

## **Photophysical and thermal properties of novel solid state fluorescent benzoxazole based styryl dyes with DFT study**

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### 1. Absorbance and emission spectra of compounds **6a-6e**

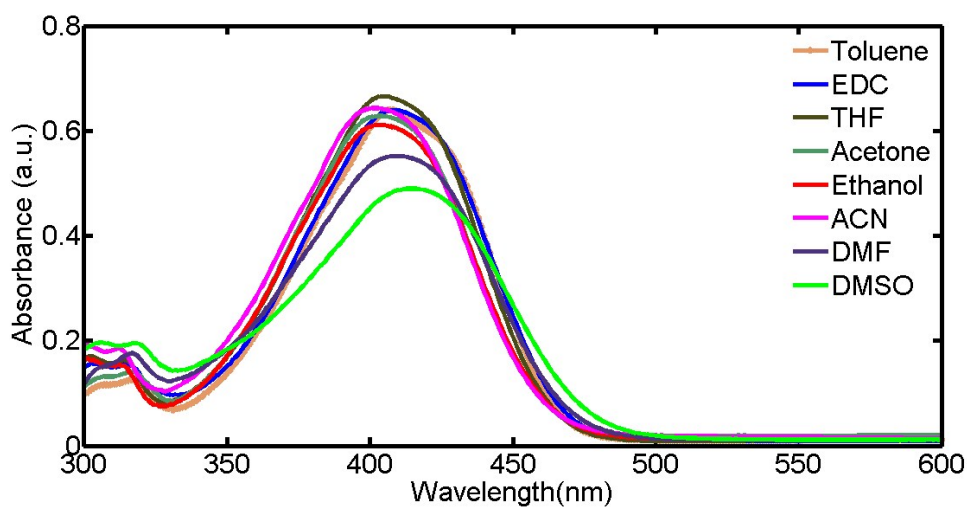


Figure S1(a). Absorption studies of dye **6a** in different solvents.

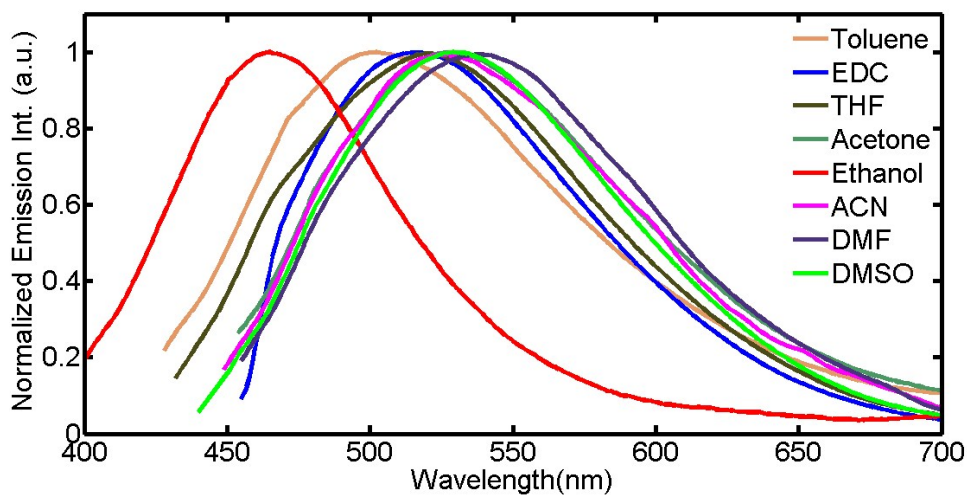


Figure S1(b). Emission studies of dye **6a** in different solvents.

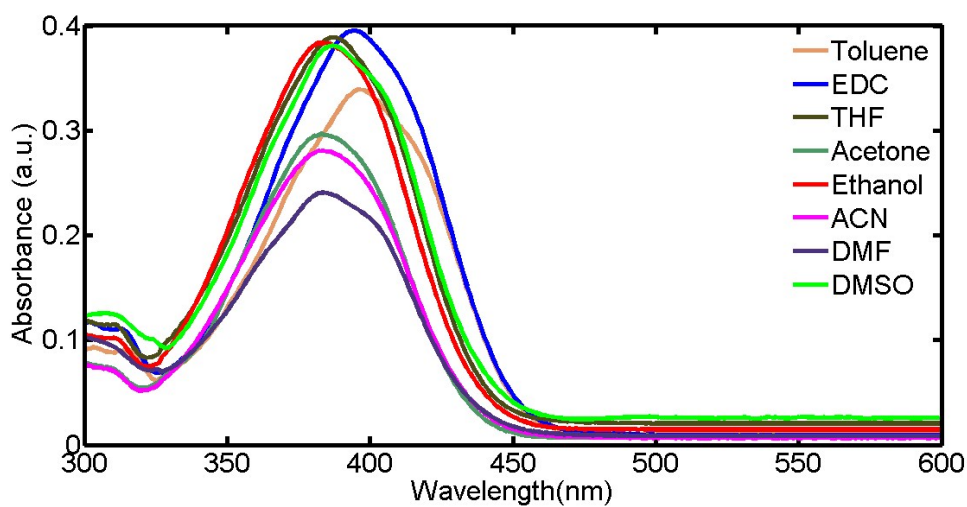


Figure S2(a). Absorption studies of dye **6b** in different solvents.

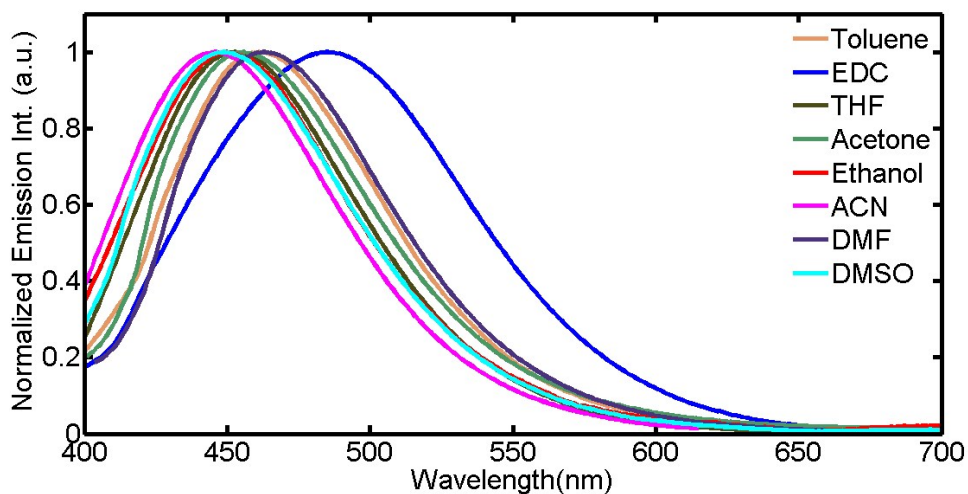


Figure S2(b). Emission studies of dye **6b** in different solvents.

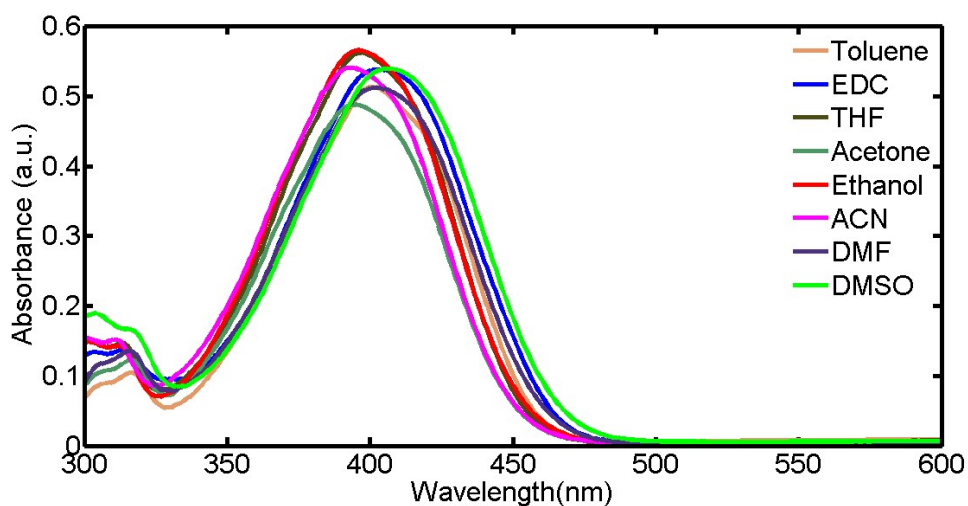


Figure S3(a) Absorption studies of dye **6c** in different solvents.

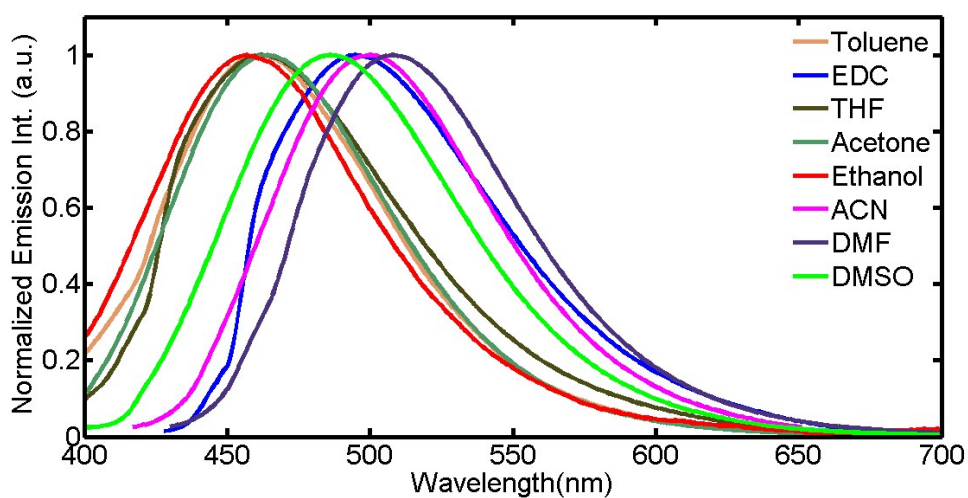


Figure S3(b). Emission studies of dye **6c** in different solvents.

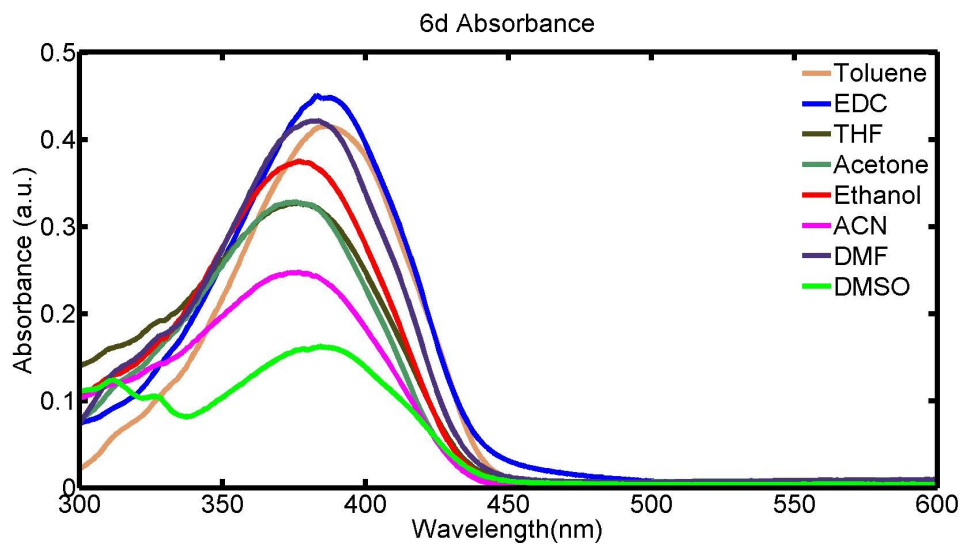


Figure S4(a). Absorption studies of dye **6d** in different solvents.

