

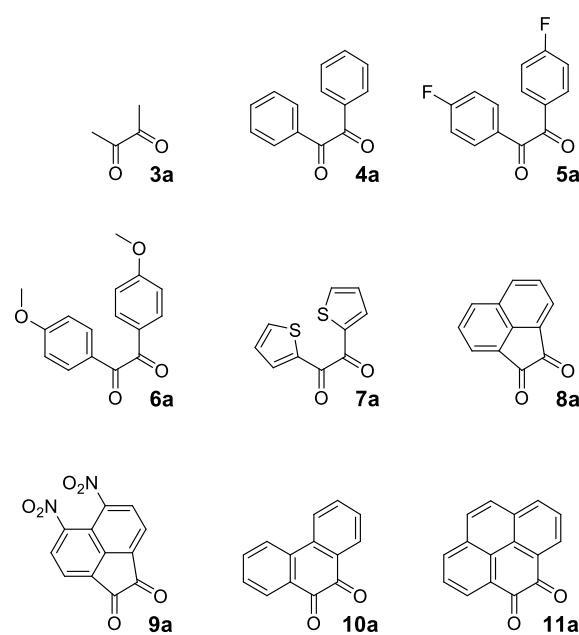
## Synthesis and Photo-Physical Properties of 5'-6-Locked Fluorescent Nucleosides

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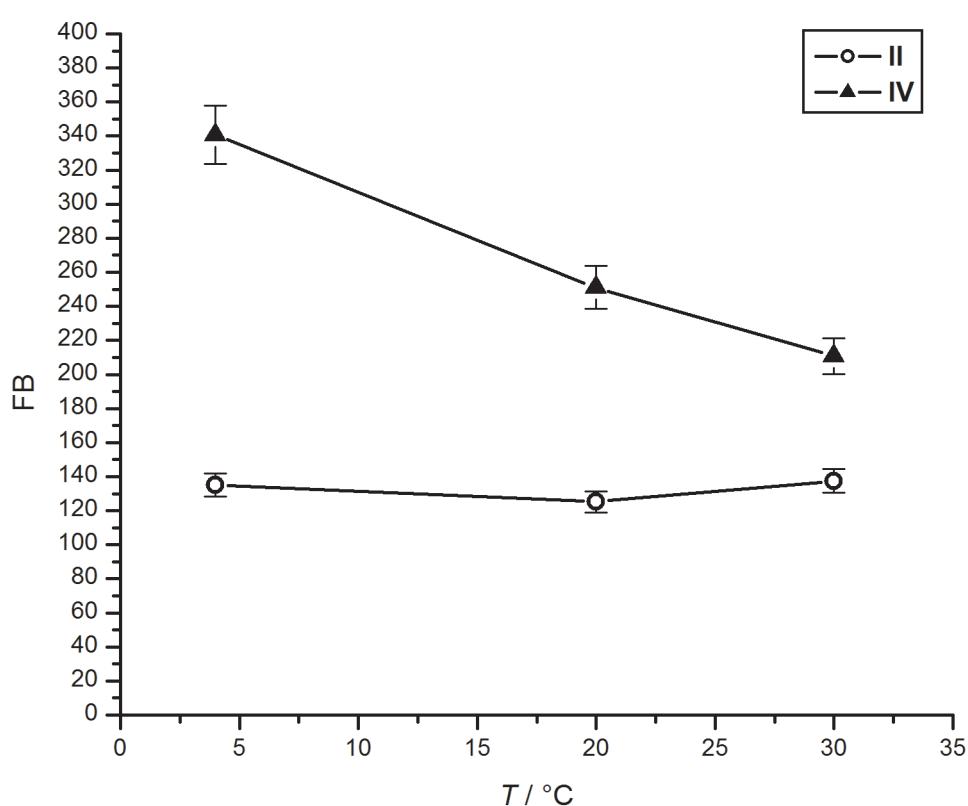
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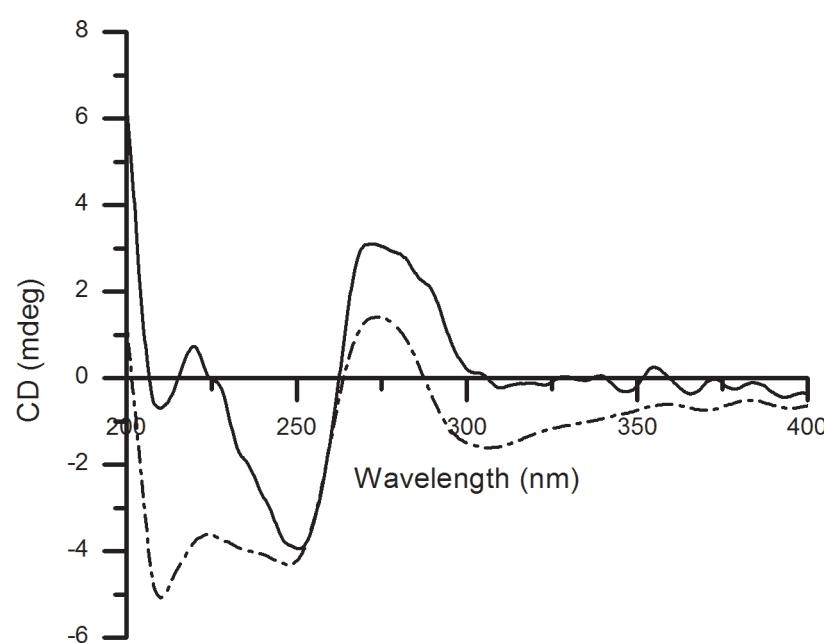


