

## Supporting information

**Novel two-photon absorption compounds with different organic cations:  
Facile synthesis, photophysical properties, detection of viscosity, and  
selective imaging of the endoplasmic reticulum in living cells**

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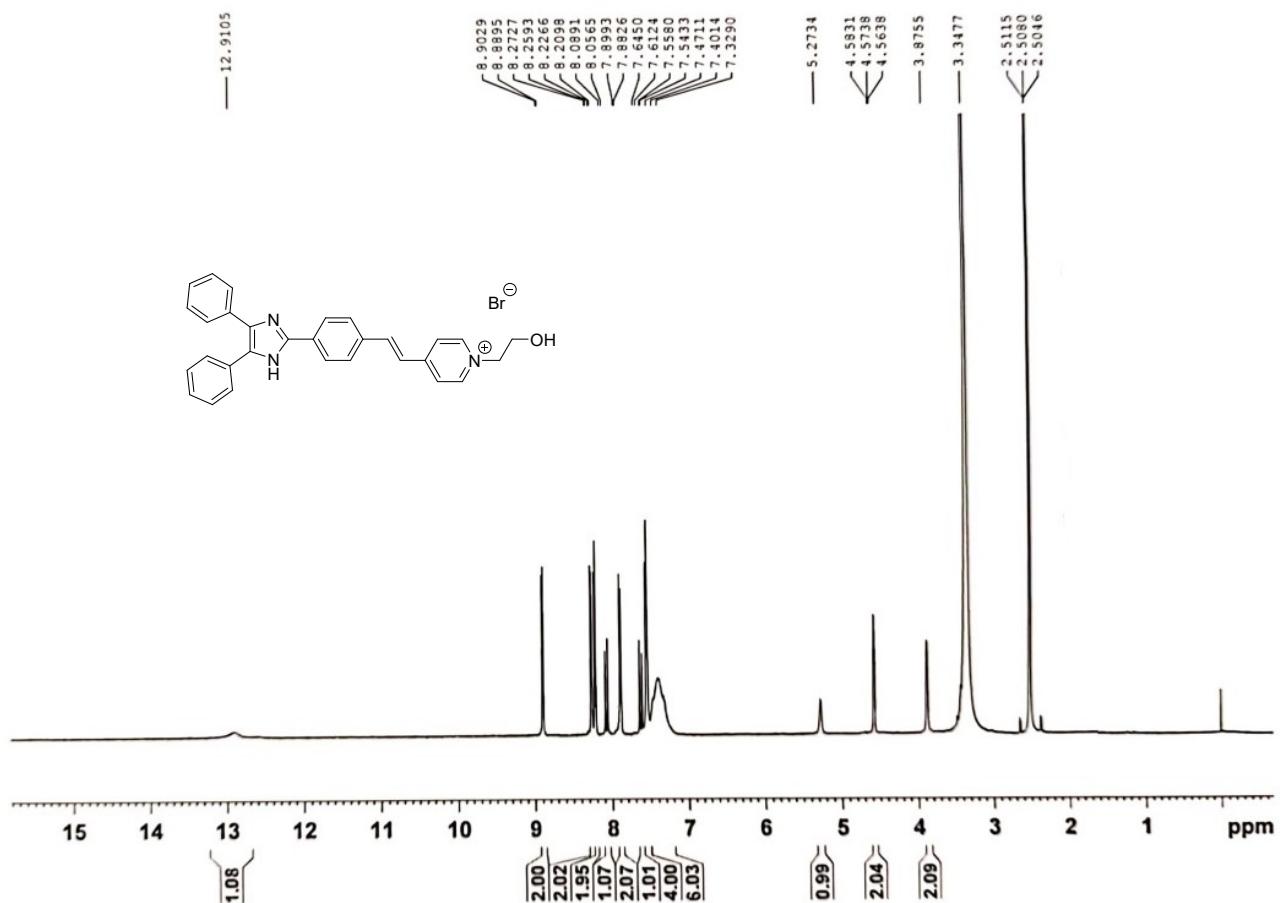
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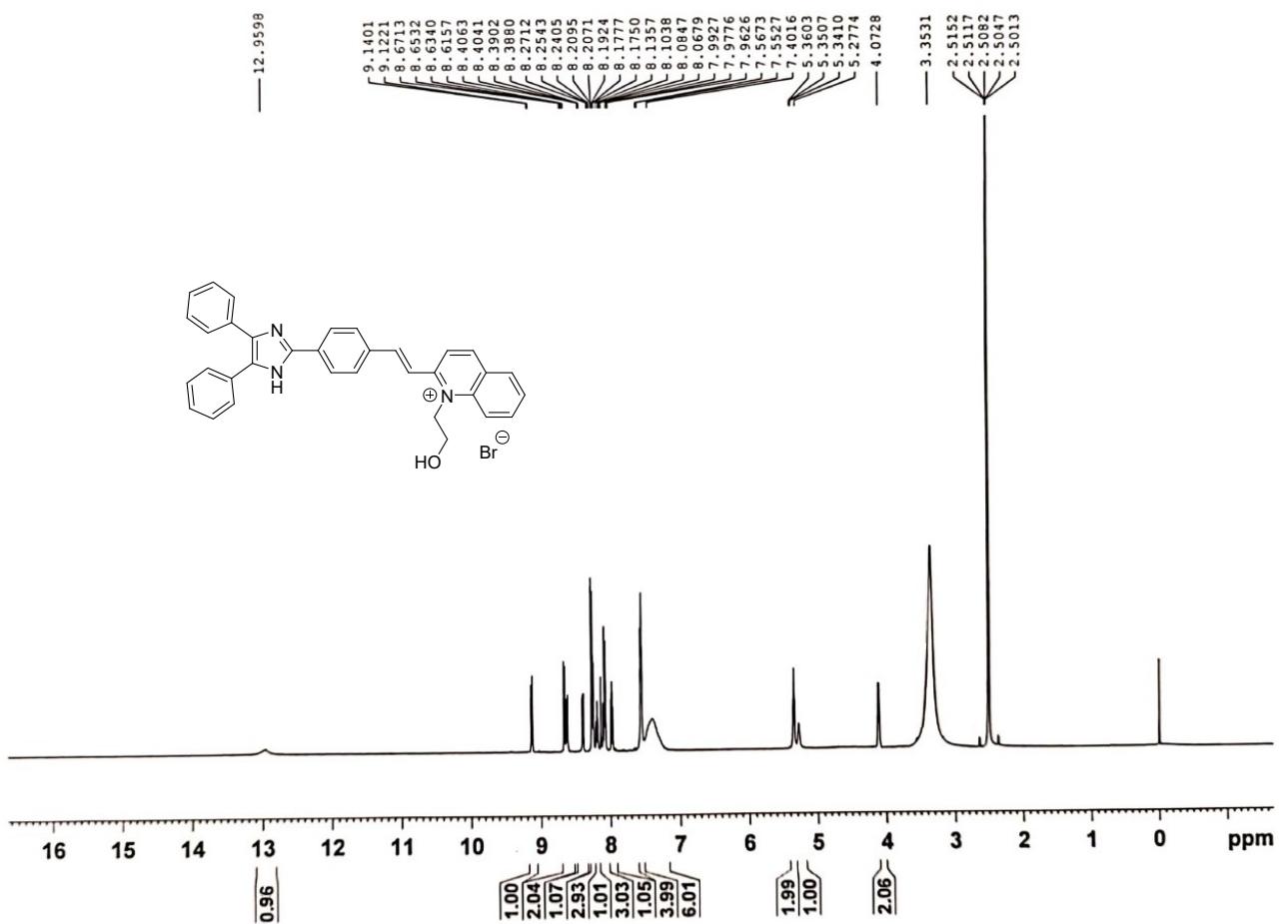
## **Table of Contents**