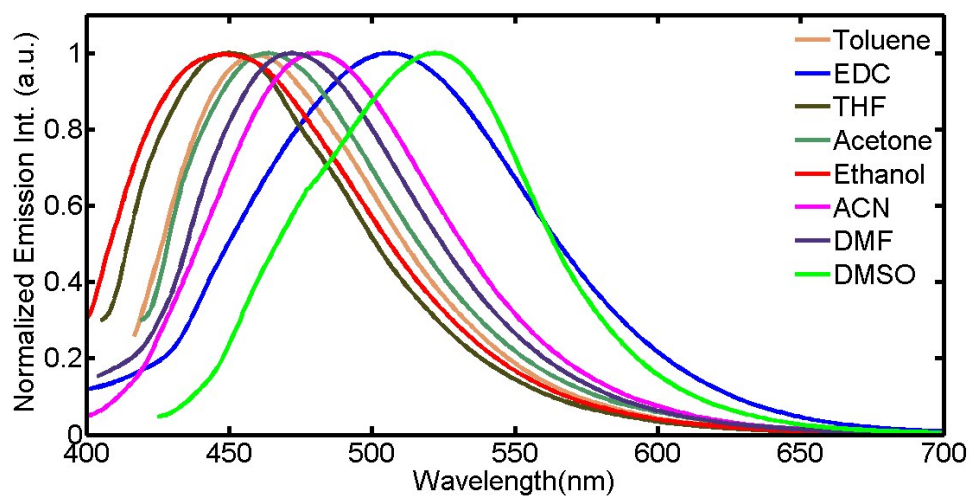


Figure S4(b). Emission studies of dye **6d** in different solvents.

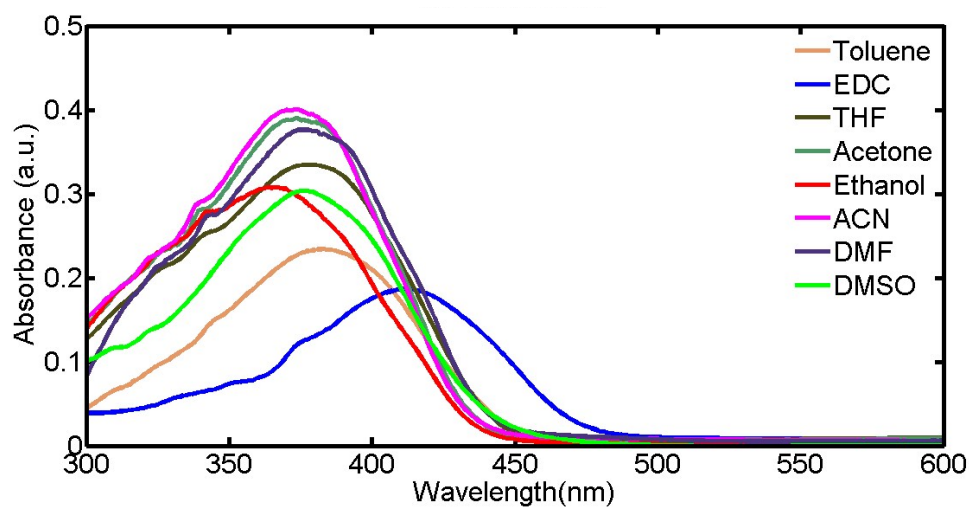


Figure S5(a). Absorption studies of dye **6e** in different solvents.

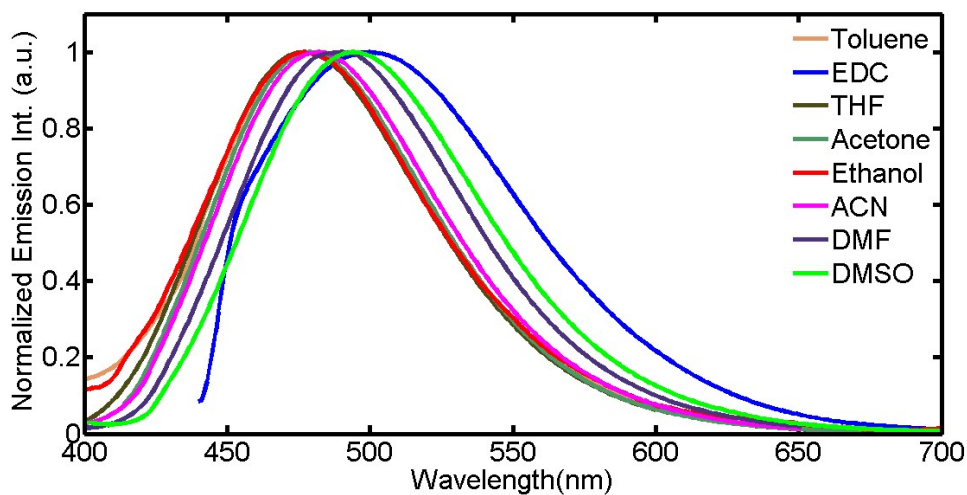
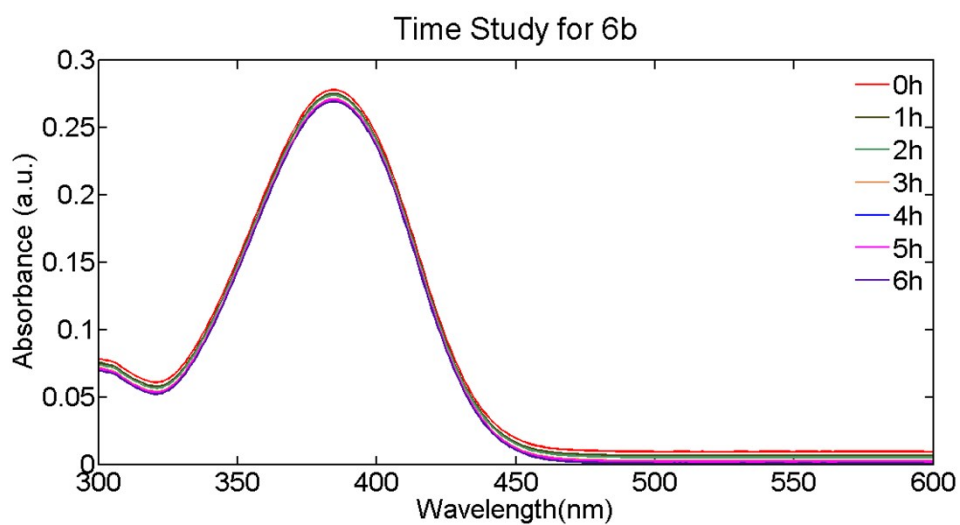
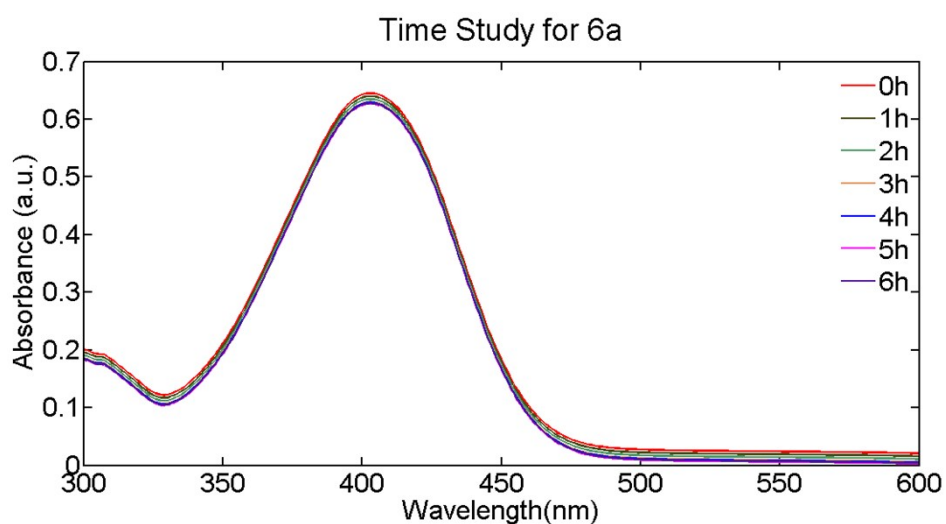


Figure S5(b). Emission studies of dye **6e** in different solvents.

