

Supporting Information

Experimental

Unless otherwise mentioned, all syntheses were carried out in N₂-atmosphere, solvents were used freshly distilled and dried over Mg (MeOH) or CaH₂ (THF, toluene) using Schlenk technique or Ar- bzw. N₂-Gloveboxes of M. Braun (Labmaster 140). Potassiumbispirazolyborat (K[H₂B(pz)₂]) was used from laboratory stock. All other chemicals were obtained from Sigma Aldrich, Merck, abcr and Fluorochem. Fe(OTf)₂ was purified by dissolution in methanol followed by filtration to remove impurities while all other chemicals were used without further purification. Column chromatography was carried out at an Isolera One Spectra System (Biotage) using prepacked SNAP Ultra columns (HP-sphere, Biotage).

NMR-Spectra were recorded with Bruker DRX 500 spectrometer operating with 500 MHz for ¹H- and 125 MHz for ¹³C-spectra and referenced to the solvent signal (¹H: δ(CDCl₃) = 7.26 ppm, ¹³C: δ(CDCl₃) = 77.16 ppm). For signal assignment, 2D-spectra (¹H¹H-COSY, ¹H¹³C-HSQC, ¹H¹³C-HMBC) were adduced.

Raman spectra were recorded at RT on a Bruker RAM II FT-Raman spectrometer using a liquid nitrogen cooled, highly sensitive Ge detector, 1064 nm radiation and 3 cm⁻¹ resolution.

IR spectra were recorded at RT on a Bruker Vertex70 FT-IR spectrometer using a broadband spectral range extension VERTEX FM for full mid and far IR in the range of 6.000-80 cm⁻¹ and 3 cm⁻¹ resolution. FIR spectra were recorded on a Bruker IFS 66v/s-IR spectrometer with a low temperature unit using a He-cooling system.

Resonance Raman spectra were measured using the Raman system T64000 from Horiba.

Elemental analysis of C, H, N and S was performed on a vario MICRO cube analyser by Elementar, halogen levels were determined with Metrohm 736 GP Titrino and combined silver ring-electrode 6.0450.100.

Magnetic measurements were carried out on a Quantum Design PPMS-9T at 1 T with ΔT = 1 K. The raw data were converted into molar magnetic susceptibility by

$$\chi_M(\text{para}) = \frac{M \cdot DC}{m \cdot B} \cdot M - \chi(\text{dia})$$

with *m* for the weight of the sample and *M* for the molar mass. The magnetic susceptibility data were then converted into the temperature dependent high spin fraction $\gamma_{HS}(T)$ by

$$\gamma_{HS} = \frac{\chi_M T - \chi_M T(LS)}{\chi_M T(HS) - \chi_M T(LS)}$$

with $\chi_M T(LS)$ as the value at 2 K and $\chi_M T(HS)$ as the value at 300 K.

Mössbauer spectra were recorded on a self-constructed spectrometer in standard transmission geometry using Mössbauer Drive System MR260A and Mössbauer Velocity Transducer MVT-1000 from Wissenschaftliche Elektronik GmbH, Starnberg. Radiation source is ⁵⁷Co in a rhodium matrix having an initial activity of 25 mCi. The temperature was controlled with an ITC502 temperature controller with a continuous flow cryostat CF506 from Oxford Instruments. All shifts are indicated to α-iron.

UV/vis spectra were recorded with a Cary 5000 spectrometer in transmission geometry crimped in KBr or embedded in polystyrene. For temperature control, a Konti-cryostat with liquid nitrogen or helium and a TIC-304 MA temperature controller from CryoVac were used. For illumination experiments 3xLED Luxeon Typ LXML-PM01-0080 (λ = 617 nm, 532 nm) from Phillips Lumileds constructed by Sahlmann Photochemical Solutions were used.

