}$ to $4.2 \times 10^{-1}$ M, $CDCl_3$, 23 °C.

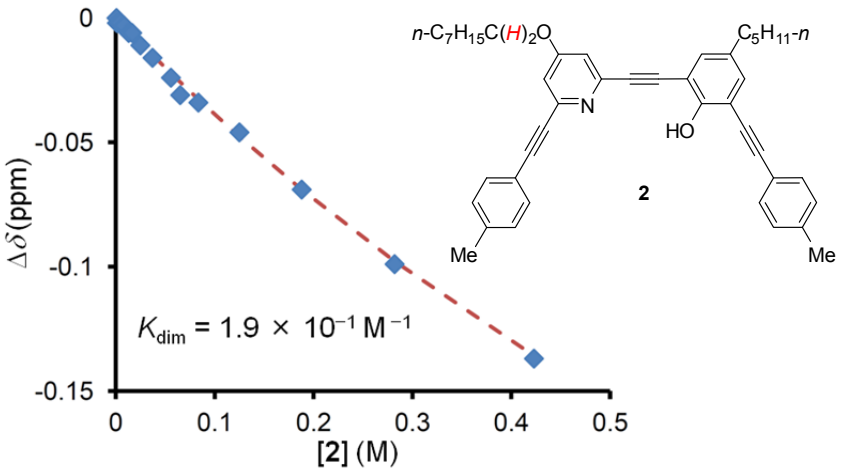



Figure S2. Concentration dependence on the $^{1}$H NMR chemical shift of the –OC$H_2$– protons in the octyloxy group of **2**. Dashed line is the theoretical curve obtained by a curve-fitting analysis. Conditions; 300 MHz, [**2**] = $6.5 \times 10^{-4}$ to $4.2 \times 10^{-1}$ M, $CDCl_3$, 23 °C.

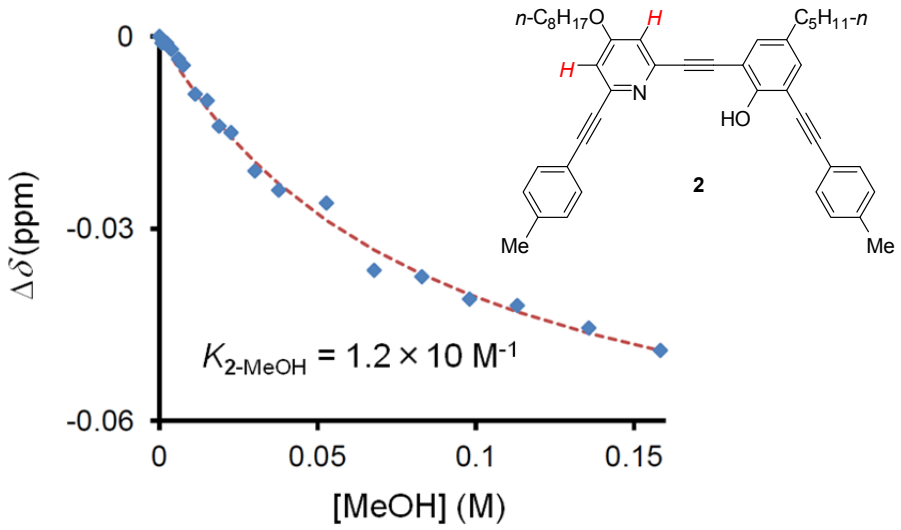



Figure S3. Change of the $^{1}$H NMR chemical shift of the pyridine protons of **2** by the addition of MeOH. Dashed line is the theoretical curve obtained by a curve-fitting analysis. Conditions; 300 MHz, [**2**] = $7.5 \times 10^{-4}$ M, [MeOH] = 0 to $1.6 \times 10^{-1}$ M, $CDCl_3$, 23 °C.

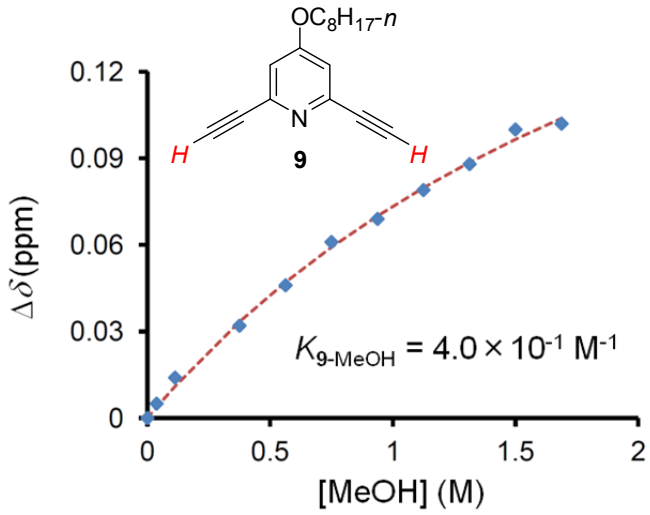



Figure S4. Change of the $^{1}$H NMR chemical shift of the alkynyl C-*H* protons of **9** by the addition of MeOH. Dashed line is the theoretical curve obtained by a curve-fitting analysis. Conditions; 400 MHz, [**9**] = 3.8 × $10^{-2}$ M, [MeOH] = 0 to 1.7 M, $CDCl_3$, 23 °C.

**Procedure for Determining Fluorescence Yields**

Fluorescence Quantum Yield Determination

Fluorescence quantum yields ($\Phi_f$) of **2** and **8** were determined by a comparative method using $\alpha$-naphthylamine in distilled *n*-hexane ($\Phi_f$ = 0.48)[1] as a reference. The fluorescence quantum yields were calculated according to the following equation.[2]

$$\Phi_{f\ (sample)} = 0.48[A_{\alpha\text{-naphthylamine}} / A_{sample}][I_{sample} / I_{\alpha\text{-naphthylamine}}][n_{DCE} / n_{n\text{-hexane}}]^2$$

In this equation, $\Phi_{f\ (sample)}$ is the quantum yield of the sample. $A_{sample}$ and $I_{sample}$ are the optical density and the integrated emission intensity of the sample at the excitation wavelength, respectively. $A_{\alpha\text{-naphthylamine}}$ and $I_{\alpha\text{-naphthylamine}}$ are those for $\alpha$-naphthylamine. $n_{DCE}$ and $n_{n\text{-hexane}}$ are the values of refractive indices of DCE and *n*-hexane, respectively.