**Figure S1.** Structures of diketones **3a-11a**.

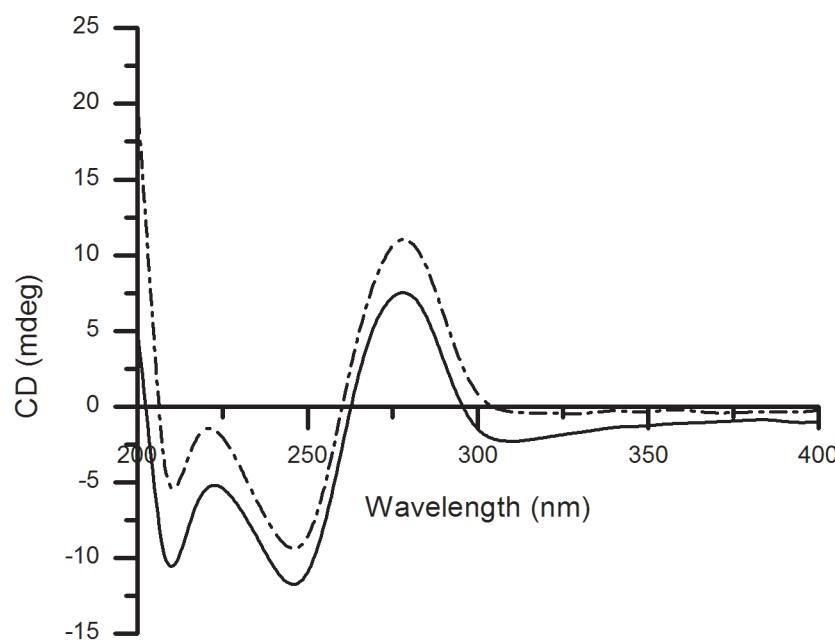


**Figure S2.** Temperature dependence of the fluorescence brightness of nucleoside **10** in **II** and **IV** in 30% ethylene glycol in aqueous buffer.

CD-spectra



**Figure S3.** CD spectra of modified helix **II** (solid line) and the corresponding unmodified helix (dashed line).