## 2. Photochemical stability study spectra of compounds 6a-6e



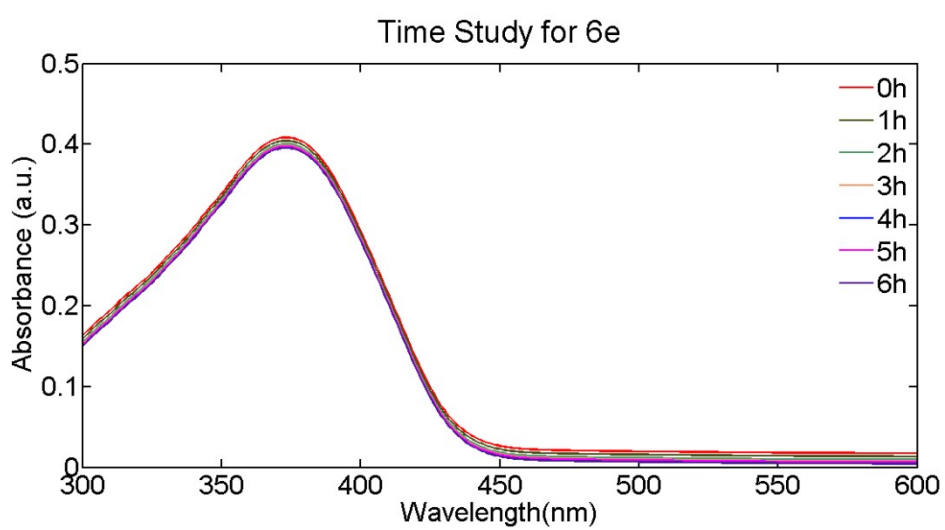
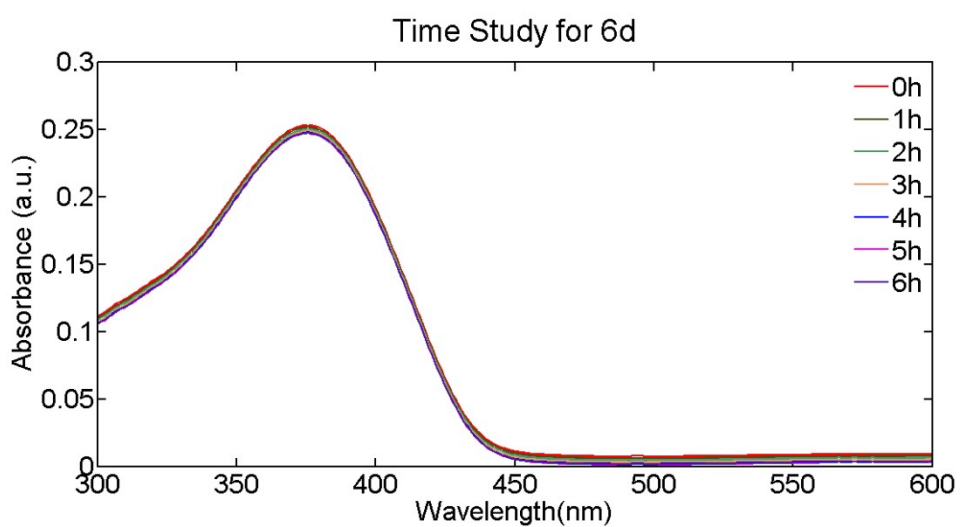
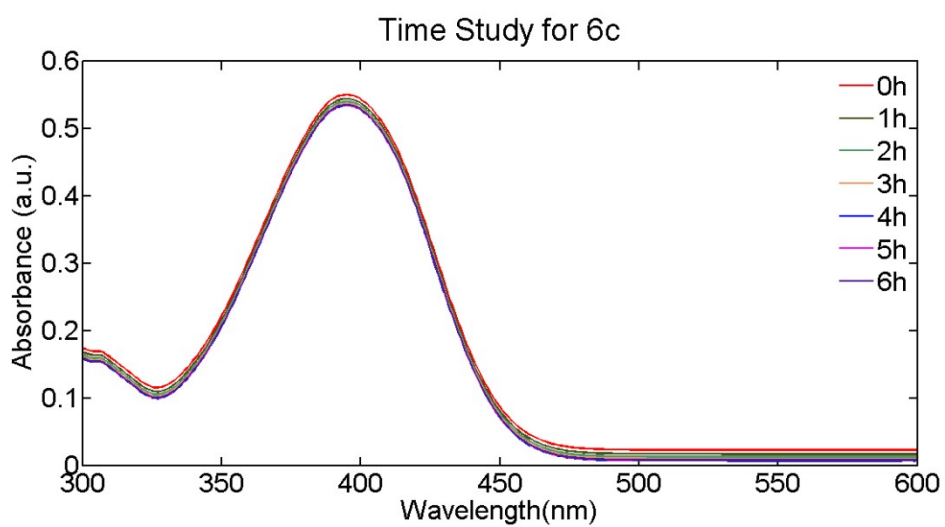
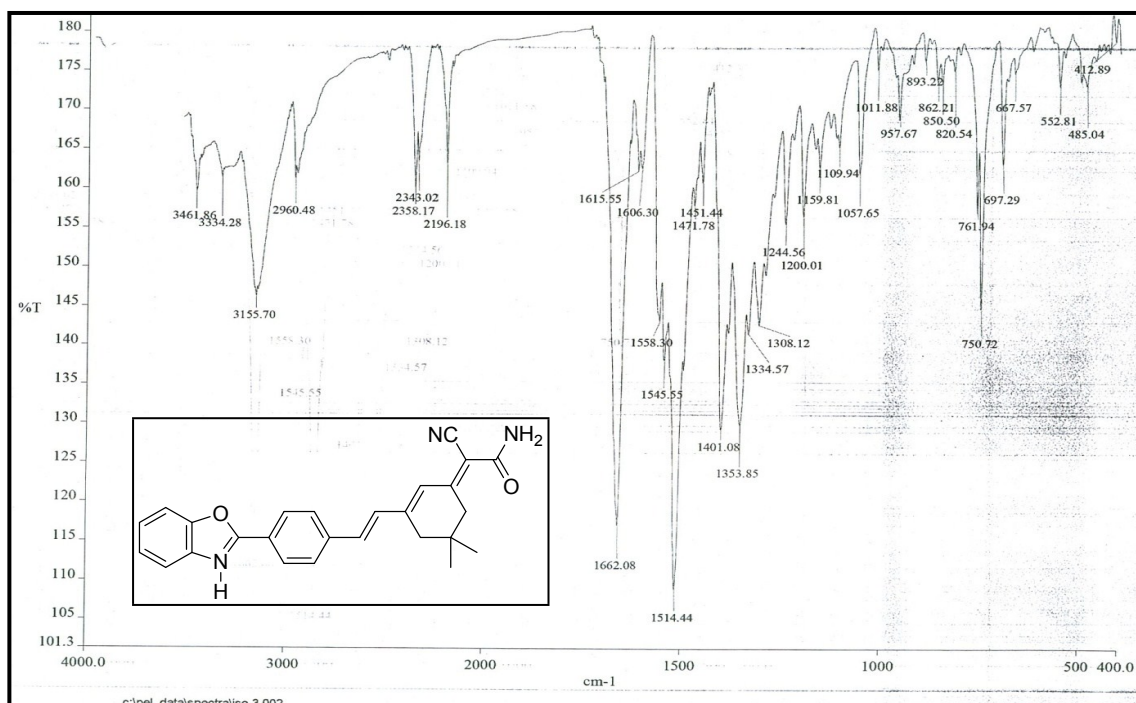
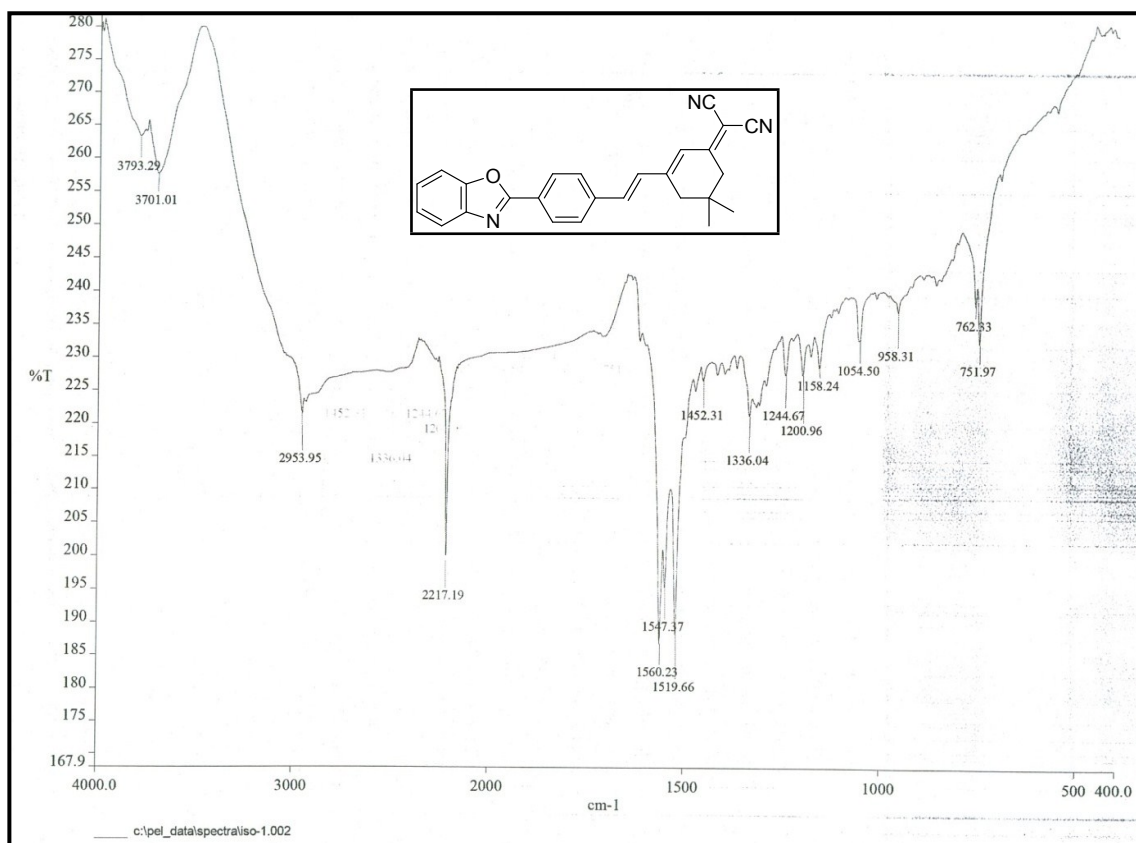
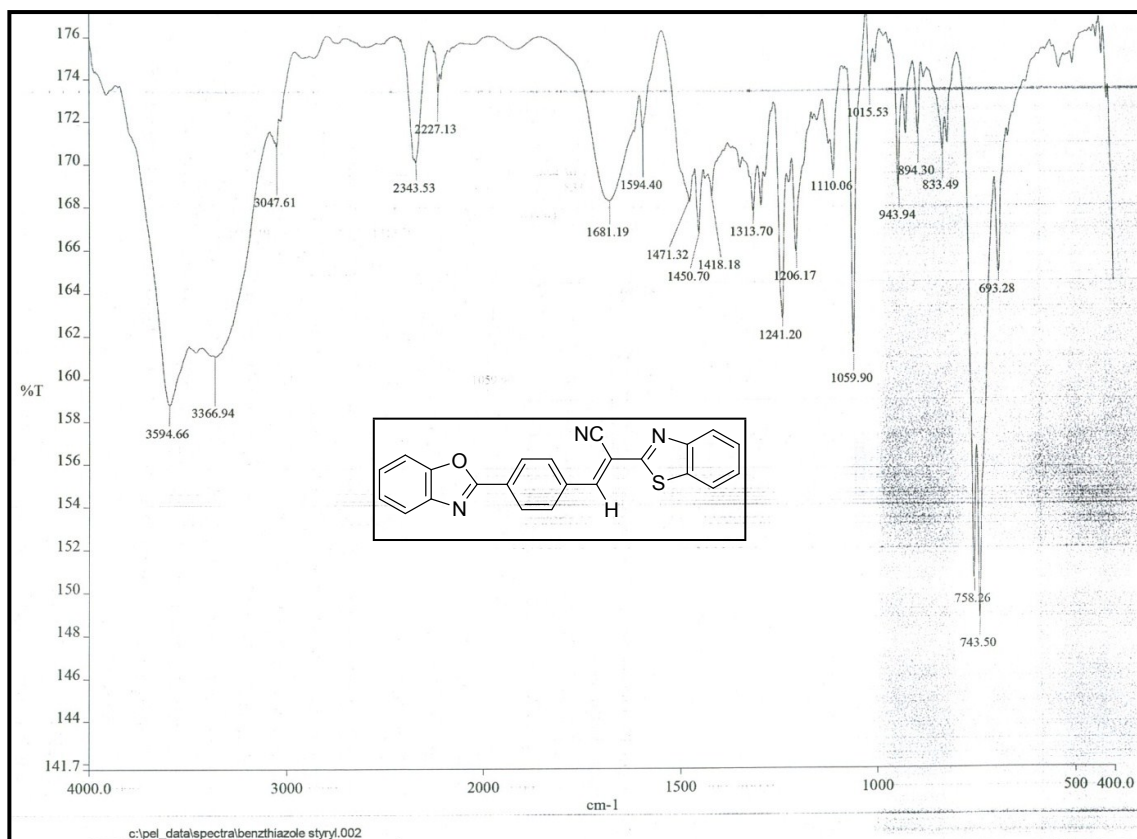
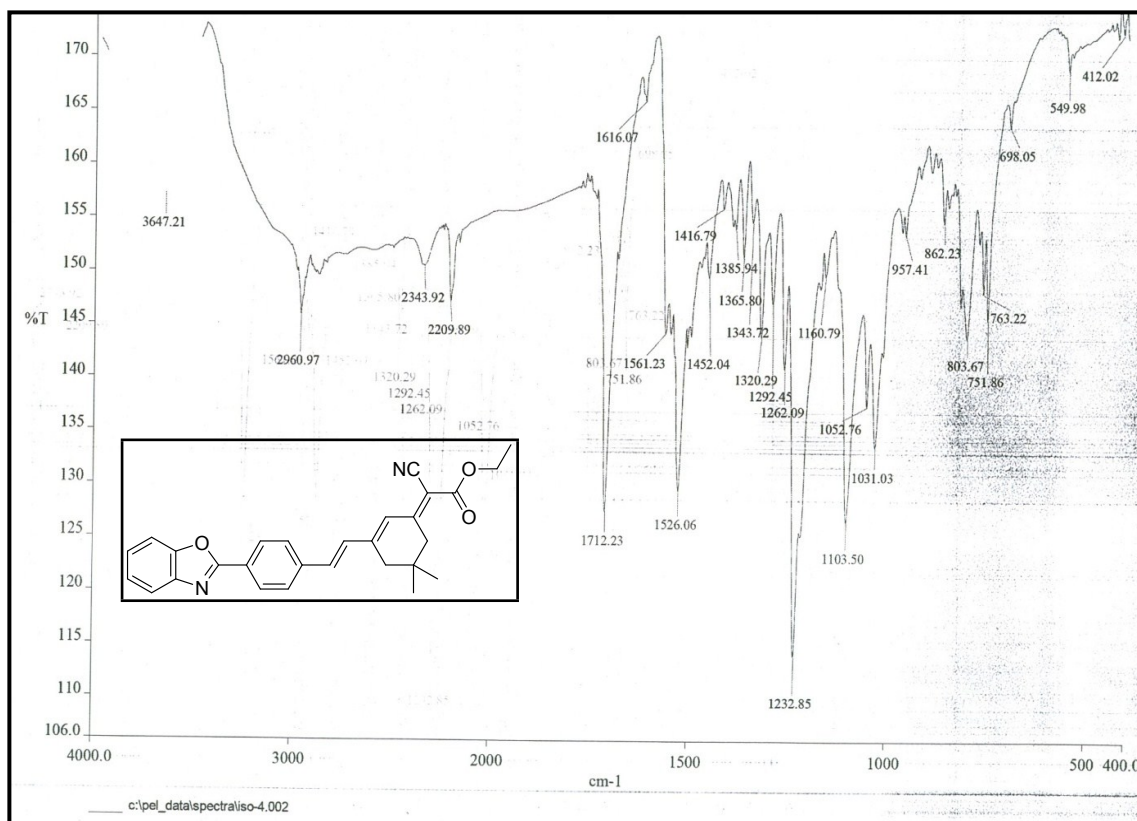