1. $^1\text{H}$ NMR spectra (Figure S1-S3).....	S-3
2. $^{13}\text{C}$ NMR spectra (Figure S4-S6).....	S-6
3. HRMS spectra (Figure S7-S9).....	S-9
4. FT-IR spectra (Figure S10-S12) .....	S-12

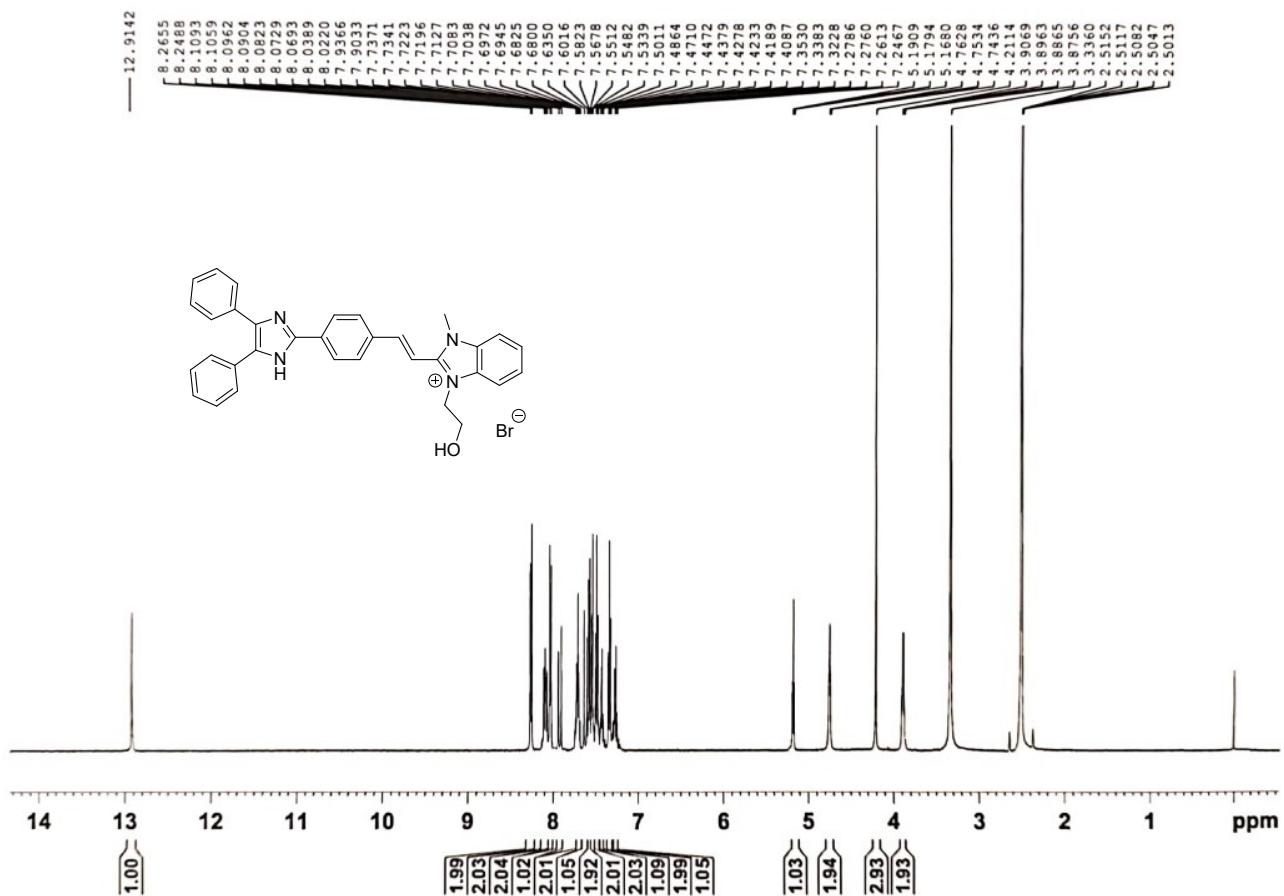