**Figure S4.** CD spectra of modified helix **IV** (solid line) and the corresponding unmodified helix (dashed line).

HPLC-traces

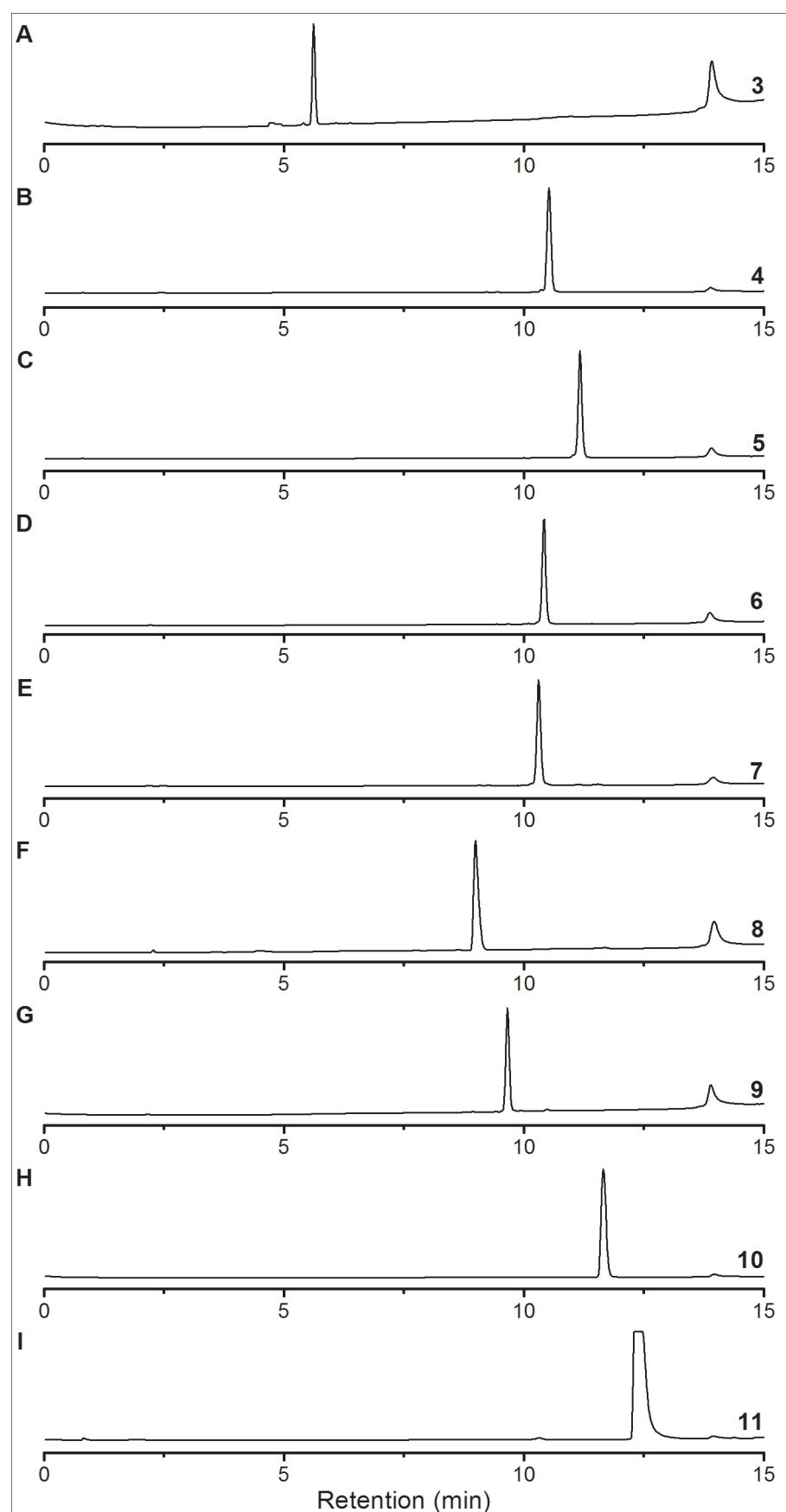
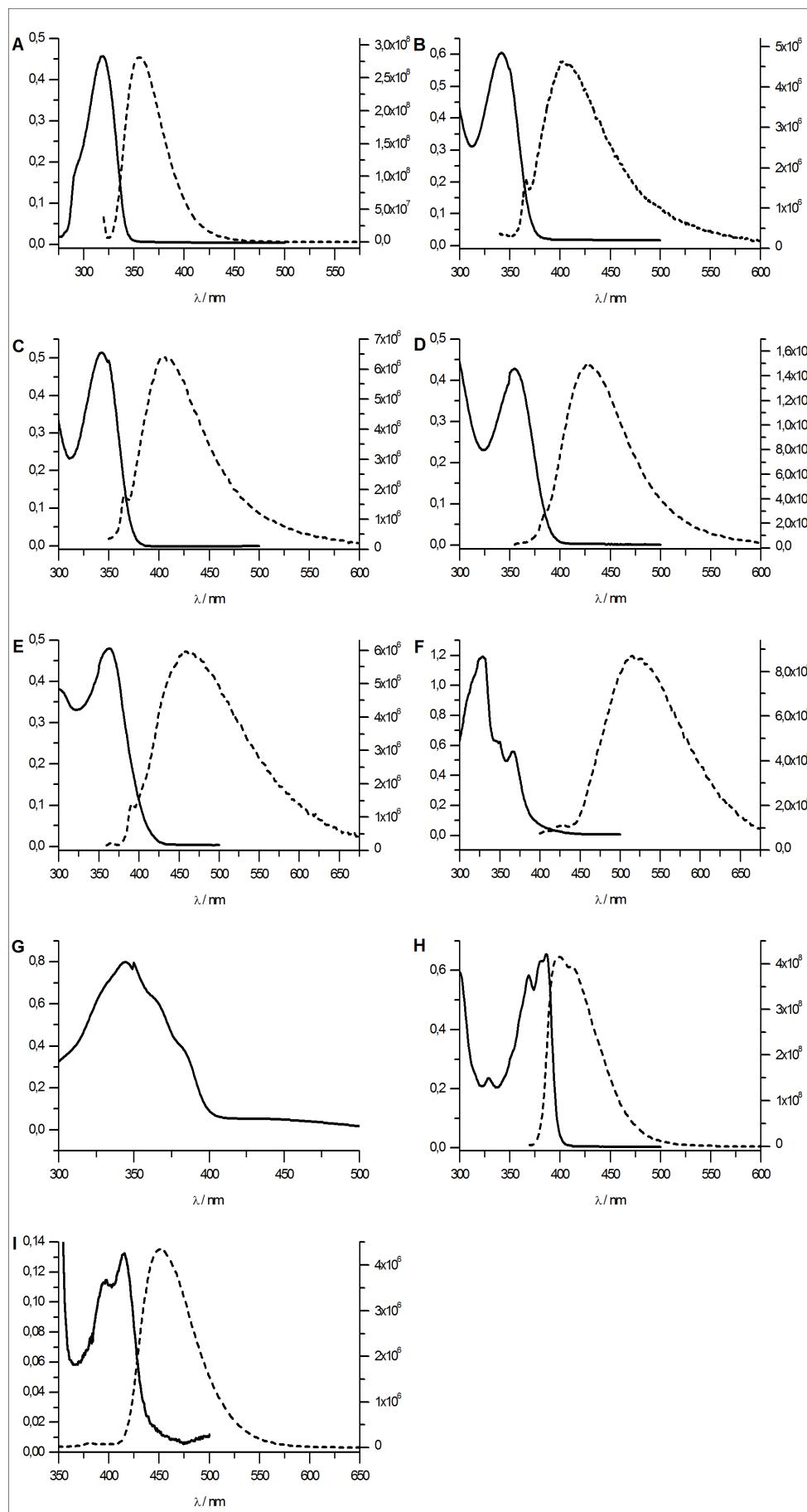
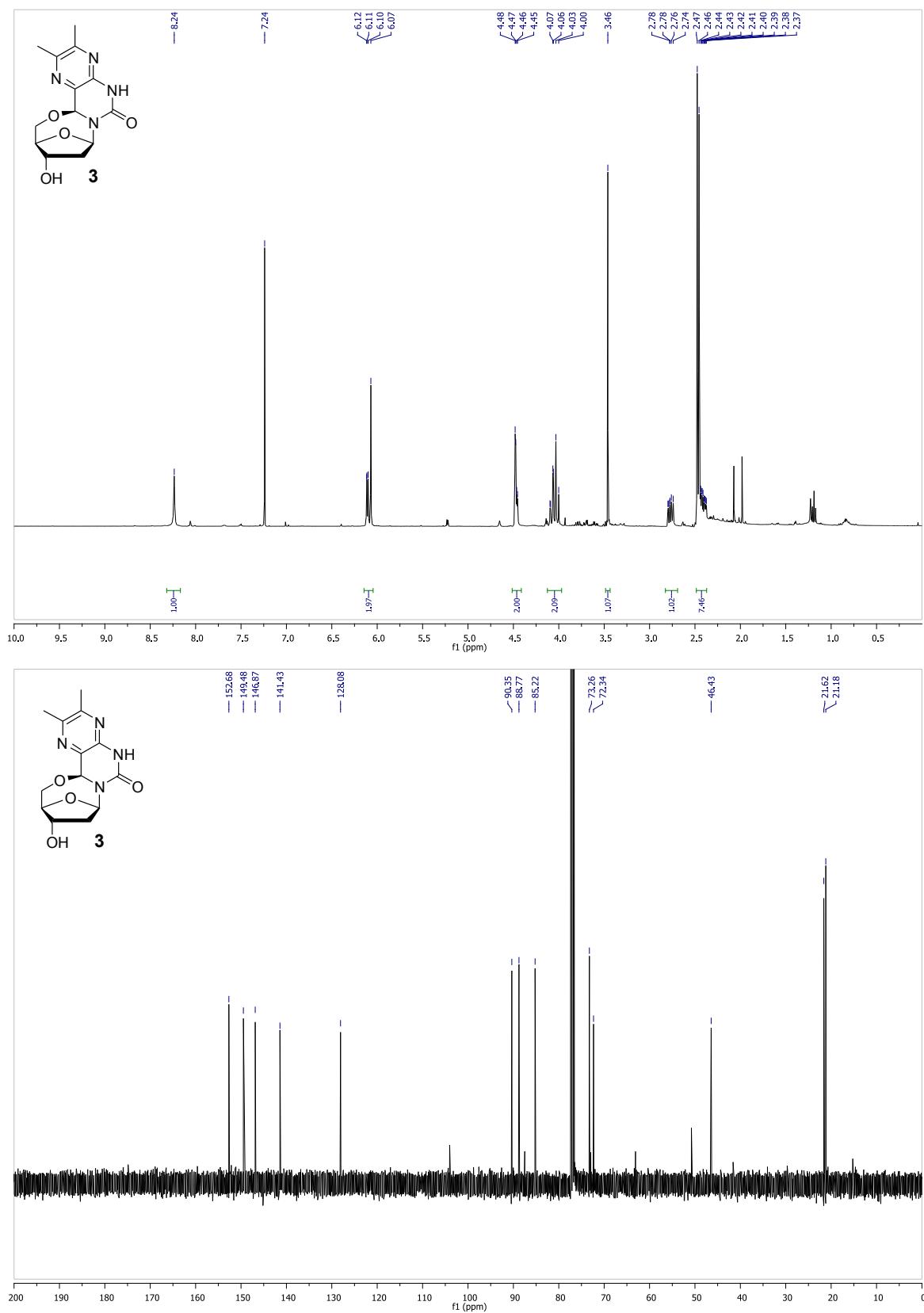


Figure S5. HPLC-traces for nucleosides 3-11. The small peak at around 14 minutes is an artifact also visible in blank runs.