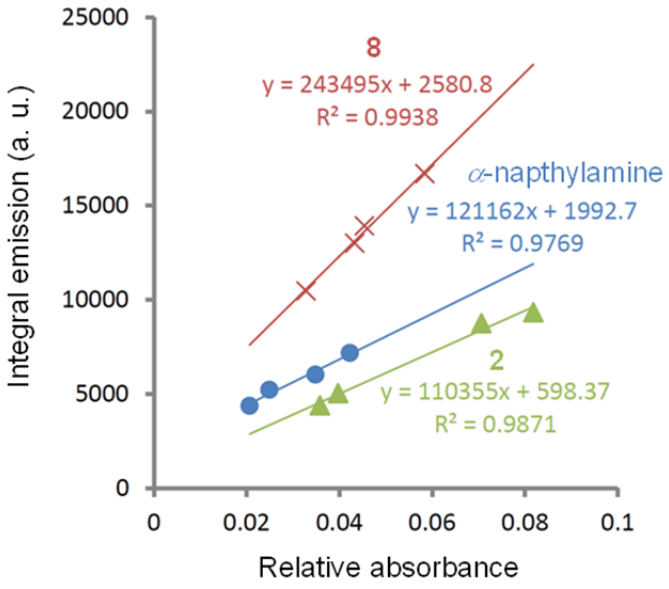


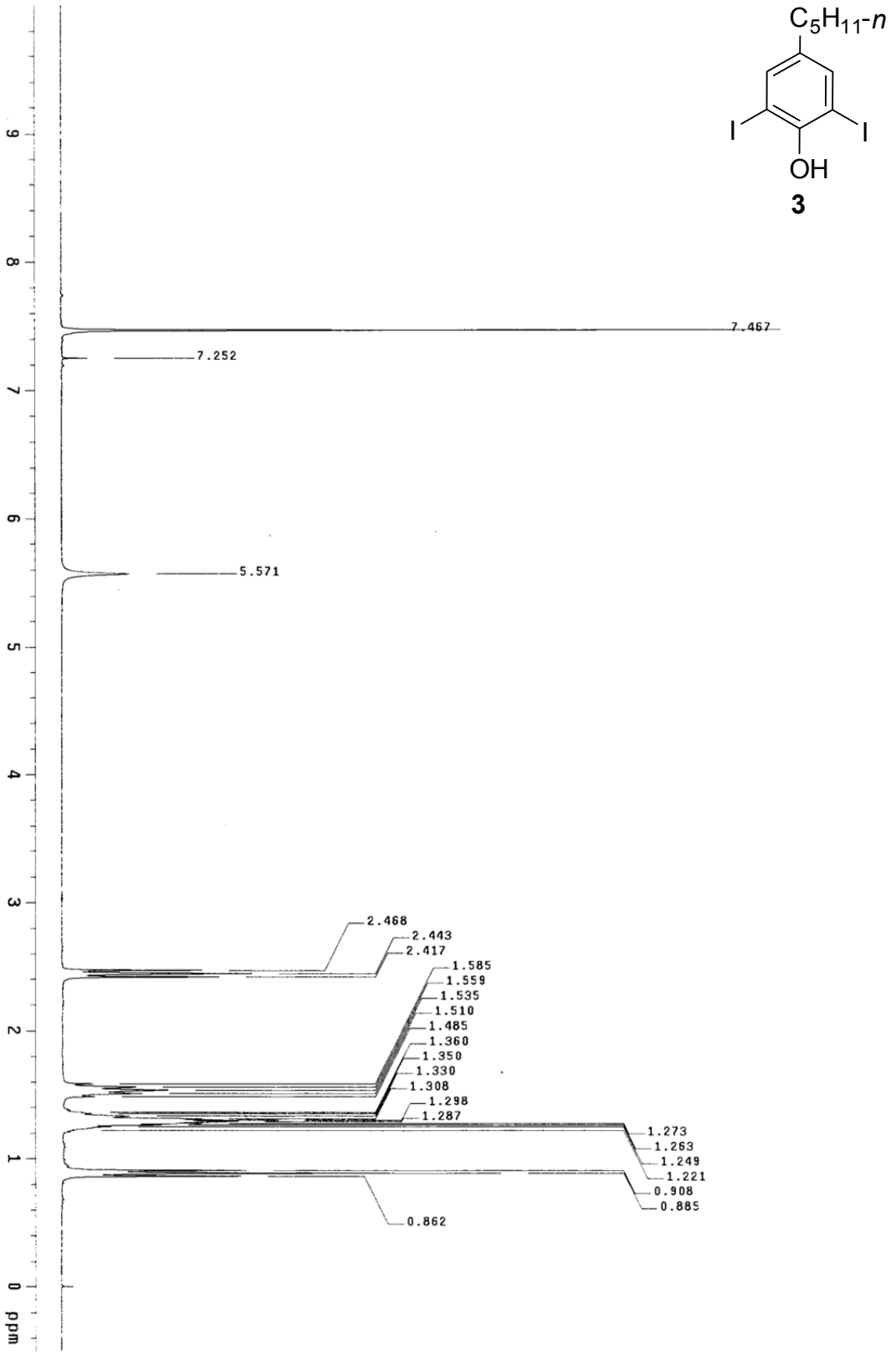

Figure S5. Plots of integrated emission intensity against absorbance at 300 nm for **2** (red cross), **8** (green triangle), and $\alpha$-naphthylamine (blue circle). Conditions; DCE (**2** and **8**) or *n*-hexane ($\alpha$-naphthylamine), 25 °C, $\lambda_{ex}$ = 300 nm, path length = 10 mm. Solid lines were depicted by the least squares method.