Figure S6. Uv-vis spectra of photostability study for dye **6a-6e**.

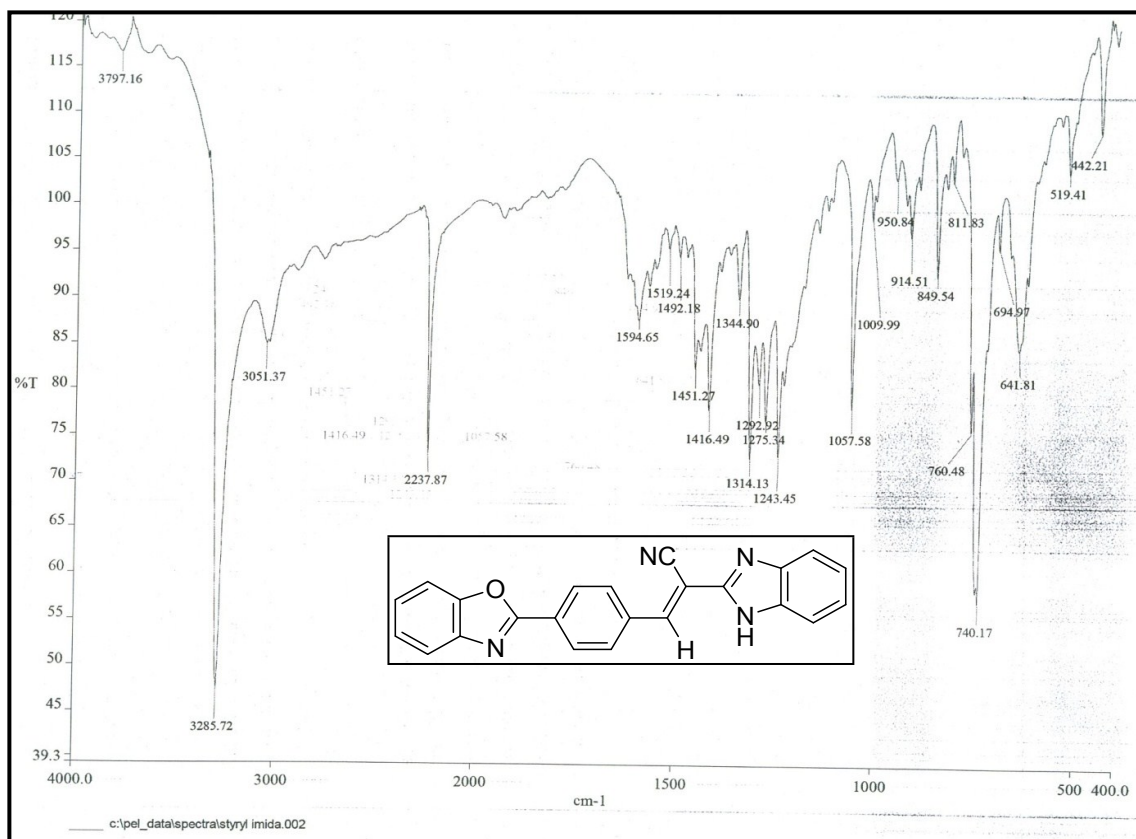


### 3. FT-IR spectra

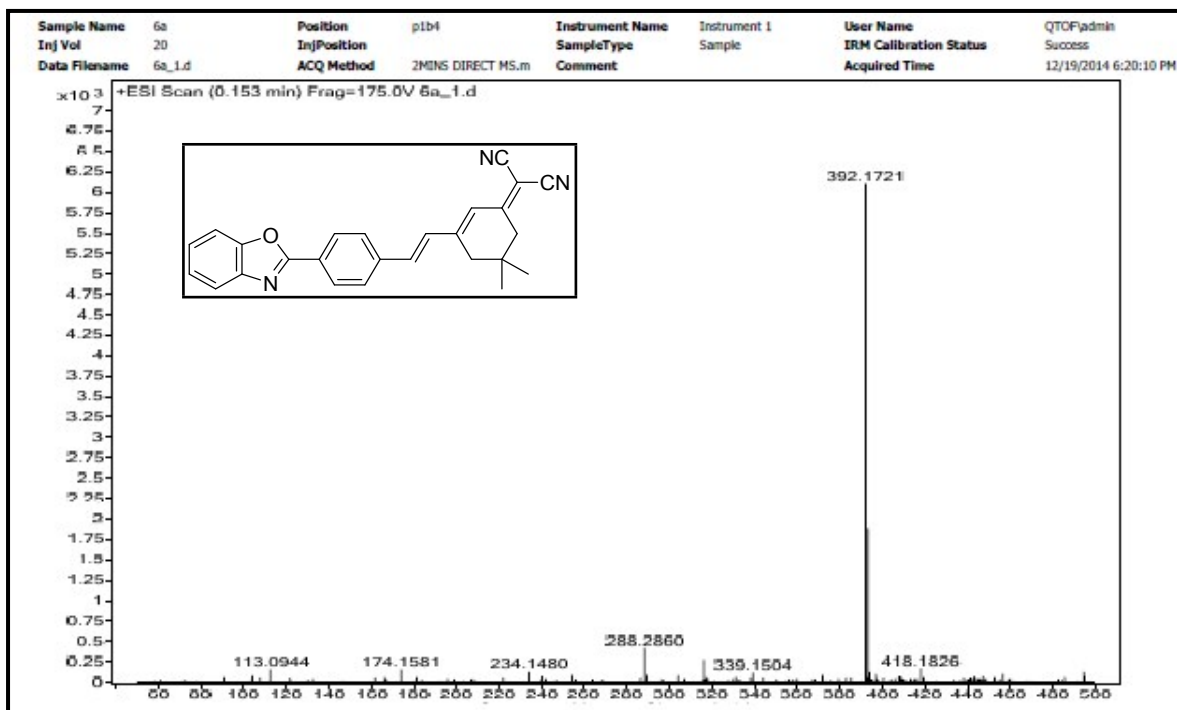


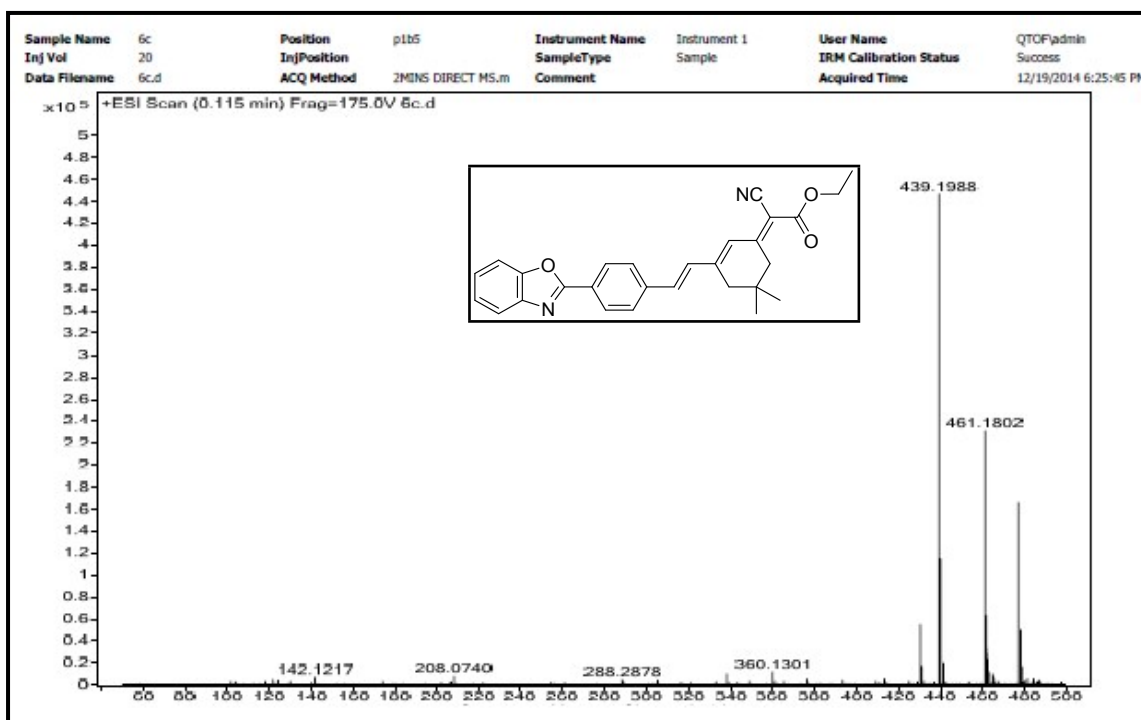
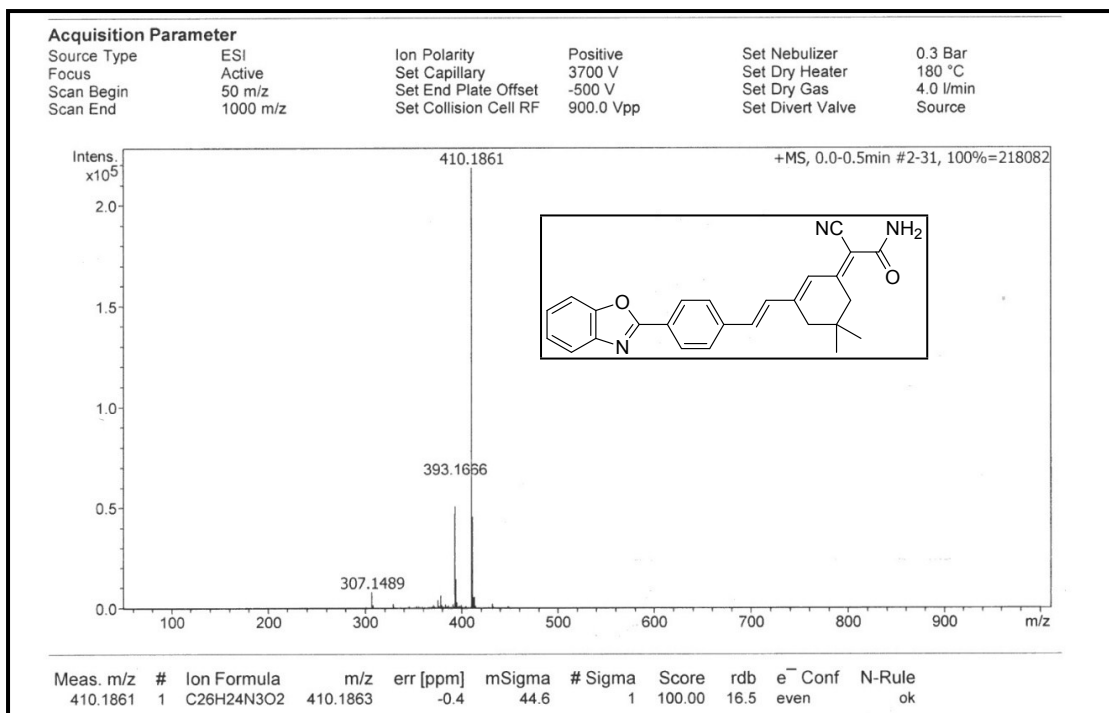