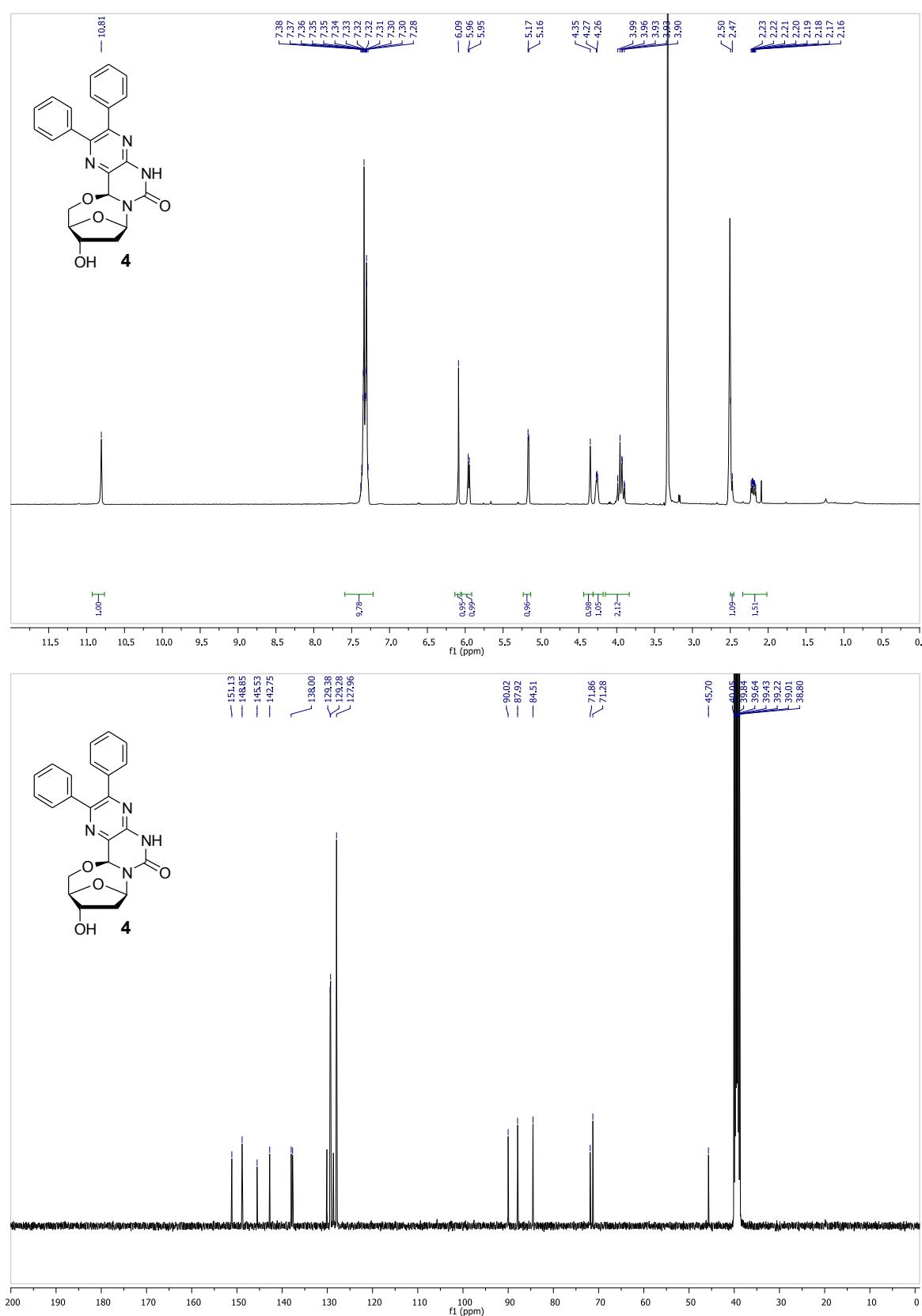
**Figure S6.** A-I) UV-Vis (solid lines) and fluorescence (broken lines) spectra for nucleosides 3-11 from Figure 3 in the main text, shown here with y-axes. Spectra recorded in THF. Left y-axis refers to absorption, right y-axis to emission.