Preparation technique: The polystyrene embedded samples were prepared by dissolving polystyrene pellets in abs. DCM. A minimal amount of complex was then dispersed in that solution. The solvent was then allowed to evaporate at room temperature over approximately 24 h. Samples dispersed in KBr were prepared by grinding a small amount of complex and KBr into a homogenous powder that was then pressed with a hydraulic press. These pellets were then coated with a layer of polystyrene by submerging them into a solution of polystyrene in DCM (as described above) and the solvent was again allowed to evaporate.

X-ray Absorption Spectroscopy (XAS) data were recorded at the VEKMag beamline at the BESSY II synchrotron light source using linearly p-polarized x rays with a flux of ≈ 5E9 photons s⁻¹ mm⁻² and probing the sample at the magic angle^[1] eliminating any texture effect. The recorded spectra are analyzed by normalization to the pre-edge and subtracting a linear background. For measurements with changing temperature, the integrated area under the graph is corrected to take the thermal drifts of the manipulator into account, which causes the probing of different grain densities on the sample. The data is fitted with a linear combination of two spectra representing the 0% HS and 100% HS state using the least-square method as implemented in the SciPy package^[2]. The spin state of the molecule is very sensitive to x-ray radiation and a complete LS state can not be accomplished at low temperatures because of soft x-ray-induced excited spin-state trapping (SOXIESST)^[3]. Therefore to calculate the HS fraction a least-square fit has been performed by taking the reference HS and LS spectra at 300 K and 75 K, respectively, of a 10 ML thin film of the mononuclear complex.^[4]

In order to observe the light-induced spin-state trapping (LIESST), **1** is cooled down to 10 K and illuminated with a 520 nm laser at a photon flux of ≈ 4E14 photons s⁻¹ mm⁻². To fit the spectra measured under light illumination, the HS spectrum obtained after light irradiation has been used as a reference HS spectrum from ref. 4.

The sample is prepared as bulk material by pressing **1** as powder into indium foil. This preparation method has the advantage of excluding any interactions of the molecules and the substrate being measured due to the limited probing depth of the total electron yield.

Syntheses

Synthesis of 5-bromo-2,2'-bipyridine (5): 2-Bromopyridine (1.01 g, 6.39 mmol) was degassed and dissolved in tetrahydrofuran (3 ml) followed by addition of *i*-PrMgCl (2 M in THF, 3.50 ml, 7.00 mmol) at 0 °C. The reaction mixture was stirred for 4 h while warming up to room temperature. At 0 °C a solution of ZnCl₂ (1.05 g, 7.67 mmol) in tetrahydrofuran (6 ml) was added and the now light brown solution was stirred 1 h while slowly warming to room temperature. The brown solution was then separated from a pale solid by taking it up with a syringe and added at 0 °C to 2,5-dibromopyridine (1.51 g, 6.39 mmol) and [Pd(PPh₃)₄] (221 mg, 192 μmol). The reaction mixture was warmed to room temperature over 1 h, stirred at room temperature for 15 min, then heated to 75 °C for 17 h. The resulting colourless suspension was then poured into 150 ml saturated aqueous EDTA solution, stirred for 1 h, then extracted with dichloromethane (3x75 ml). The combined organic layers were dried over MgSO₄ and the solvent removed in vacuo. The residue was purified using flash column chromatography (cyclohexane/ethylacetate (9:1)) to give 5-bromo-2,2'-bipyridine (**5**) as pale-yellow solid (708 mg, 47 %).