## 1. $^1\text{H}$ NMR spectra



**Figure S1.**  $^1\text{H}$  NMR spectrum of **1PIPyl** in  $\text{DMSO}-d_6$ .

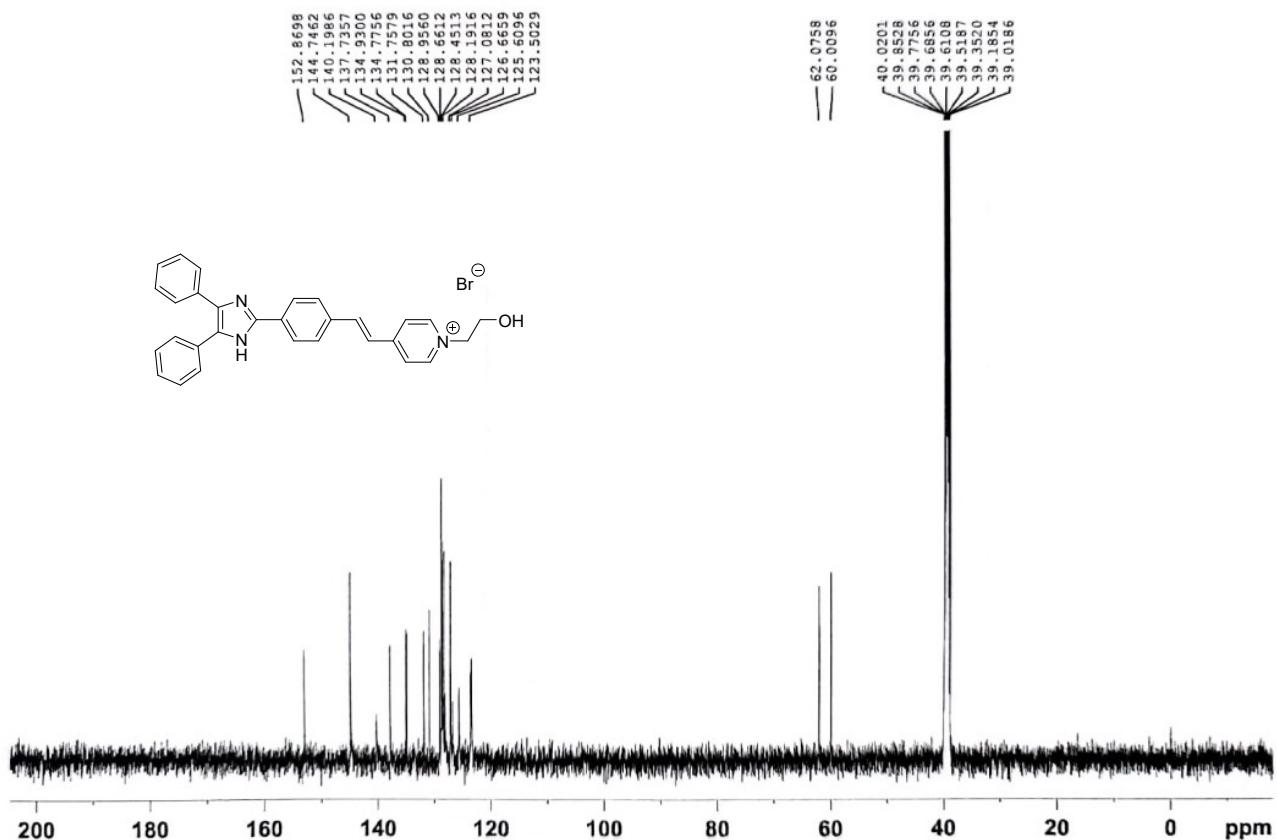


**Figure S2.