NMR-spectra



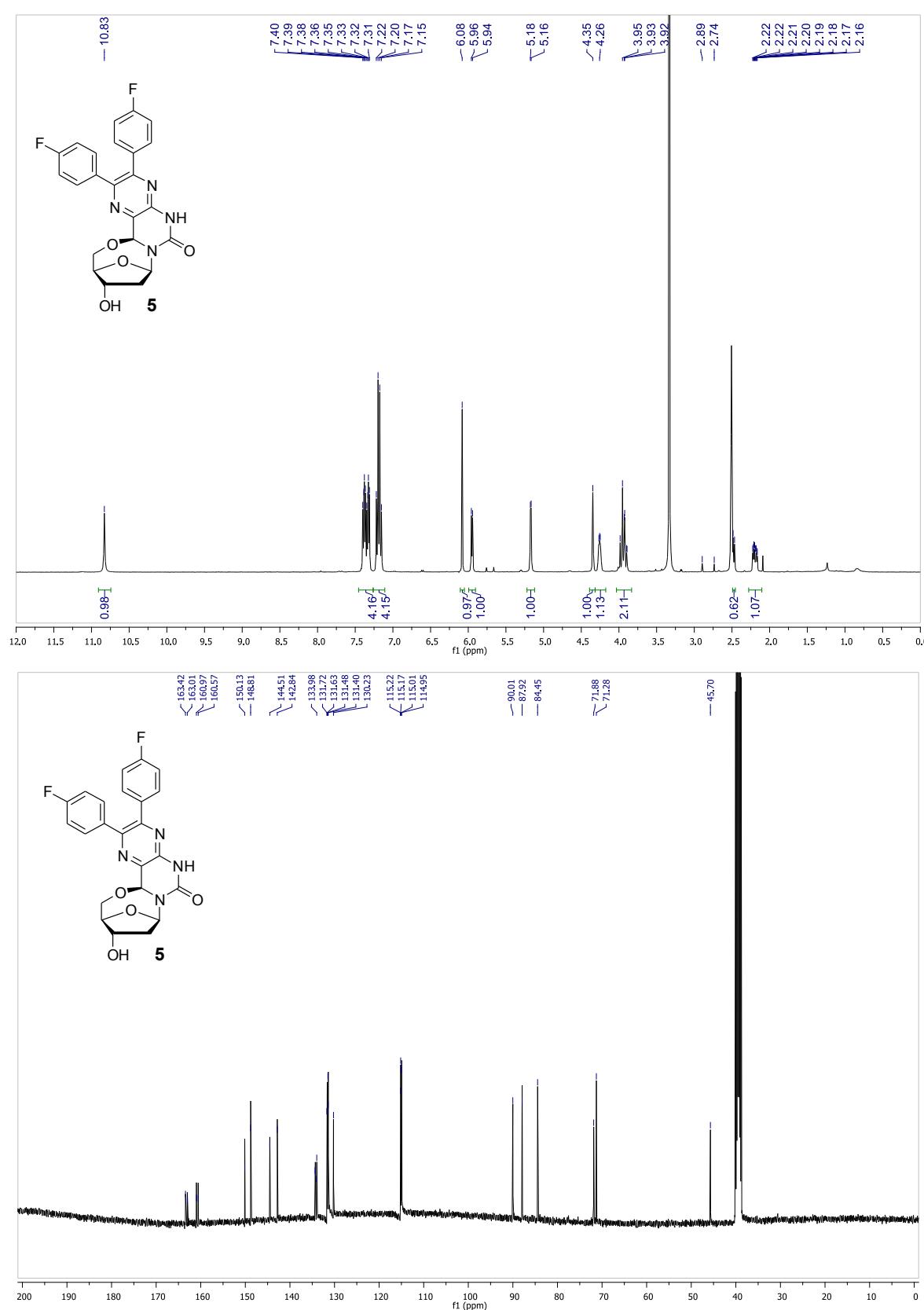
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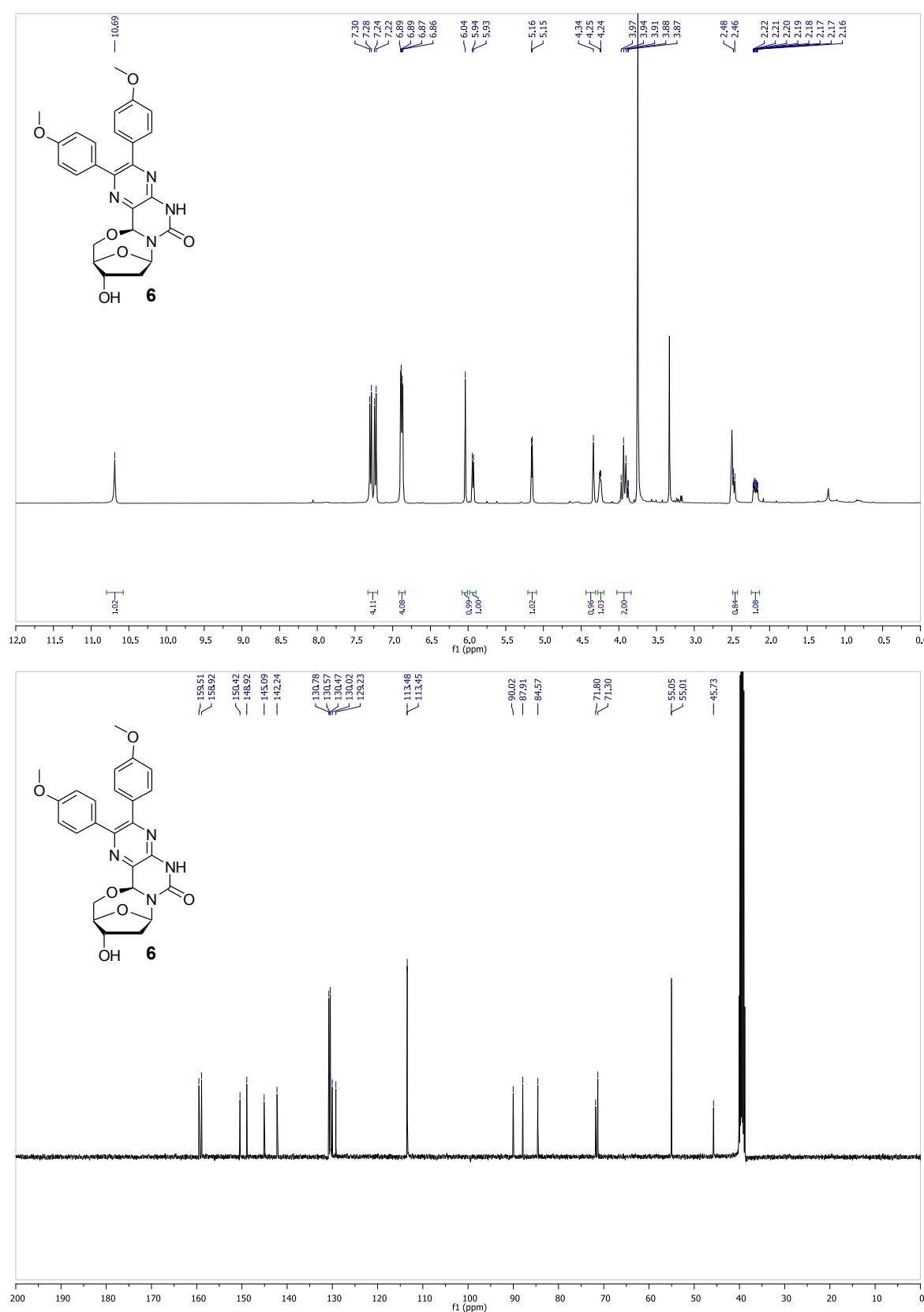