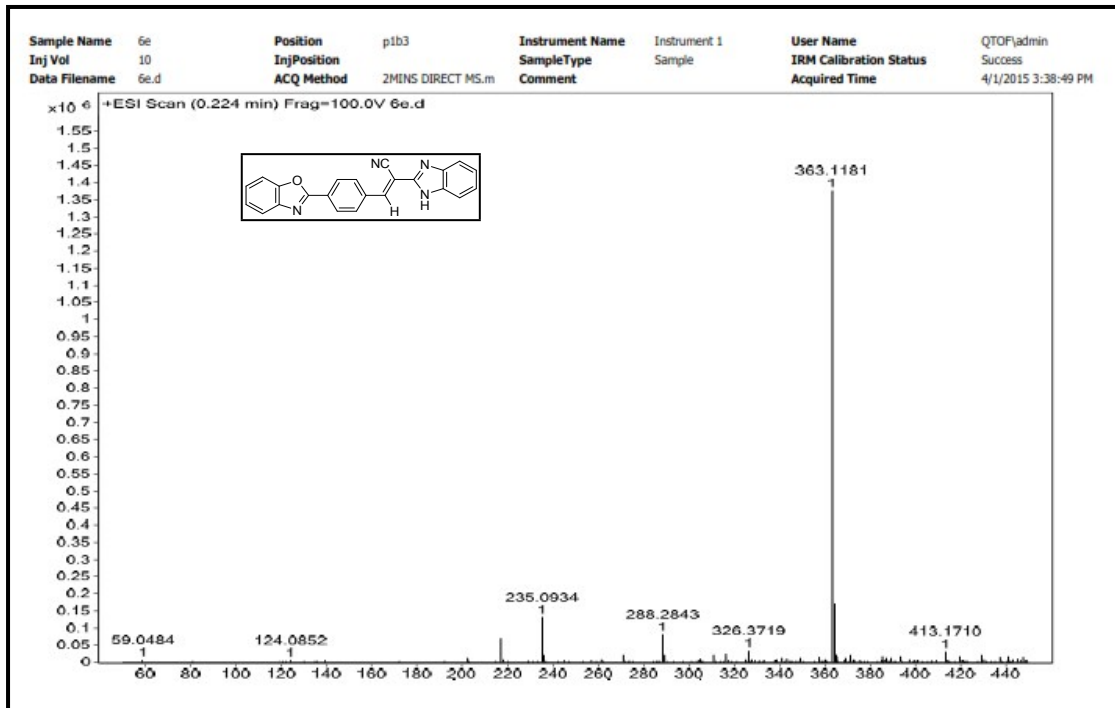
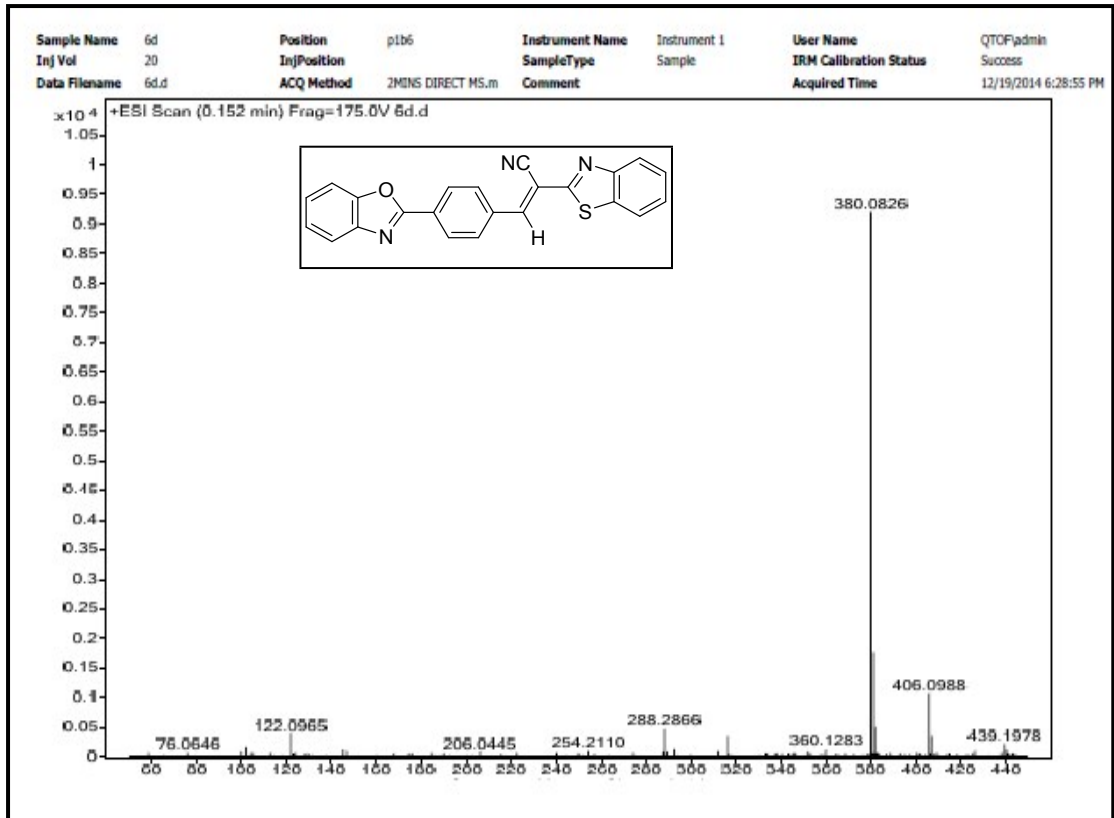




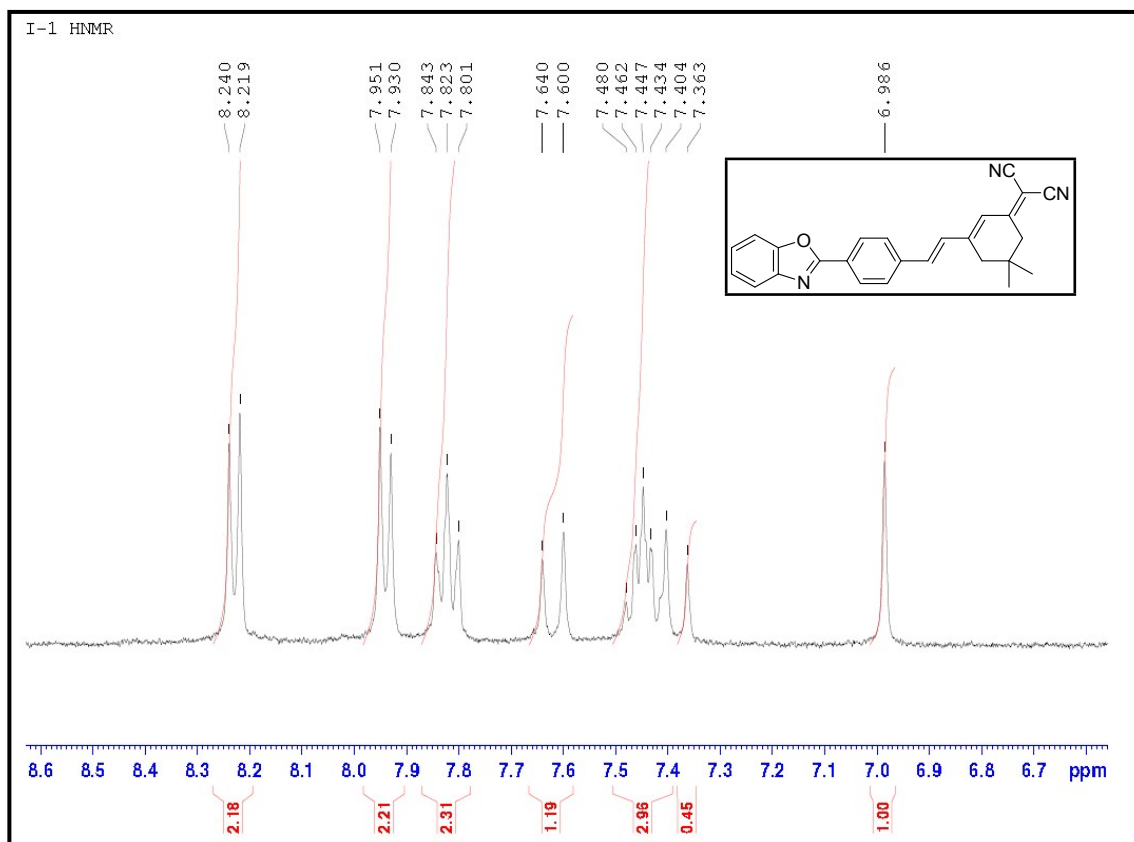
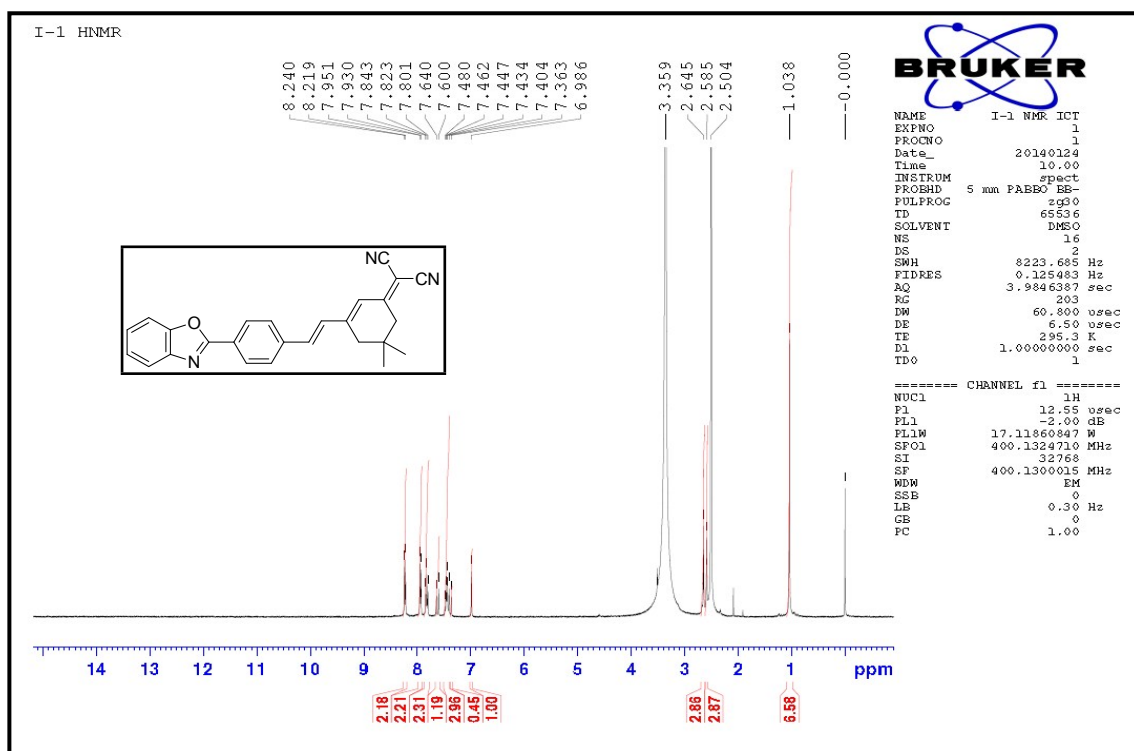
#### 4. HR-MS Spectra