**  $^1\text{H}$  NMR spectrum of **2PIQu** in  $\text{DMSO}-d_6$ .

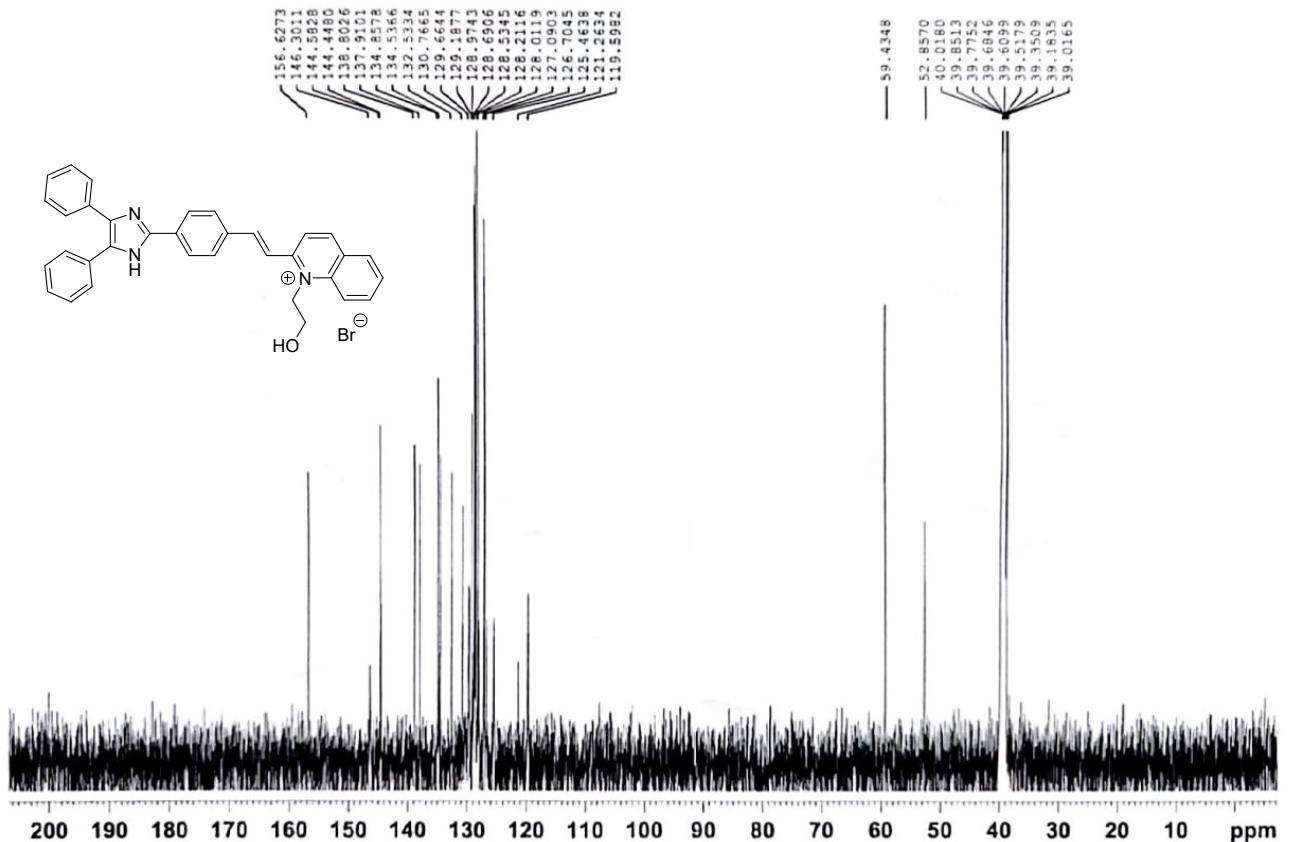


**Figure S3.**  $^1\text{H}$  NMR spectrum of **3PIIm** in  $\text{DMSO}-d_6$ .

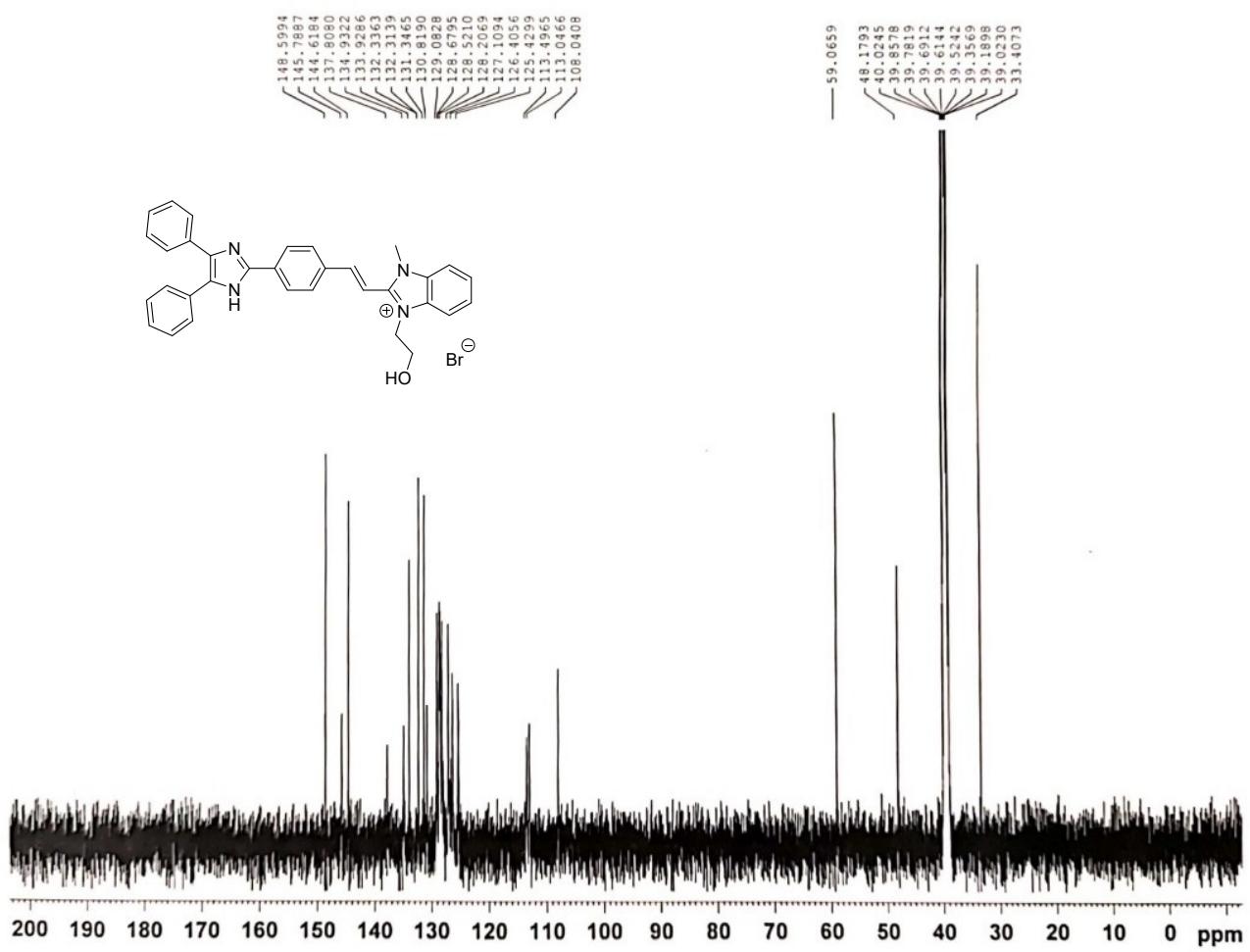