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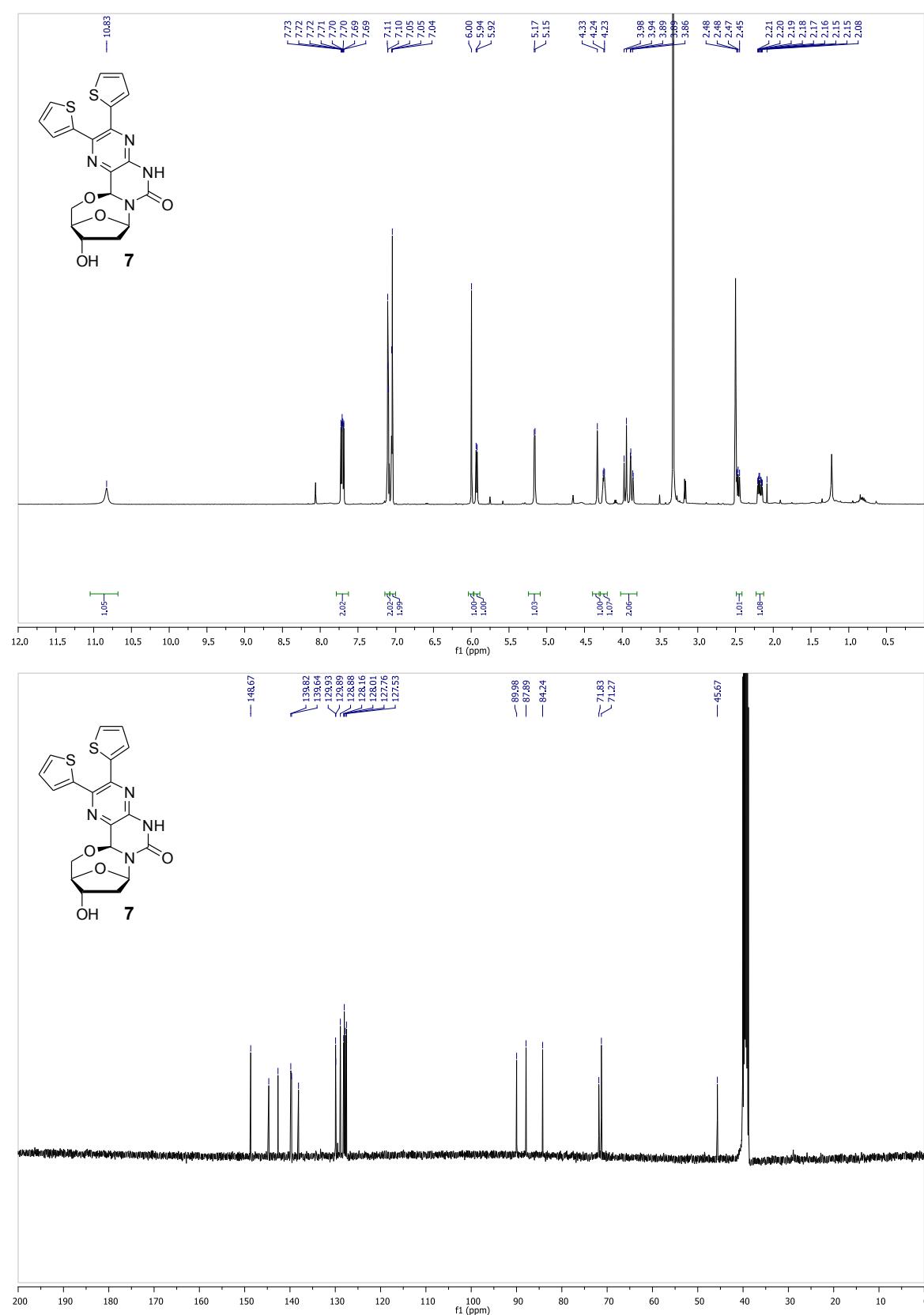
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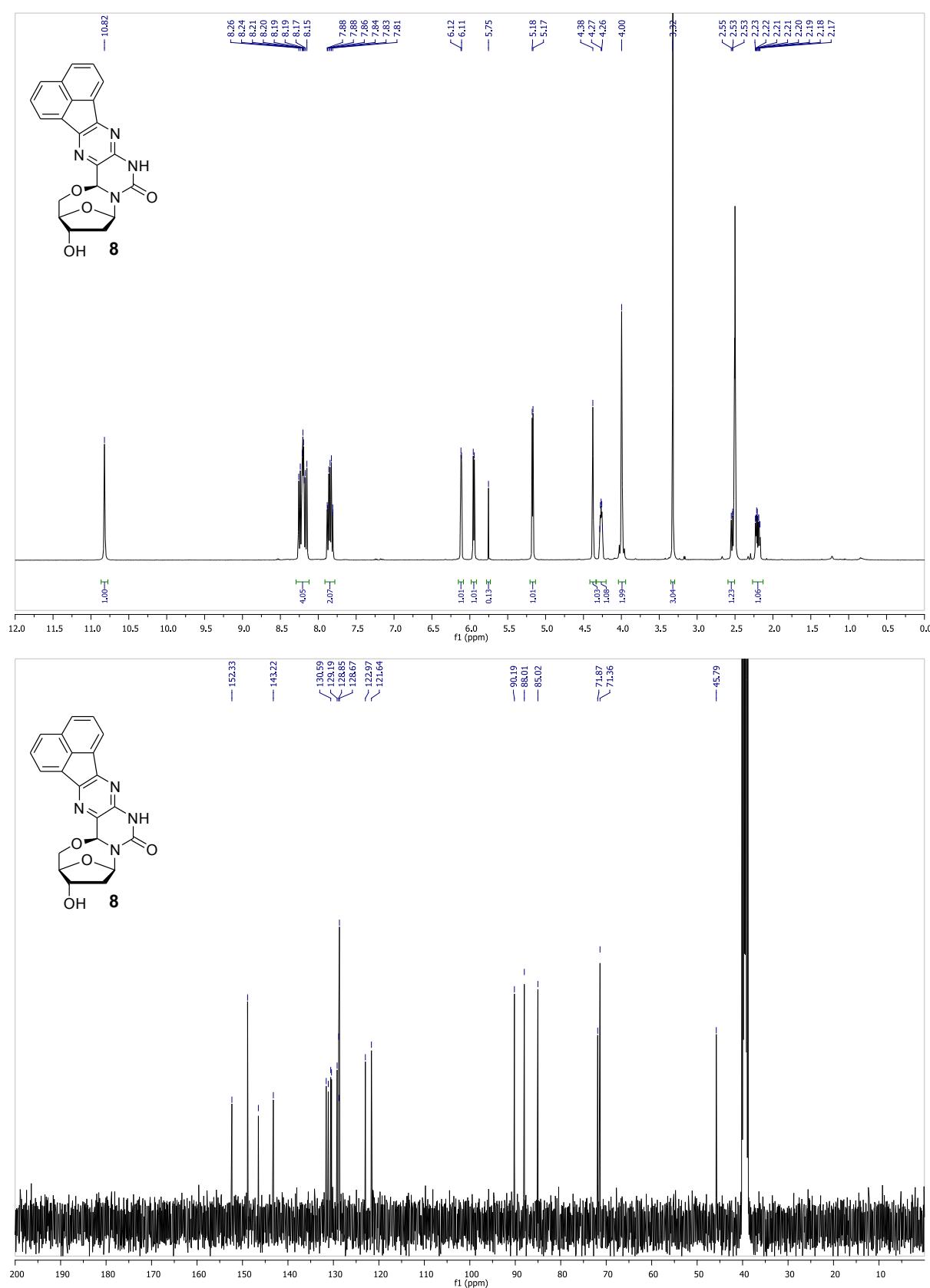