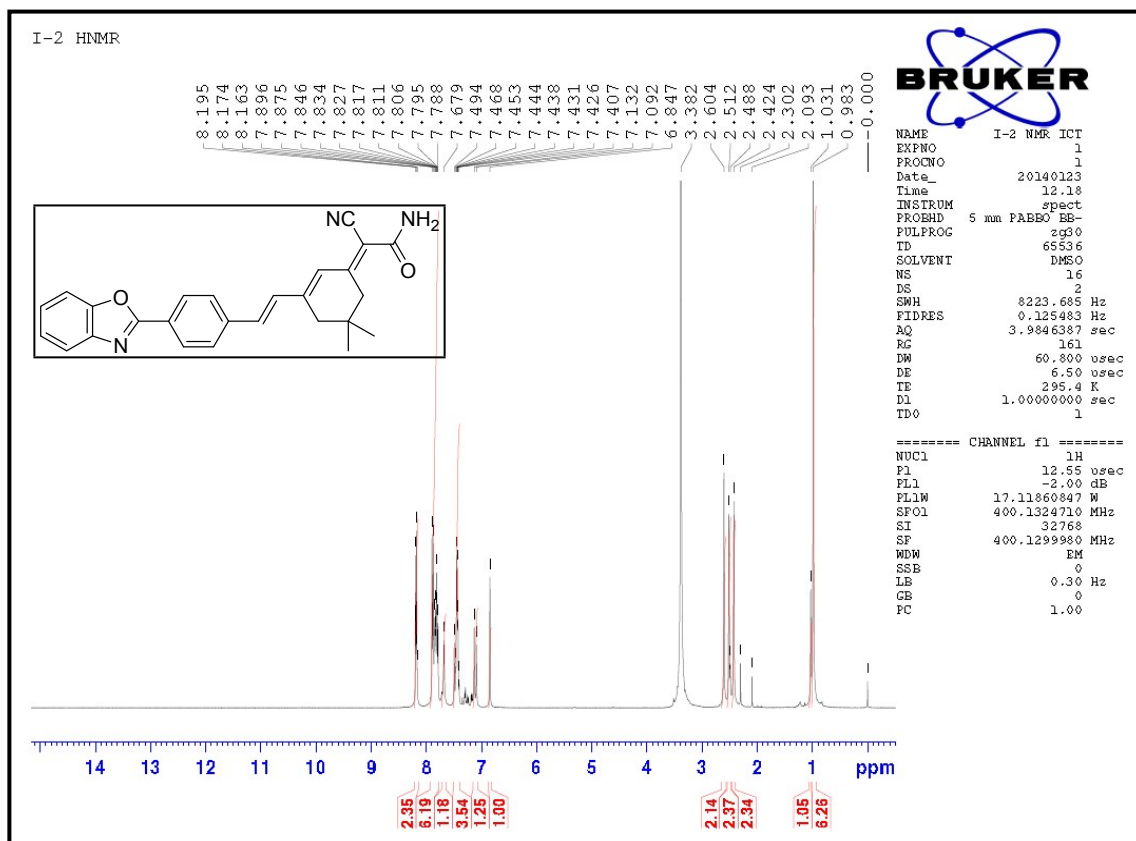
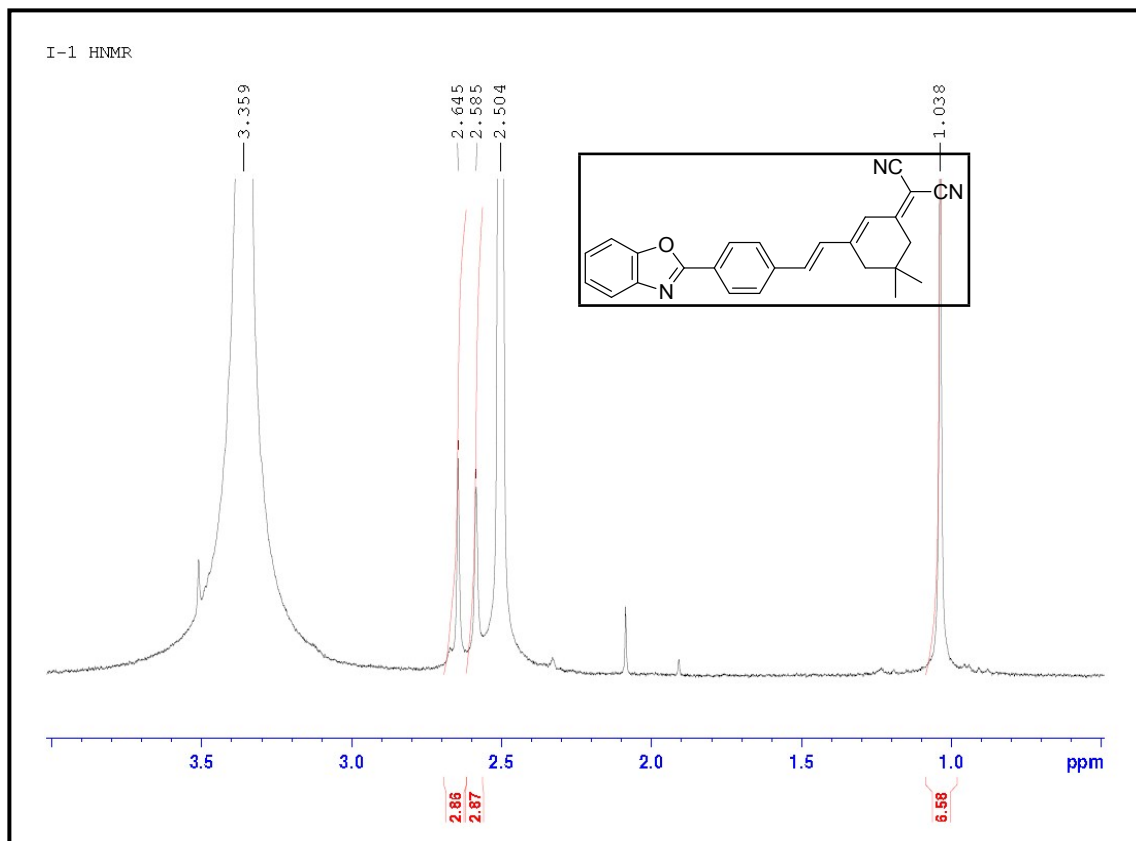