## 2. $^{13}\text{C}$ NMR spectra



**Figure S4.**  $^{13}\text{C}$  NMR spectrum of 1PIPyl bromide in  $\text{DMSO}-d_6$ .

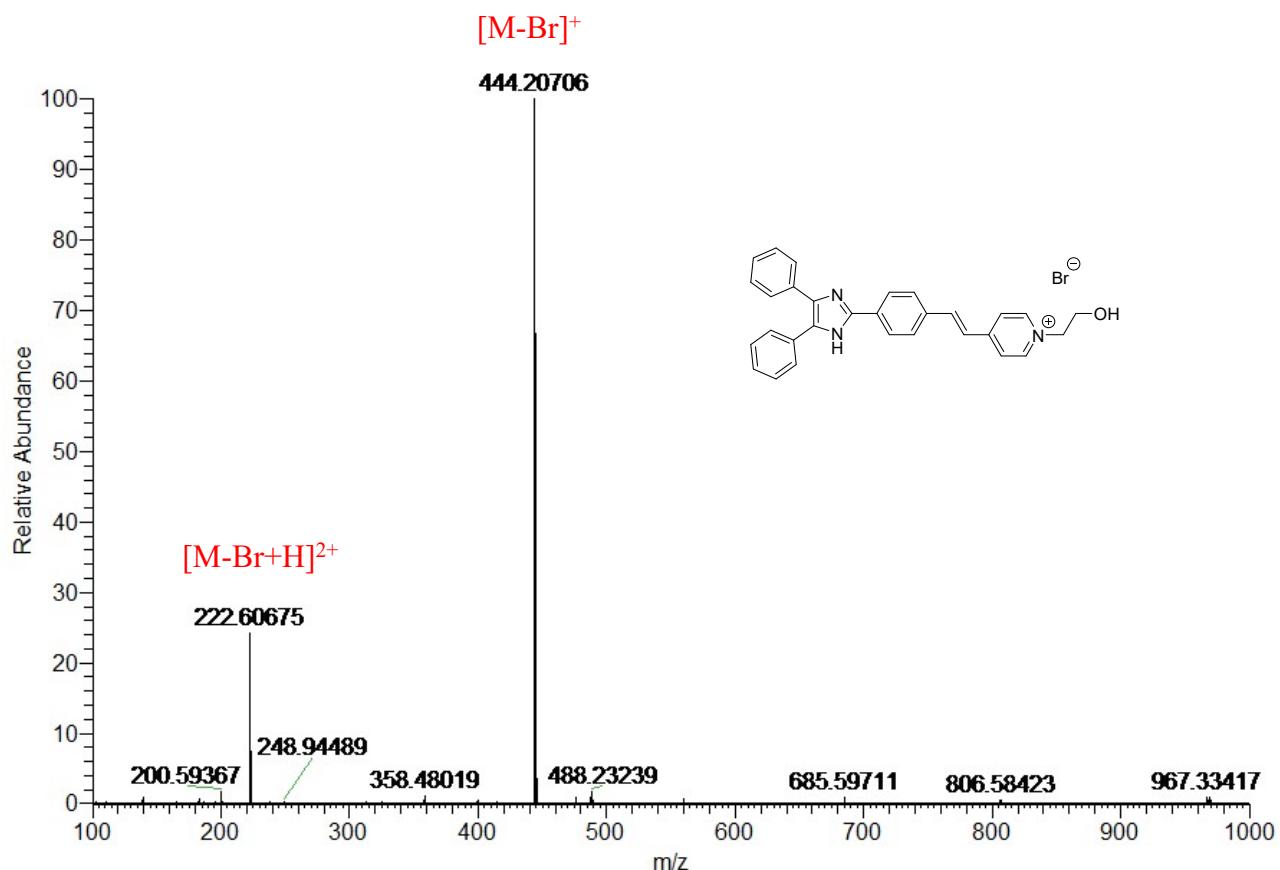


**Figure S5.** <sup>13</sup>C NMR spectrum of **2PIQu** in DMSO-*d*<sub>6</sub>.