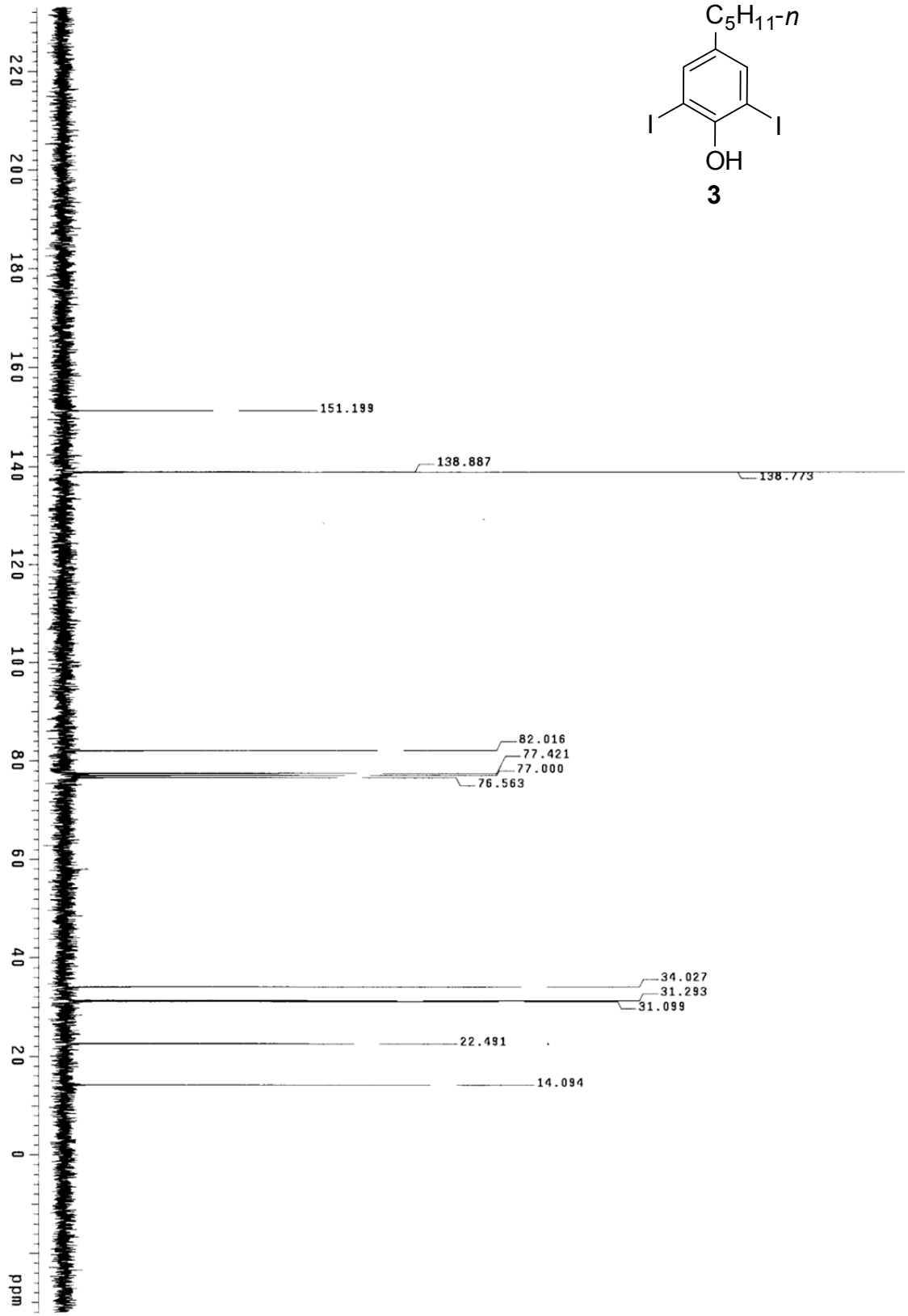
**References**

1) K. Suzuki, A. Kobayashi, S. Kaneko, K. Takehira, T. Yoshitada, H. Ishida, Y. Shima, S. Oishi, and S. Tobita, *Phys. Chem. Chem. Phys.*, 2009, **11**, 9850.

2) A. T. R. Williams, S. A. Winfield, and J. N. Miller, *Analyst*, 1983, **108**, 1067.