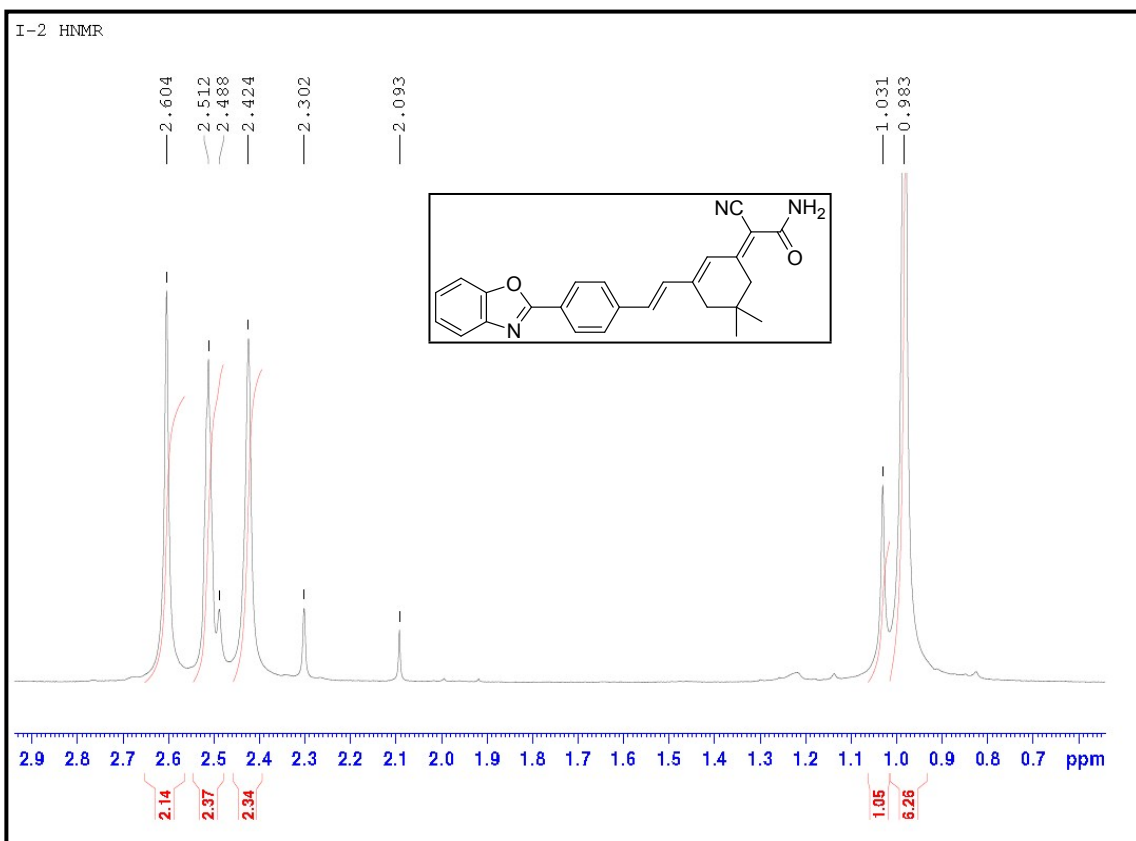
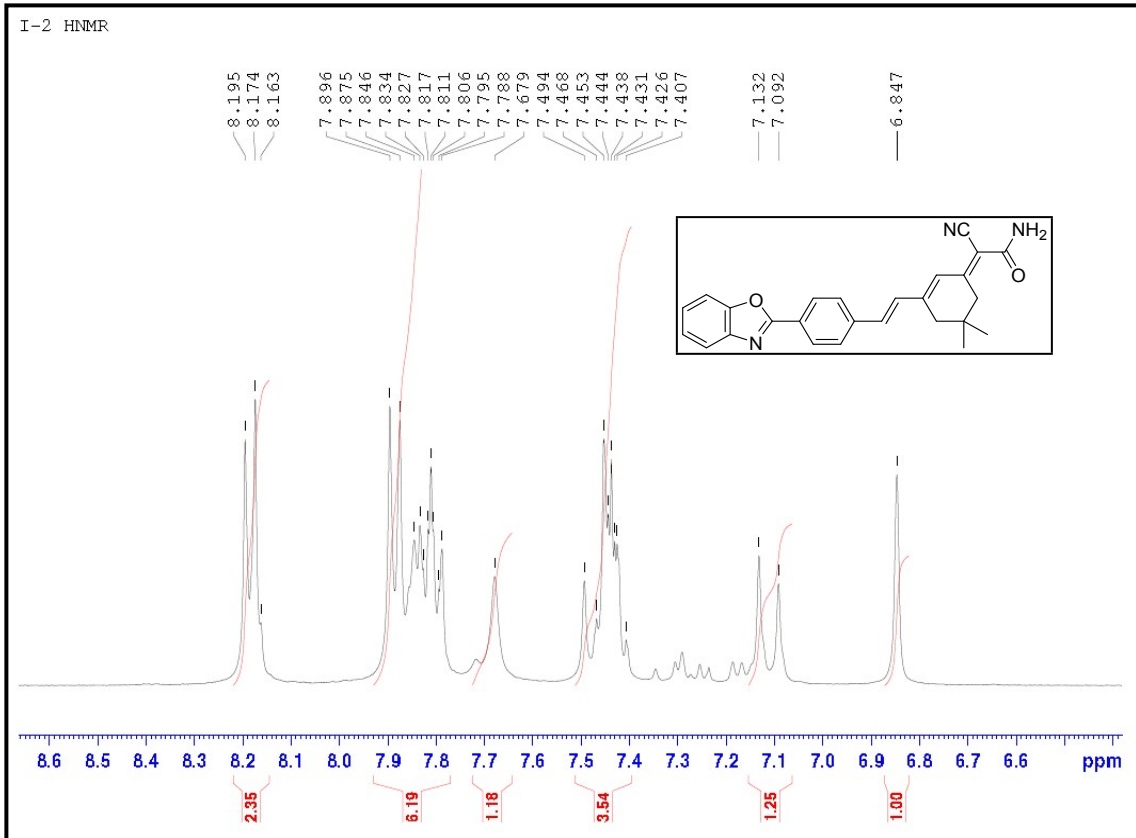


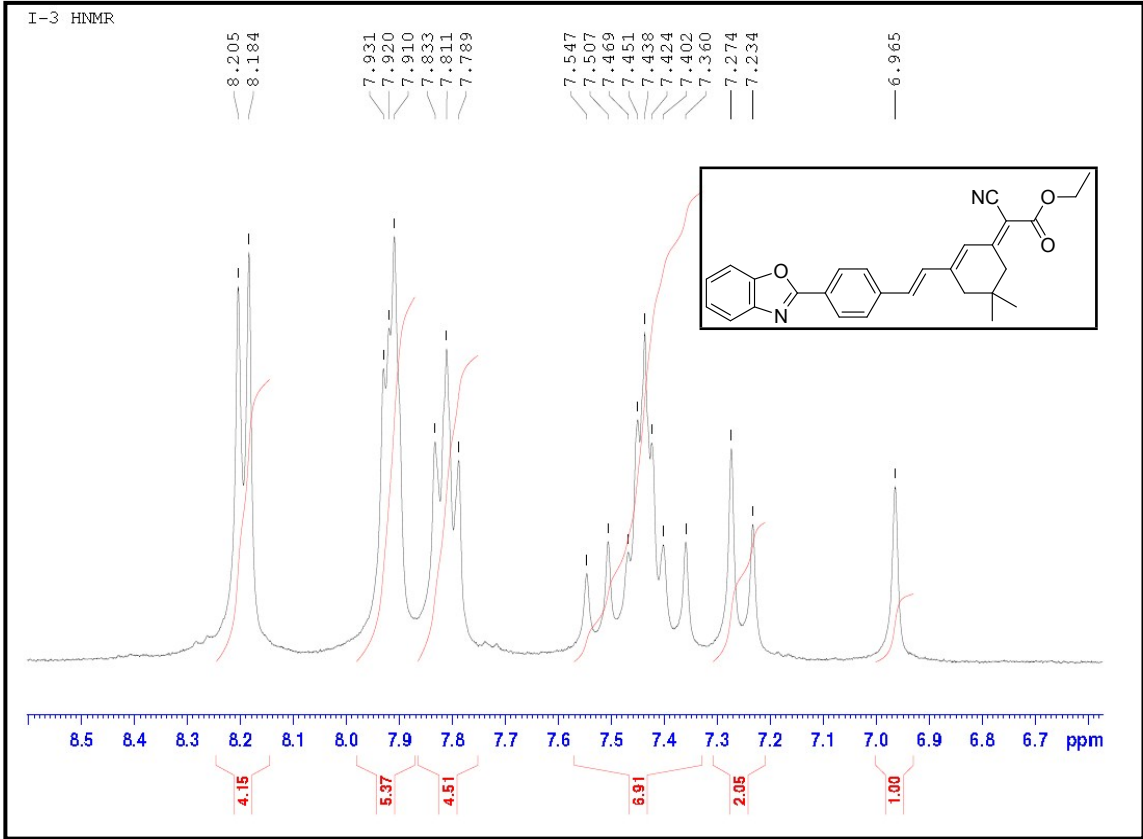
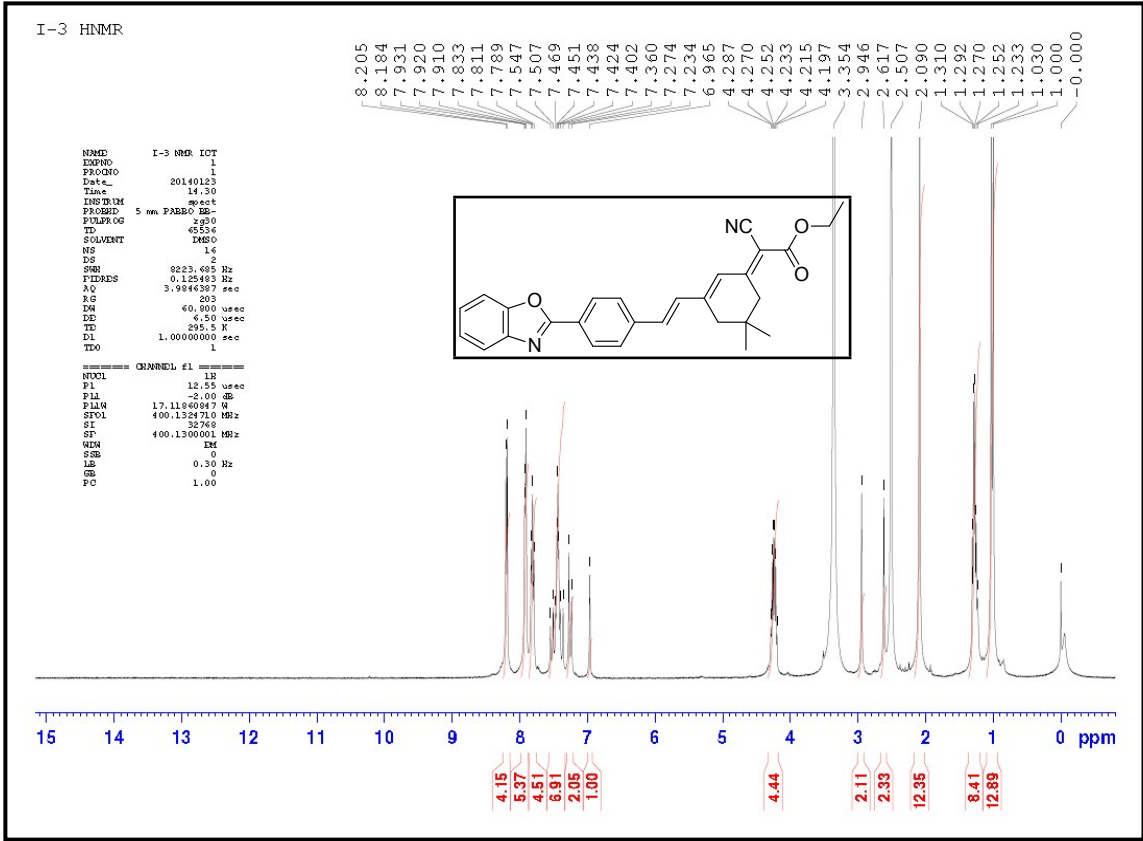
## 5. <sup>1</sup>H NMR spectra