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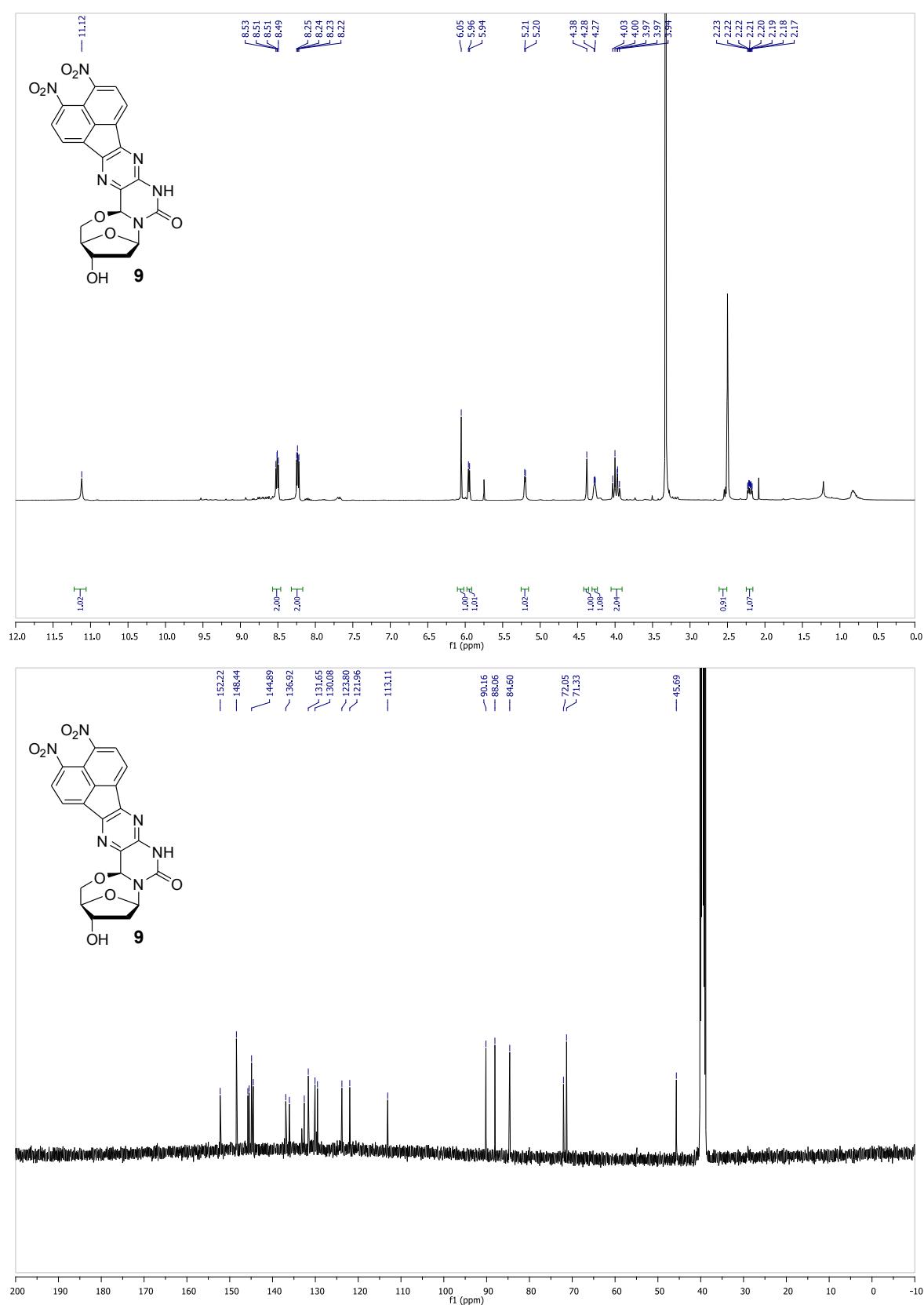
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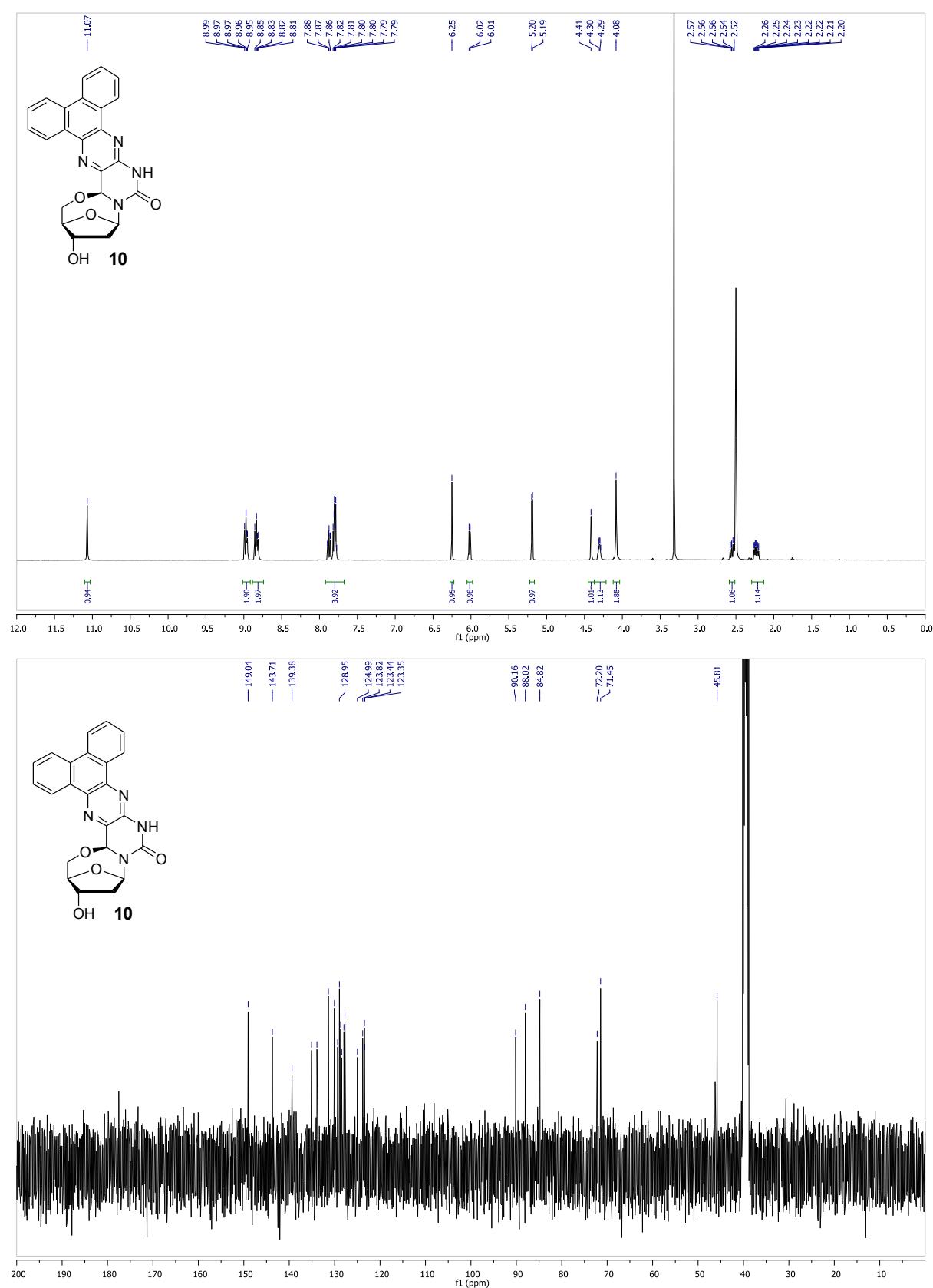