**$^{1}H$ and $^{13}C$ NMR spectra (in $CDCl_3$)**

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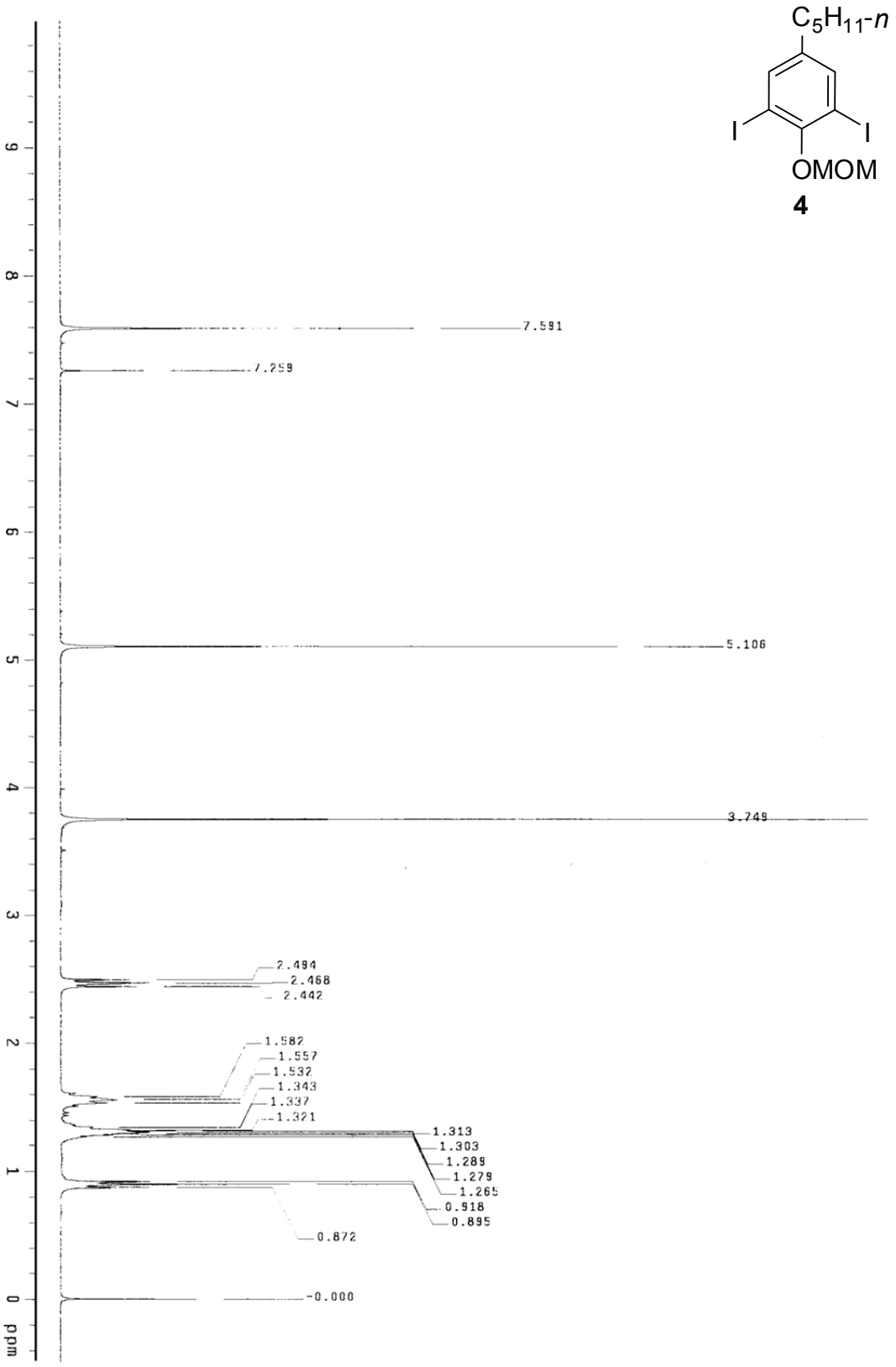
I
OH

**3**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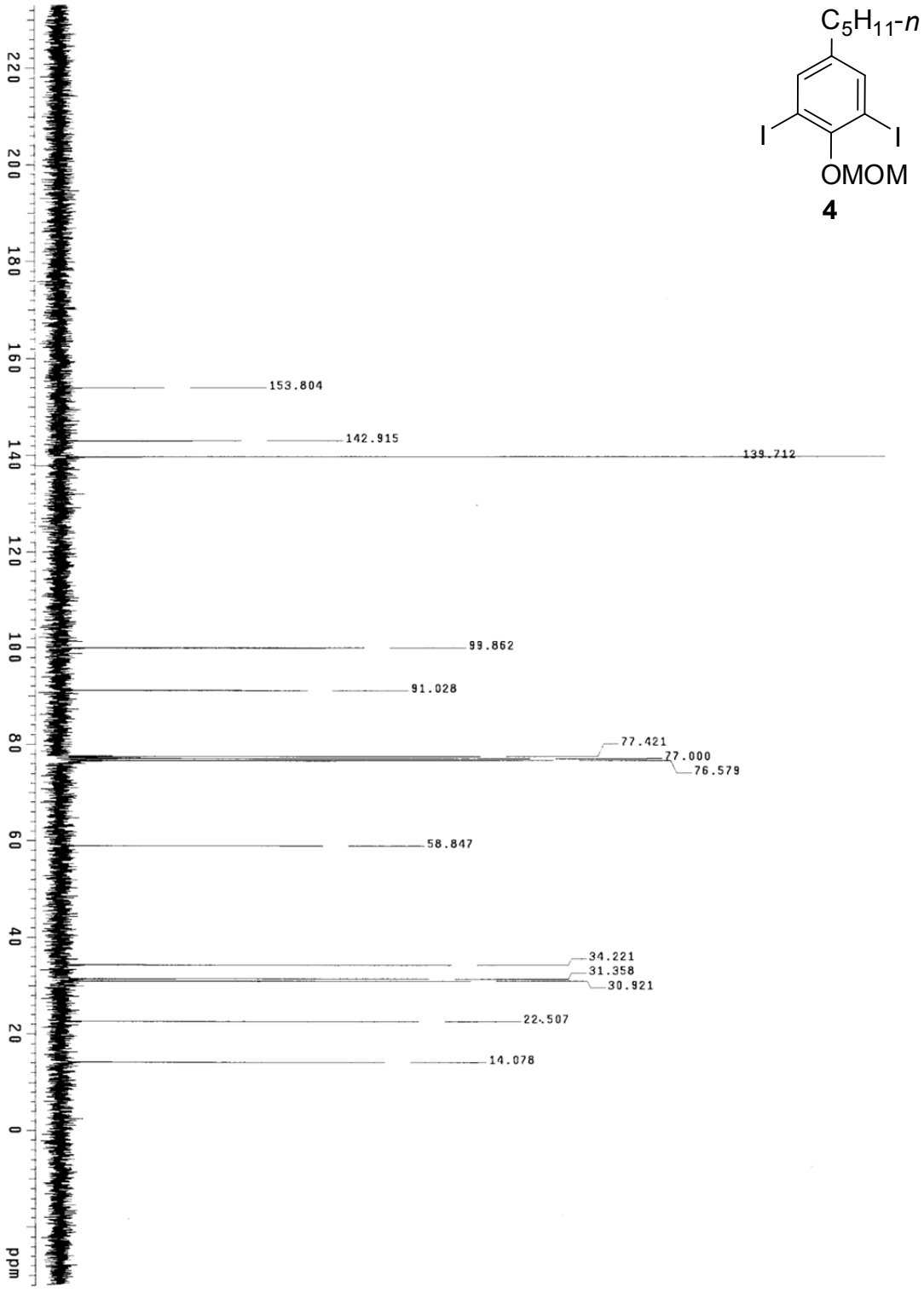
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I
I
OMOM