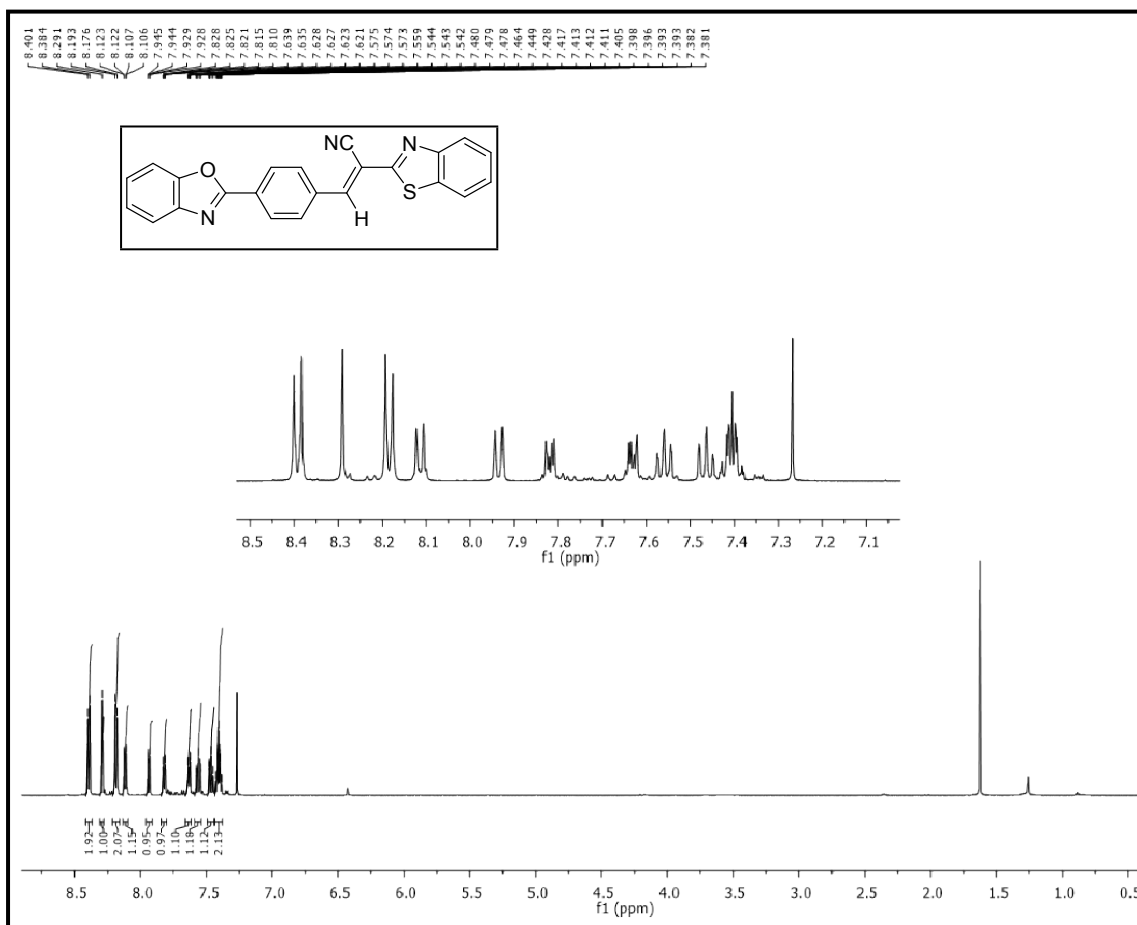
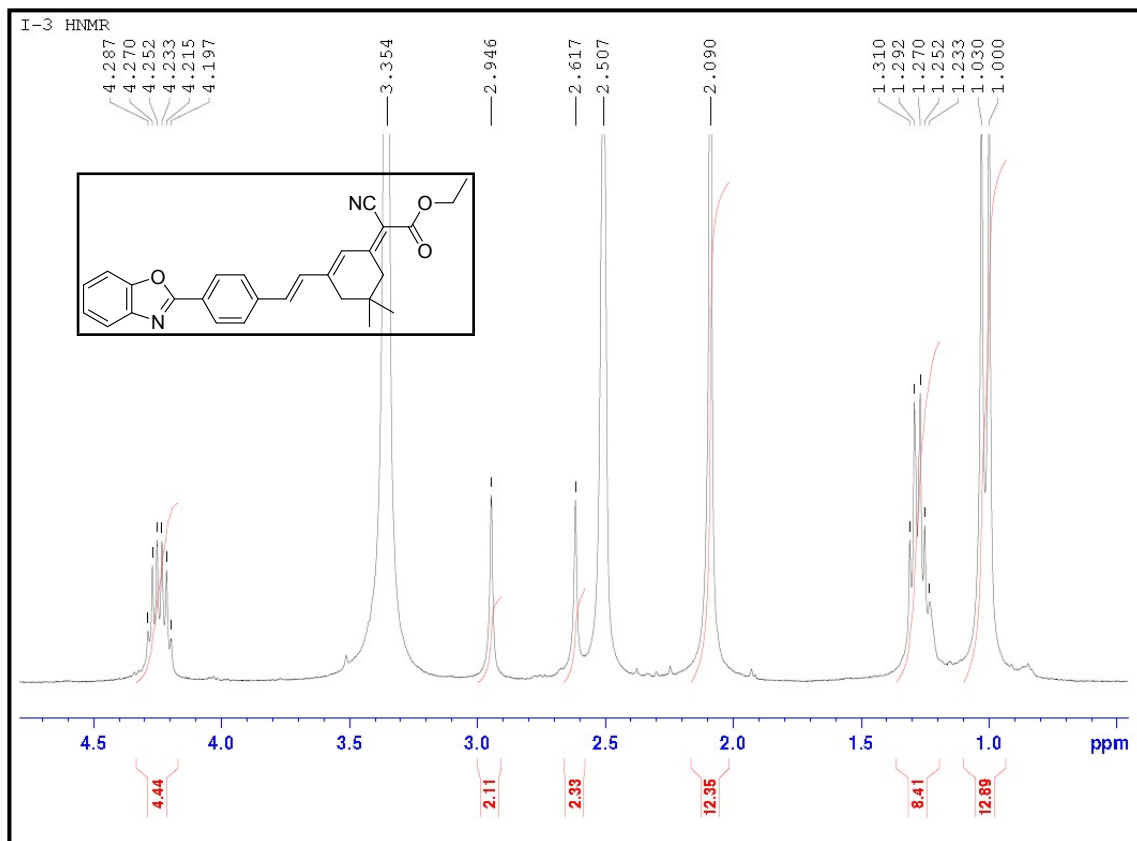


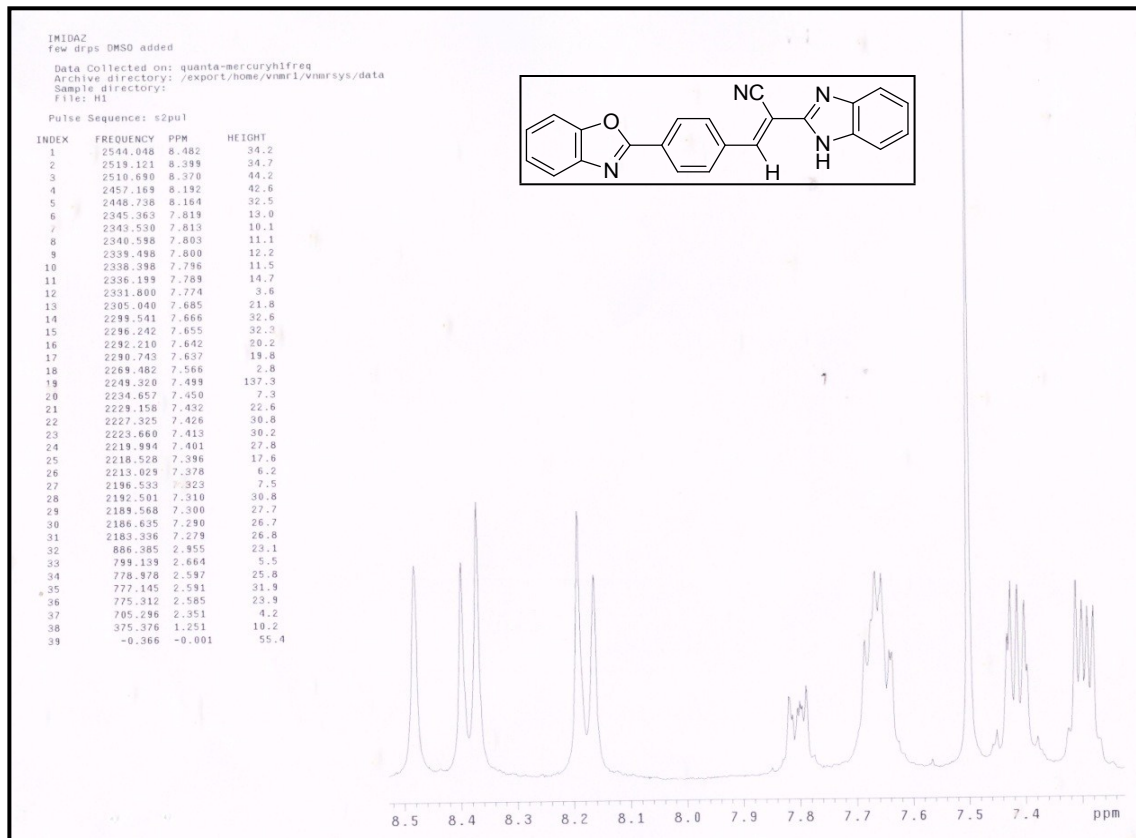
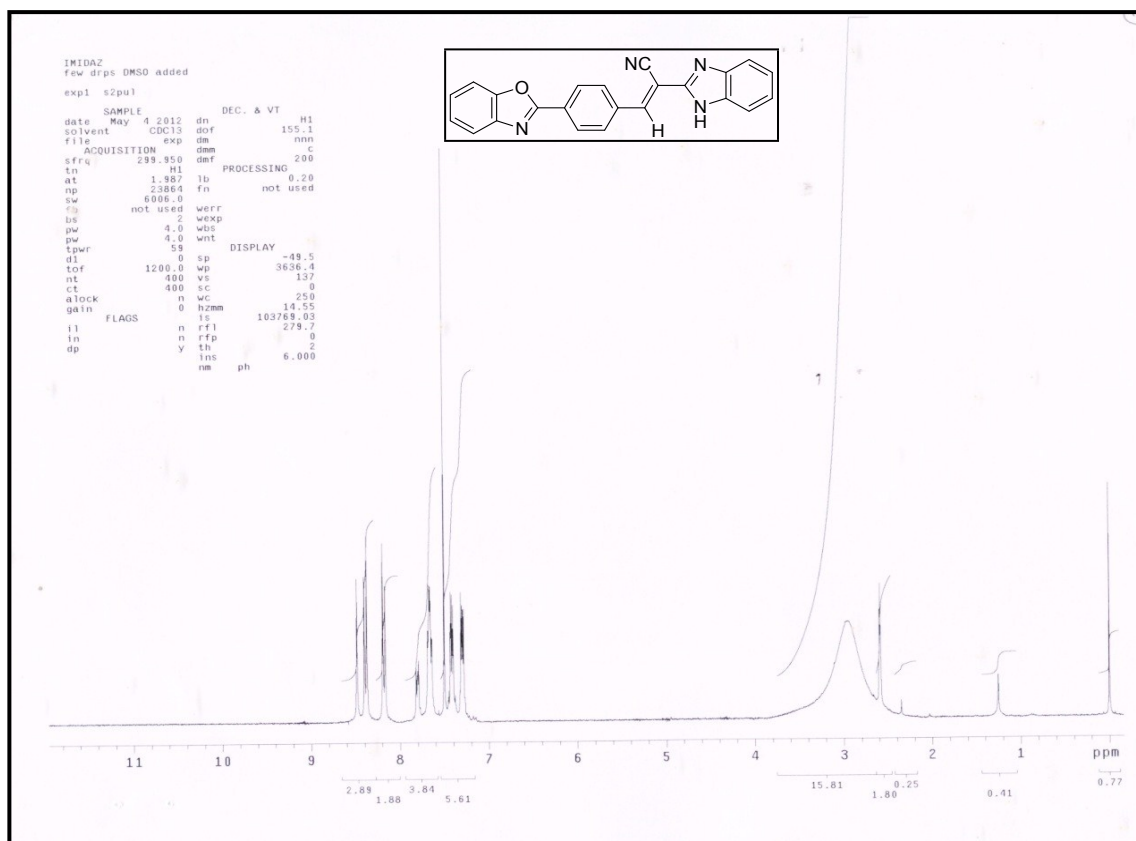












# C<sup>13</sup> -NMR spectra