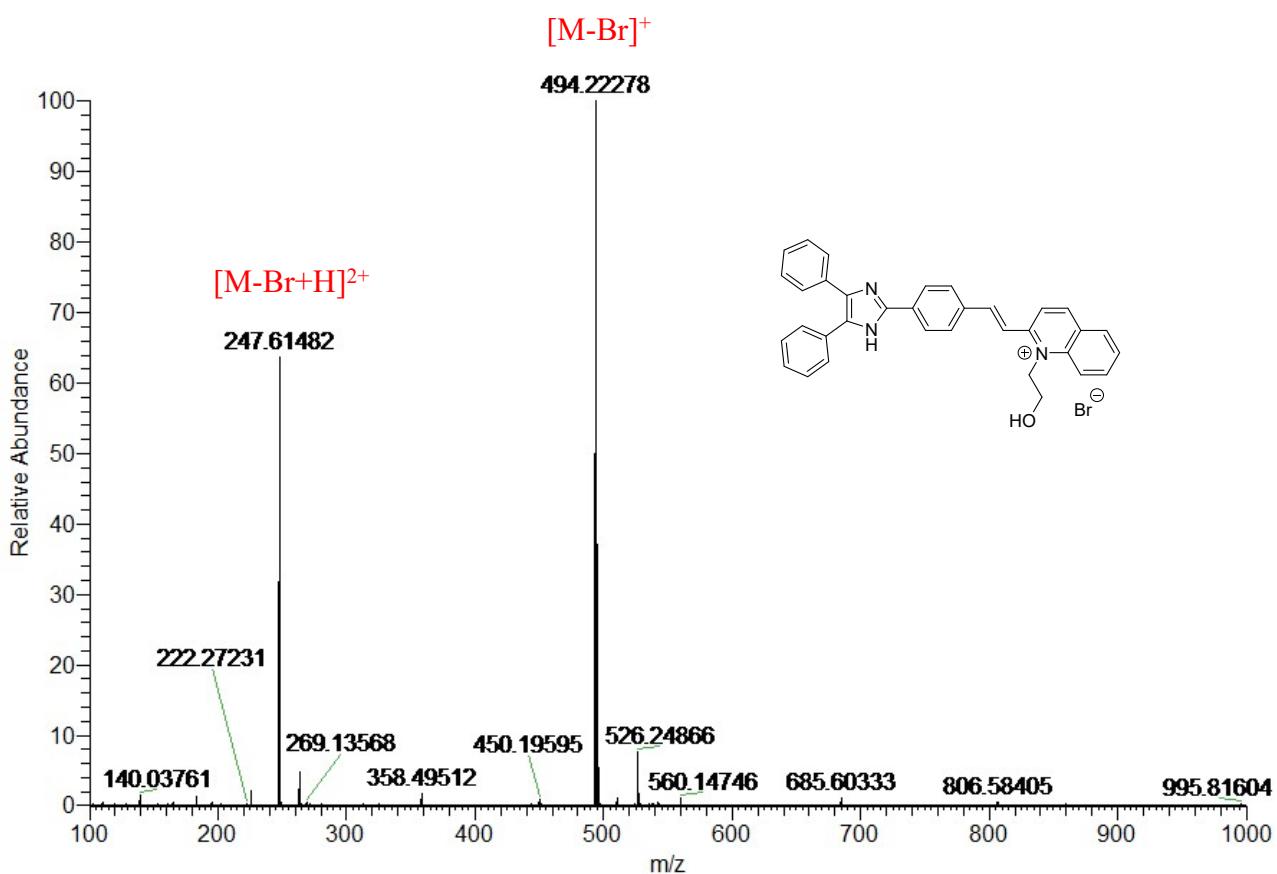


**Figure S6.**  $^{13}\text{C}$  NMR spectrum of **3PIIm** in  $\text{DMSO}-d_6$ .

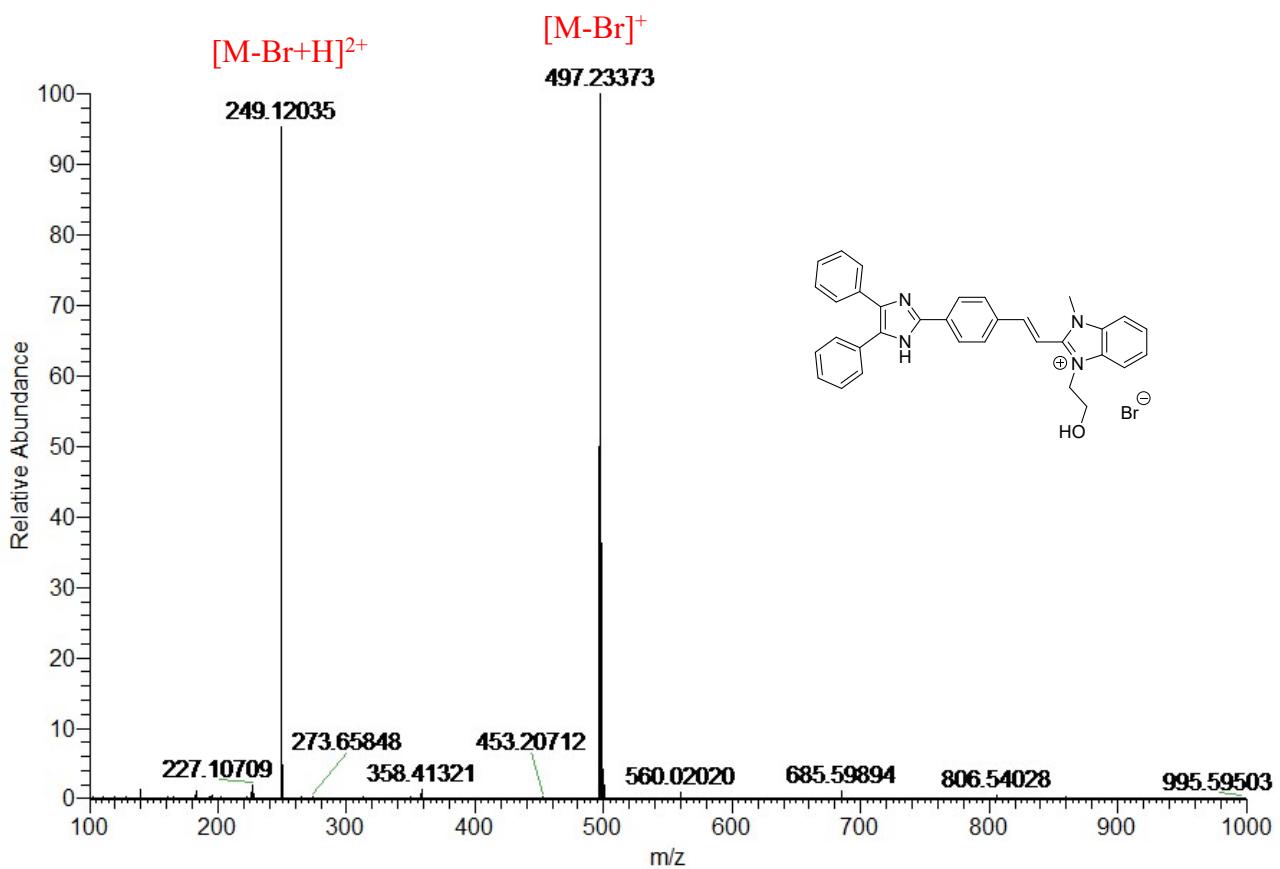