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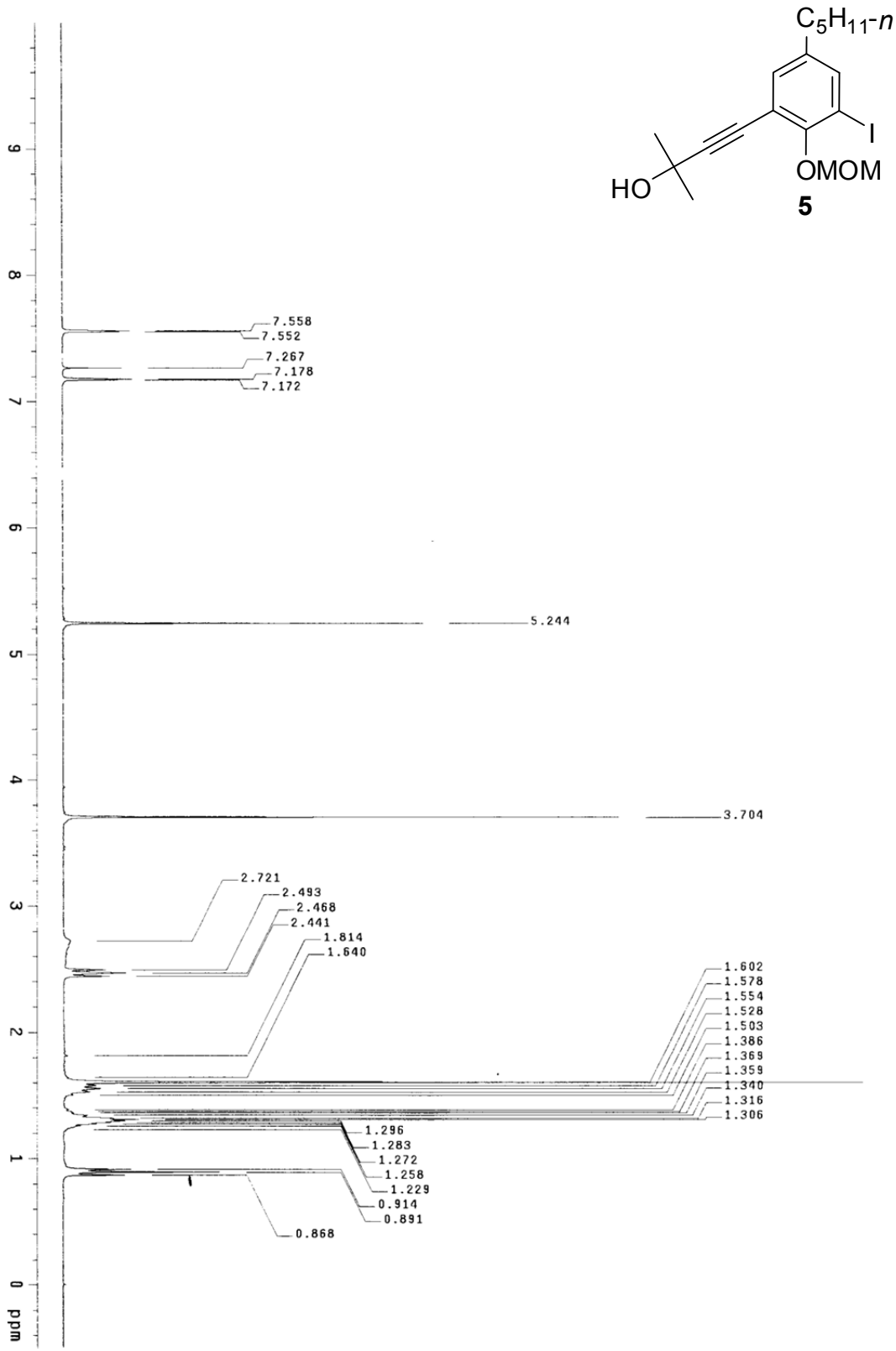
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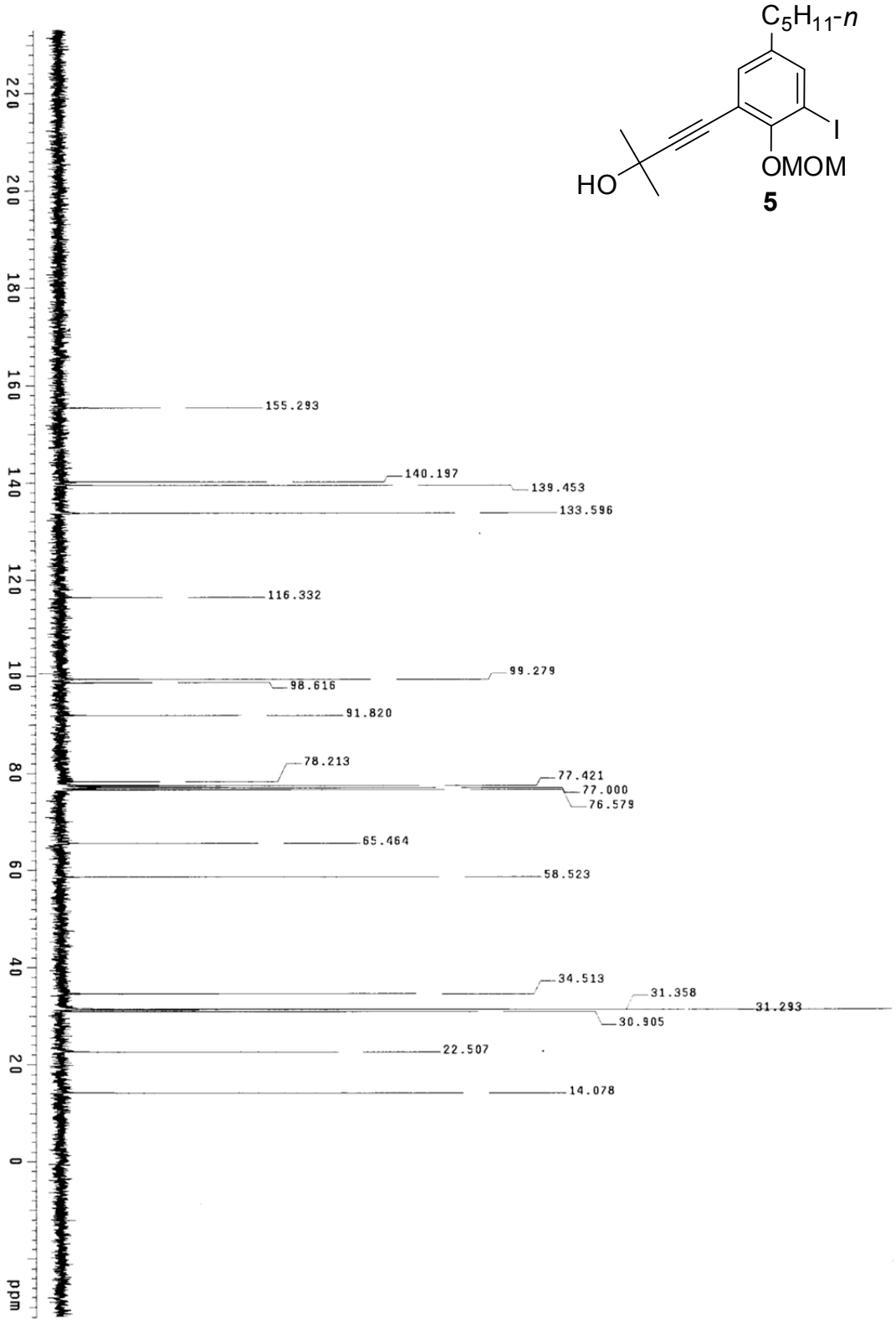
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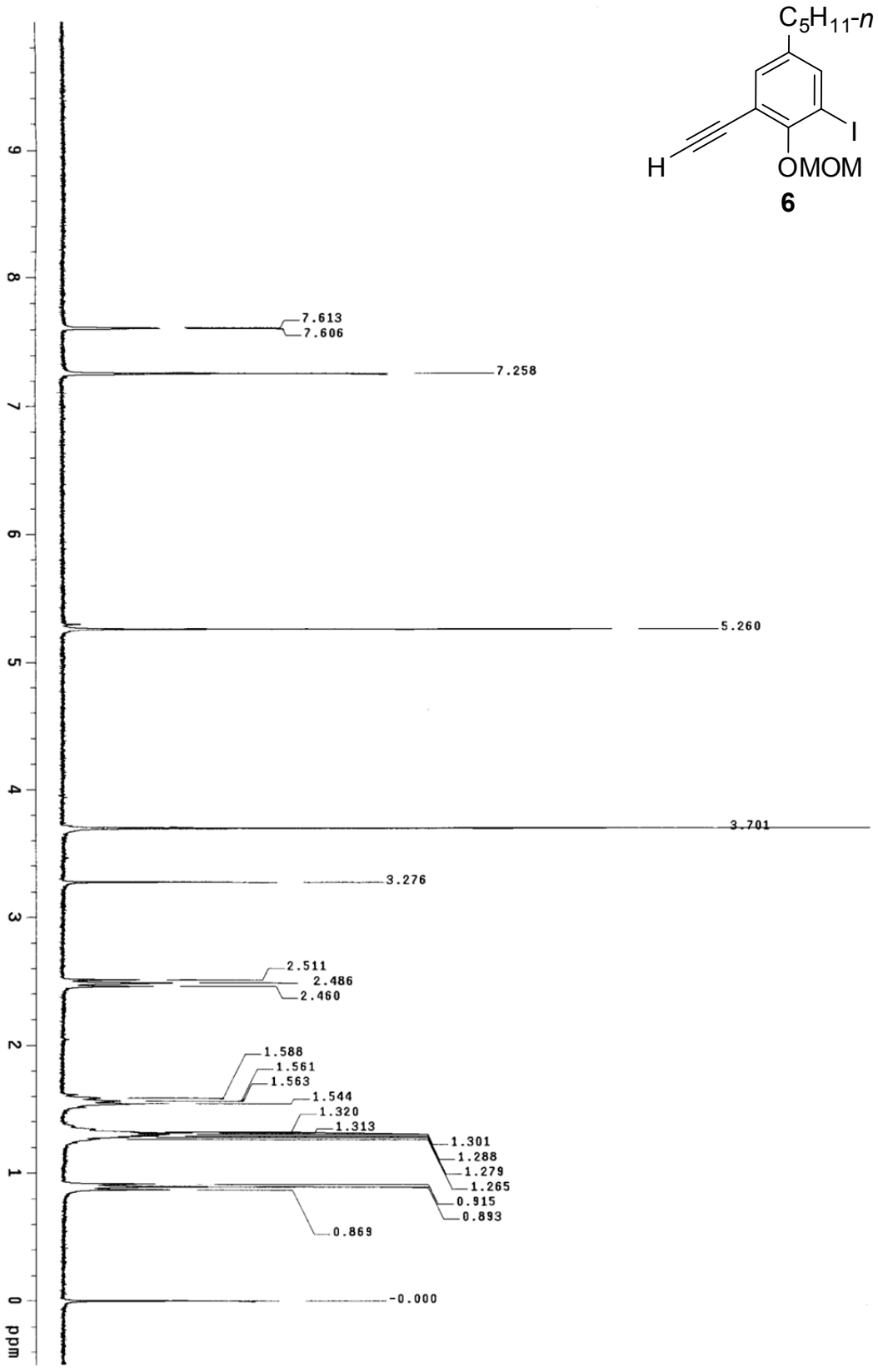