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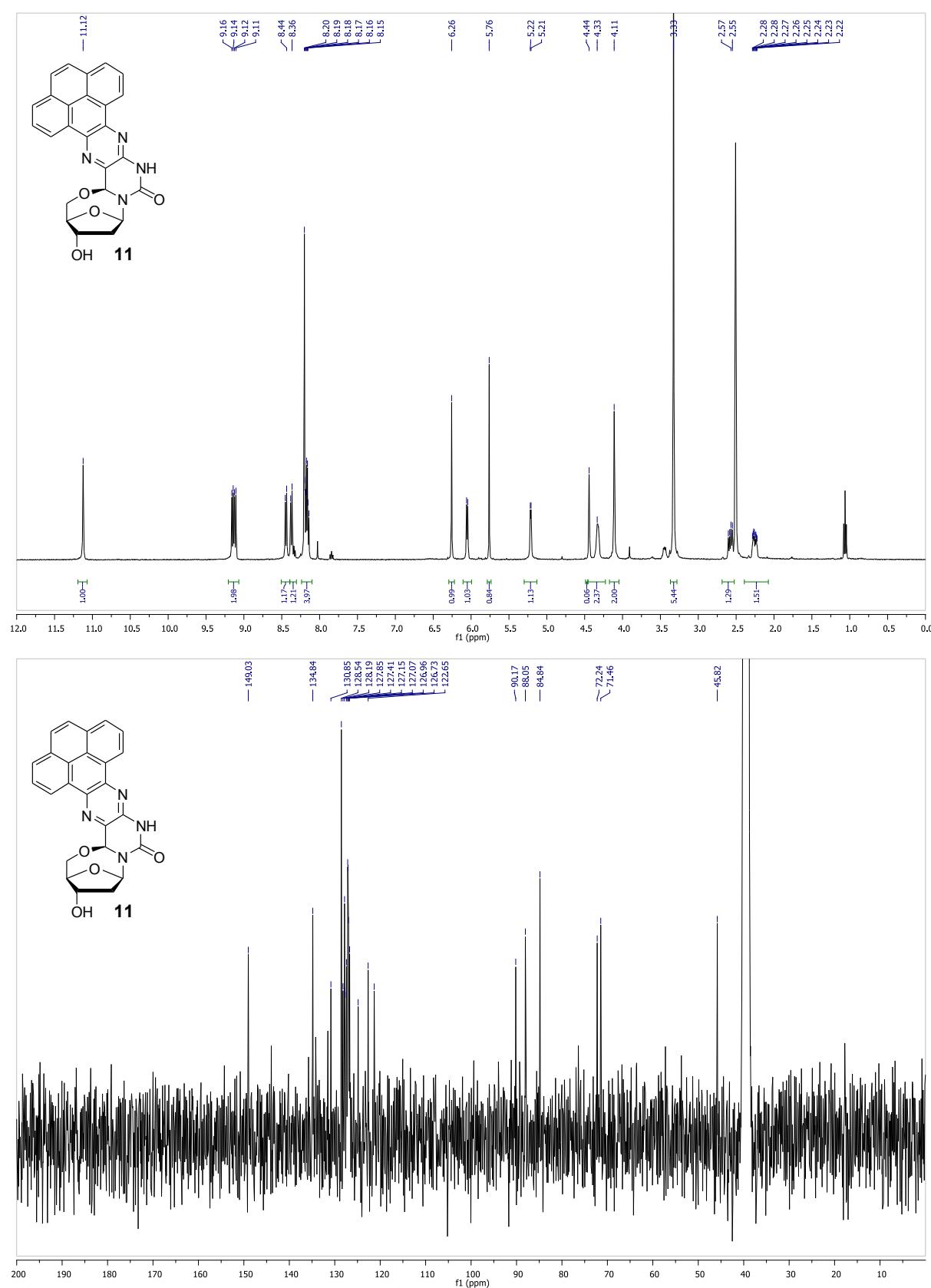
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