### 3. HRMS spectra



**Figure S7.** HRMS spectrum of **1PIP<sub>y</sub>**.

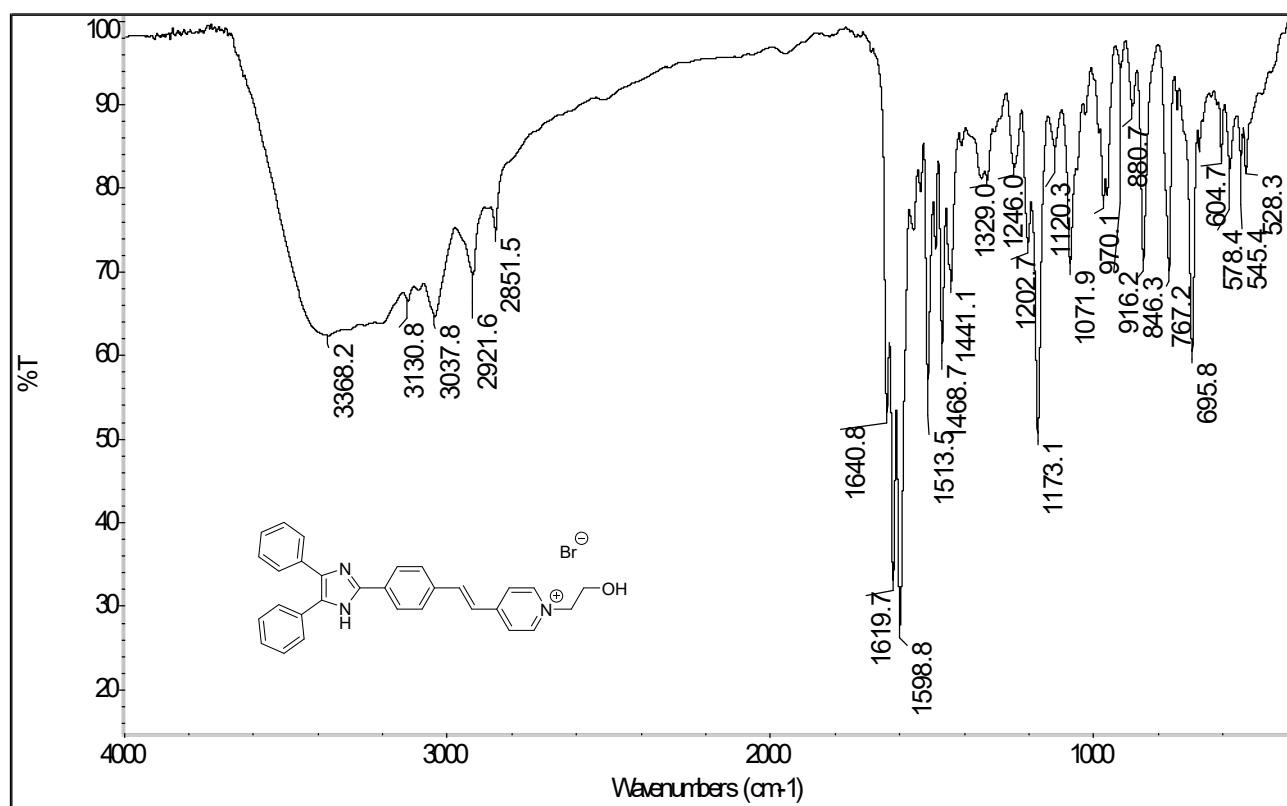


**Figure S8.** HRMS spectrum of **2PIQu**.

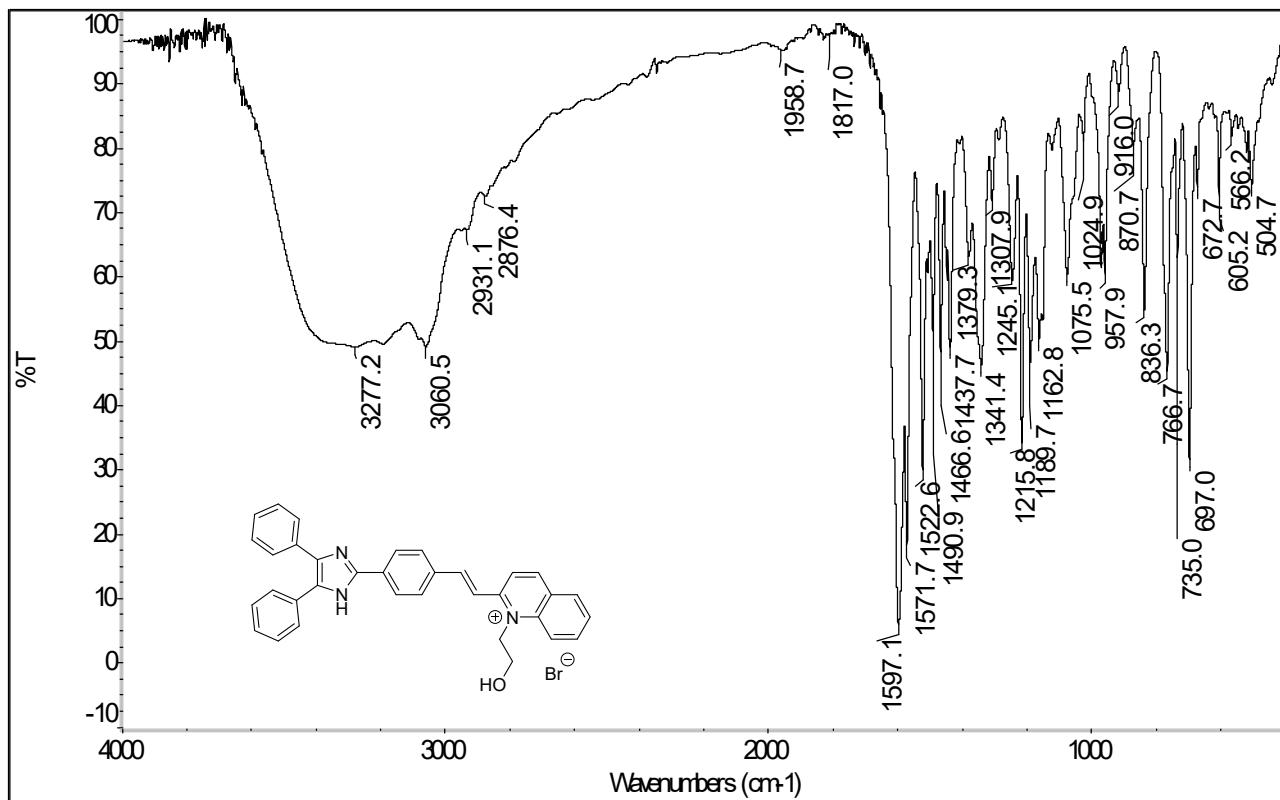


**Figure S9.** HRMS spectrum of **3PIIm**.