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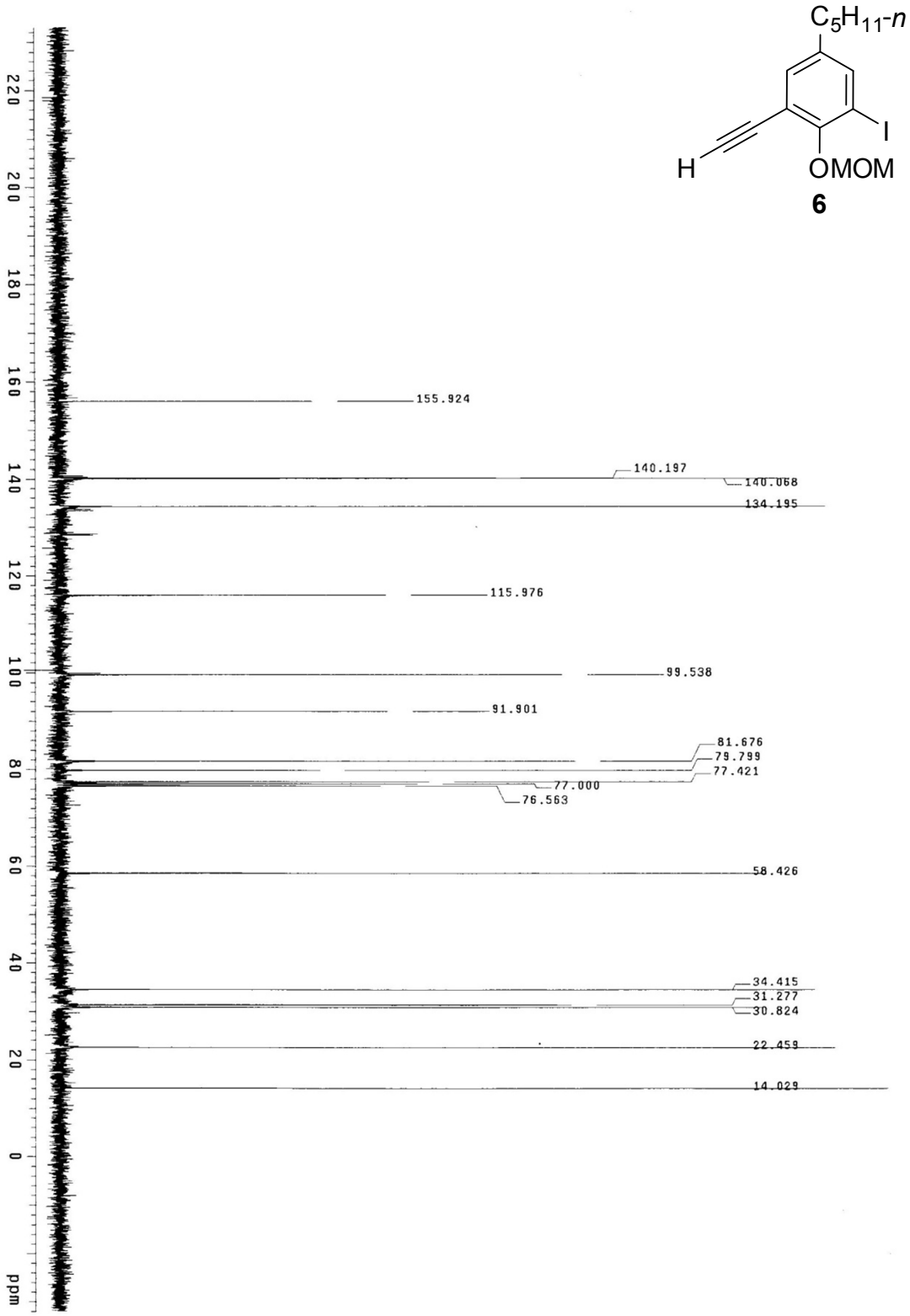
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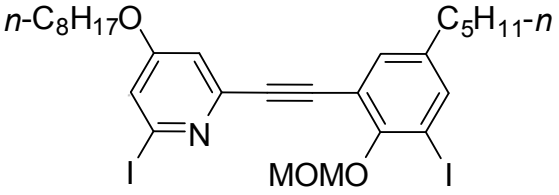
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MOMO
I

**7**


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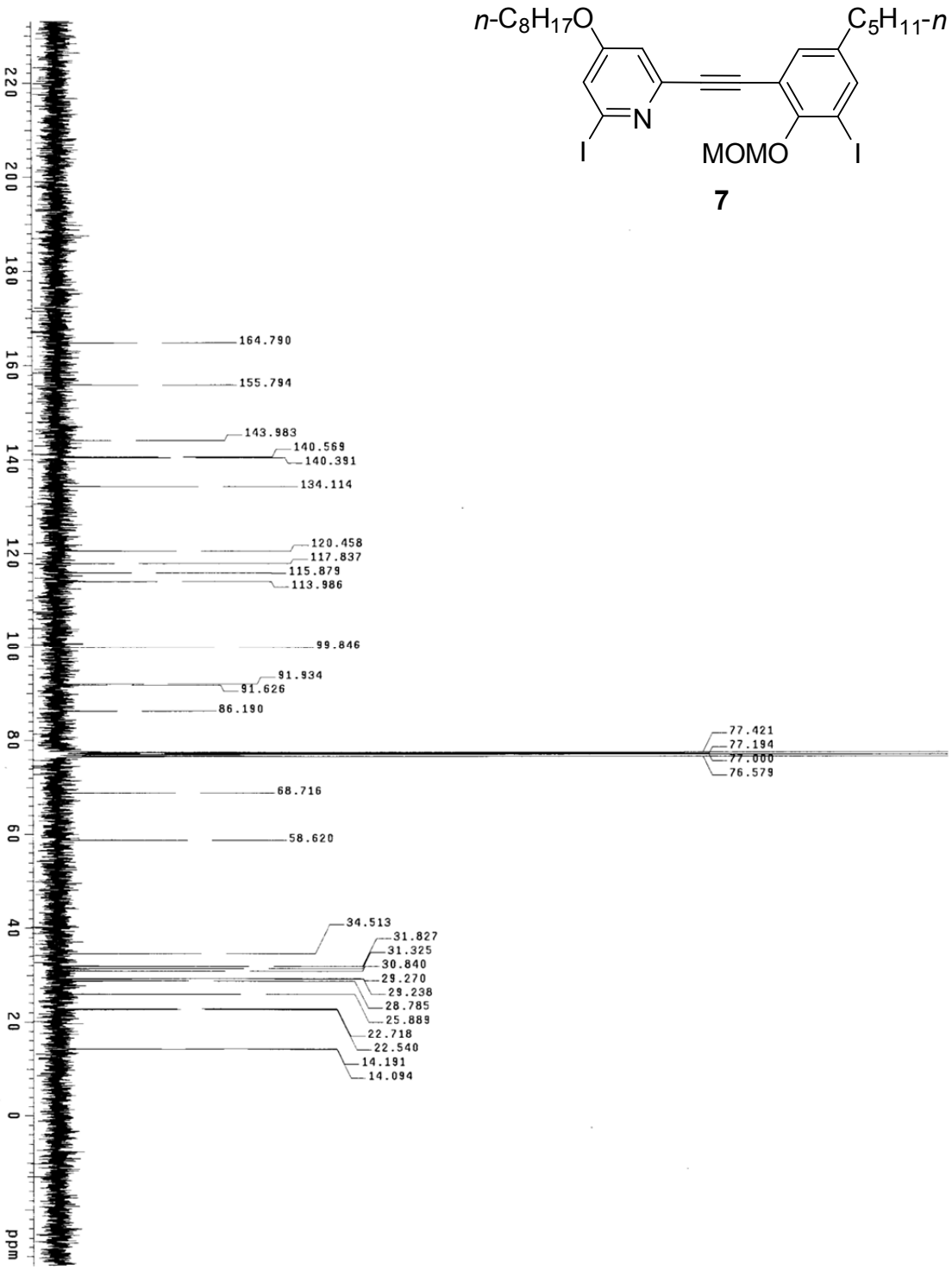
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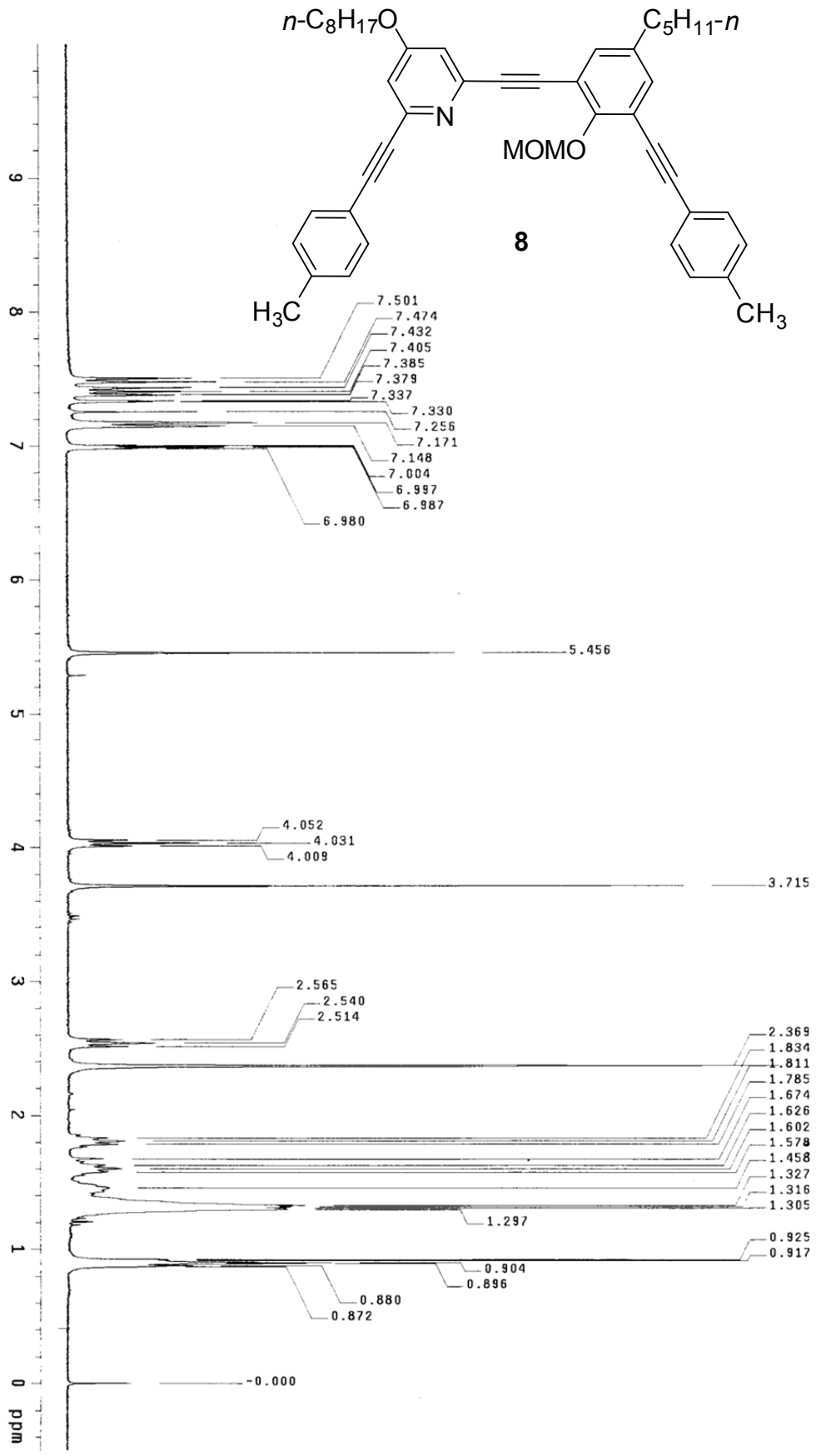
**7**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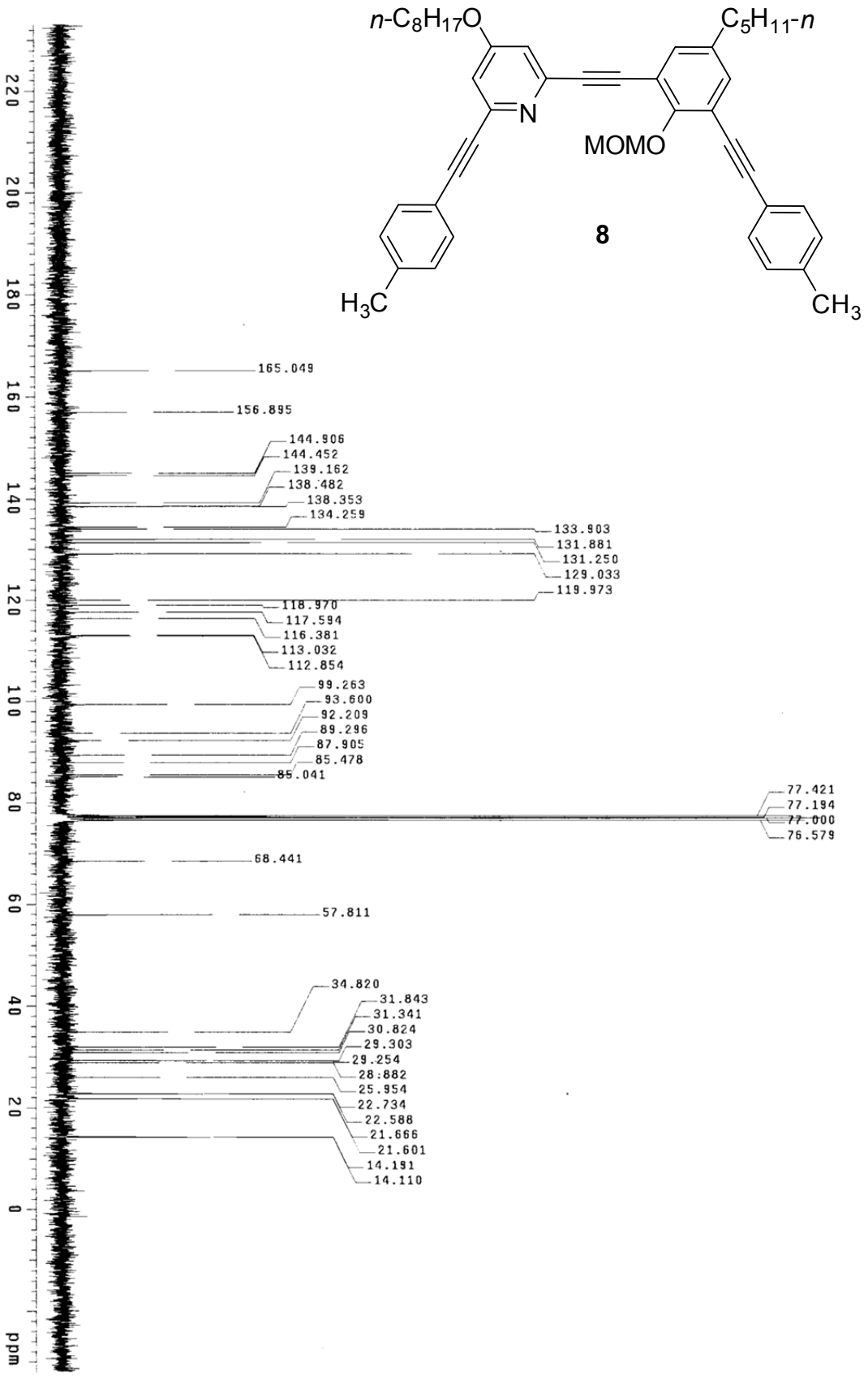