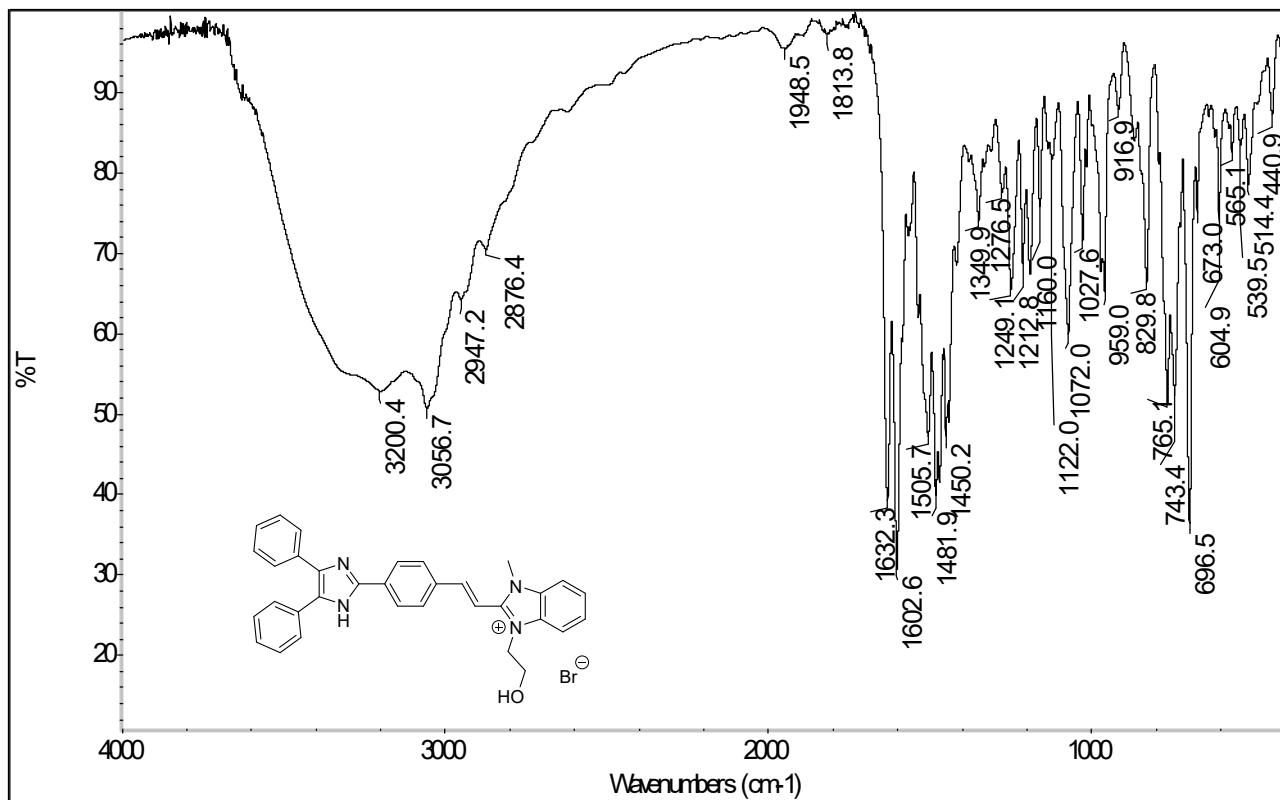
#### 4. FT-IR spectra



**Figure S10.** FT-IR spectrum of **1PIPy**.



**Figure S11.** FT-IR spectrum of **2PIQu**.



**Figure S12.** FT-IR spectrum of **3PIIm**.