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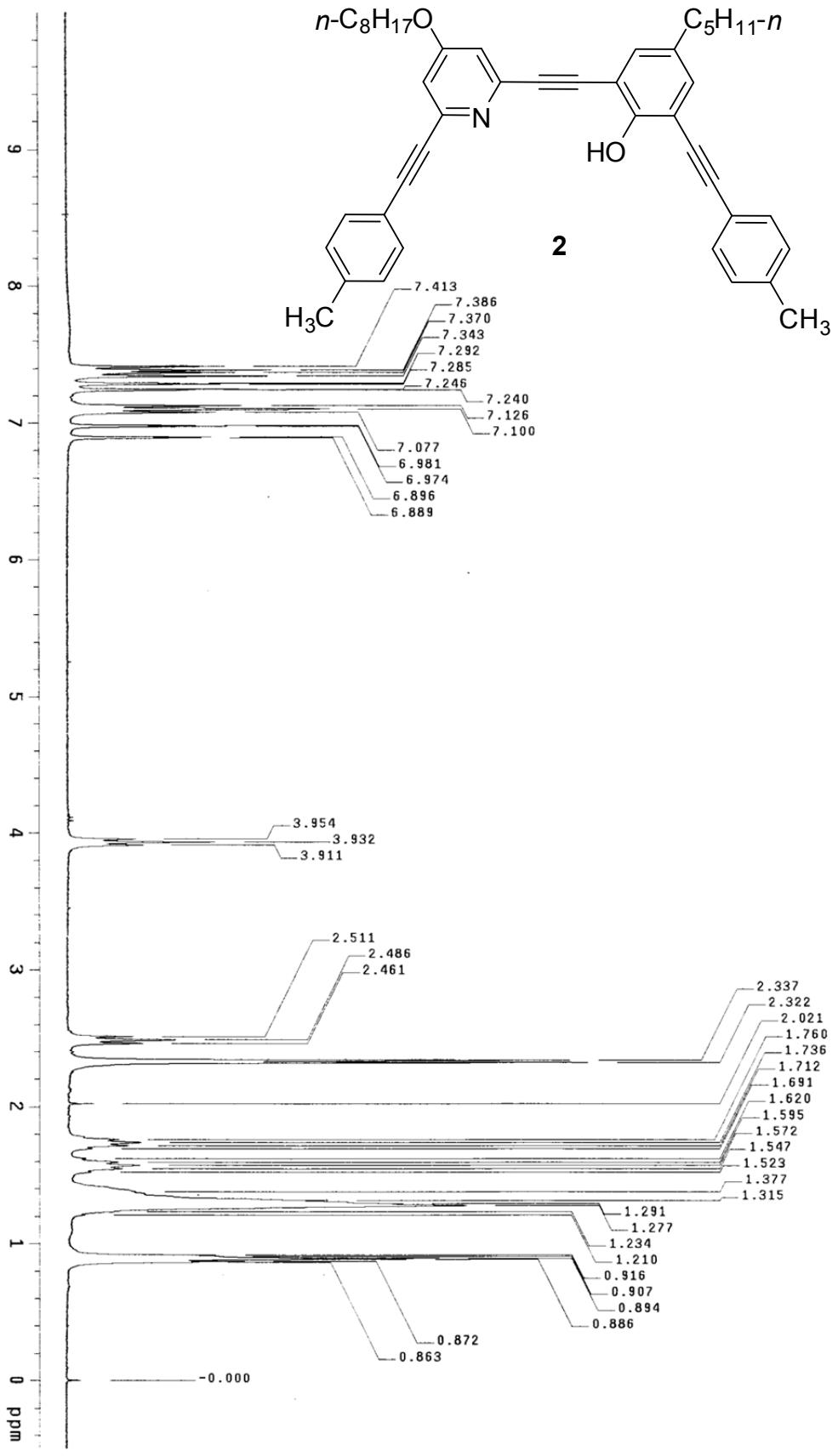
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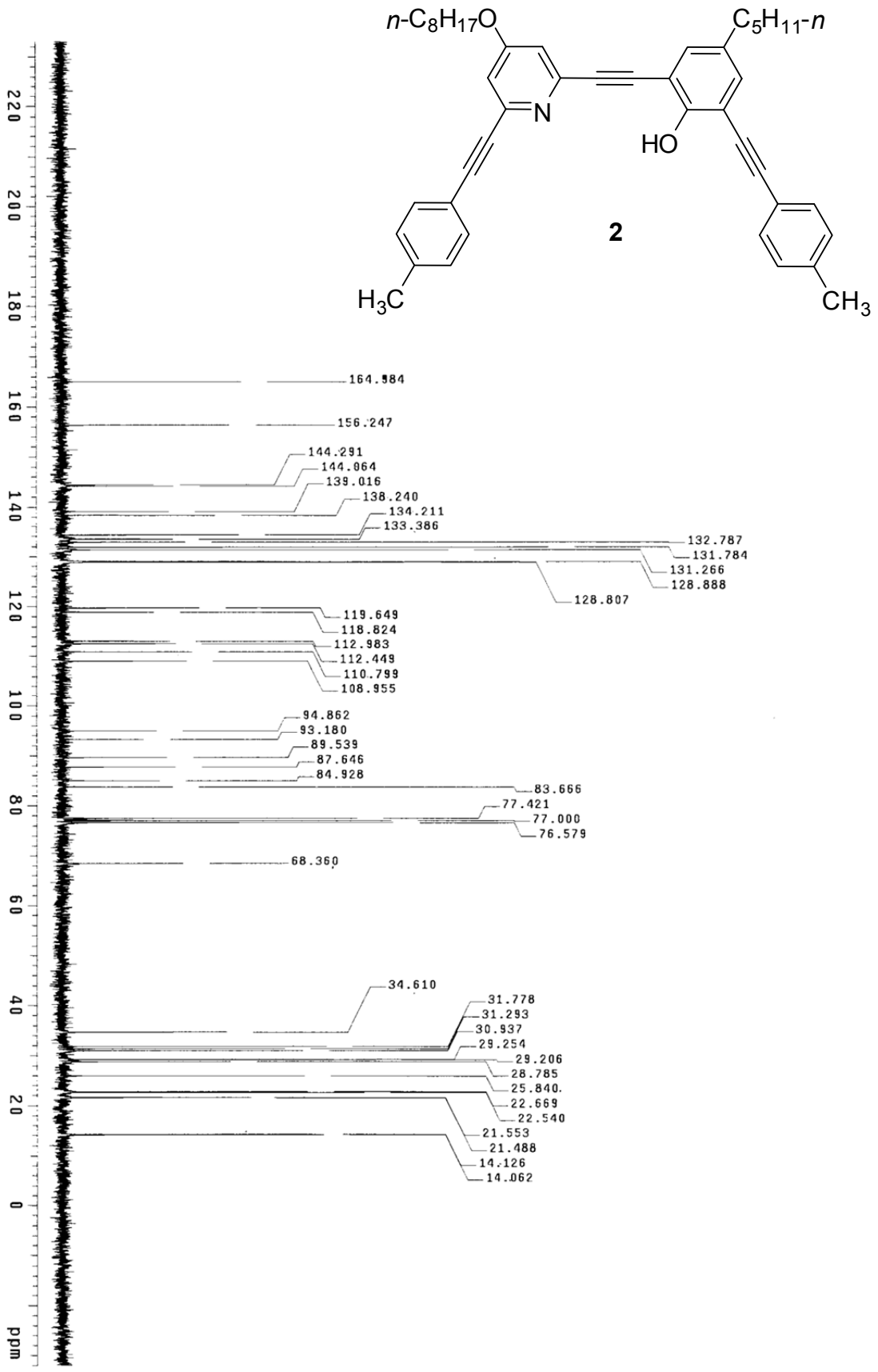
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