¹H-NMR (400 MHz, CDCl₃): δ = 8.71 (dd, *J* = 2.4, 0.7 Hz, 1H, H6), 8.66 (ddd, *J* = 4.8, 1.8, 1.1 Hz, 1H, H6'), 8.36 (dt, *J* = 8.1, 1.1 Hz, 1H, H3'), 8.31 (*J* = 8.5, 0.7 Hz, 1H, H3), 7.92 (dd, *J* = 8.5, 2.4 Hz, 1H, H4), 7.80 (ddd, *J* = 8.0, 7.5, 1.8 Hz, 1H, H4'), 7.31 (ddd, *J* = 7.5, 4.8, 1.1 Hz, 1H, H5') ppm. ¹³C-NMR (101 MHz, CDCl₃): δ = 55.28 (C5), 154.73 (C4'), 150.30 (C5'), 149.35 (C1), 139.60 (C3'), 137.13 (C3), 124.11 (C2), 122.46 (C2'), 121.26 (C1'), 121.10 (C4) ppm. IR (FTR): 3088 (Ar-H), 3046 (Ar-H), 3001 (Ar-H), 2922 (Ar-H), 1448 (aromatic C=C).

HRMS (ESI) calcd for [M+H]⁺: 234.9865 m/z, found: 234.9861 m/z. Elemental Analysis calcd(%) C, 51.09; H, 3.00; N, 11.92; Br, 33.99, found C, 51.09; H, 2.95; N, 11.71; Br, 34.76.

Synthesis of 5-((trimethylsilyl)ethynyl)-2,2'-bipyridine (6): 5-bromo-2,2'-bipyridine (**5**) (400 mg, 1.70 mmol), CuI (50.0 mg, 15 mol-%), [Pd(PPh₃)₂Cl₂] (120 mg, 10 mol-%) were dissolved in 30 ml tetrahydrofuran. Trimethylsilylacetylene (0.57 ml, 4.08 mmol) and NEt₃ (6.00 ml, 1.70 mmol) were added and the reaction mixture was stirred 23 h at room temperature until the starting material was consumed (followed by TLC). After treatment with 200 mg of activated carbon, it was filtered over celite. The solvent was removed and the crude product purified using flash column chromatography (cyclohexane/ethylacetate (8:2)) to give **6** as orange solid (357 mg, 83 %).^[5]

¹H-NMR (400 MHz, CDCl₃): δ = 8.73 (dd, *J* = 2.1, 0.9 Hz, 1H, H6), 8.67 (ddd, *J* = 4.8, 1.8, 0.9 Hz, 1H, H6'), 8.39 (dt, *J* = 8.0, 1.1 Hz, 1H, H3'), 8.35 (dd, *J* = 8.2, 0.9 Hz, 1H, H3), 7.86 (dd, *J* = 8.2, 2.1 Hz, 1H, H4), 7.80 (ddd, *J* = 8.0, 7.5, 1.8 Hz, 1H, H4'), 7.30 (ddd, *J* = 7.5, 4.8, 1.2 Hz, 1H, H5'), 0.28 (s, *J* = 3.6 Hz, 9H, Si-CH₃) ppm. ¹³C-NMR (101 MHz, CDCl₃): δ = 155.57 (C2'), 155.07 (C5), 152.14 (C6), 149.38 (C6'), 139.91 (C4), 137.06 (C4'), 124.05 (C5'), 121.53 (C3'), 120.27 (C3), 101.93 (Py-C-Ac), 99.45 (Ac-C-Si), -0.00 (Si-C) ppm. IR(FTR): 3048 (Ar-H), 3011 (Ar-H), 2962 (Ar-H), 2897 (C-H), 2158 (C≡C), 1455 (aromatic C=C), 794 (Ar-C) cm⁻¹. Elemental Analysis calcd(%) C, 71.38; H, 6.39; N, 11.190 found C, 71.27; H, 6.38; N, 10.58.

Synthesis of 5-(ethynyl)-2,2'-bipyridine (7): 5-((trimethylsilyl)ethynyl)-2,2'-bipyridine (**6**) (352 mg, 1.40 mmol) and K₂CO₃ (386 mg, 2.80 mmol) were stirred in 40 ml methanol for 3 h at room temperature. The suspension was filtered over celite, the solvent removed in vacuo and the crude product was purified by flash column chromatography (cyclohexane/ethylacetate (10-100 %)) to give **7** as colourless solid (178 mg, 51 %).^[5]

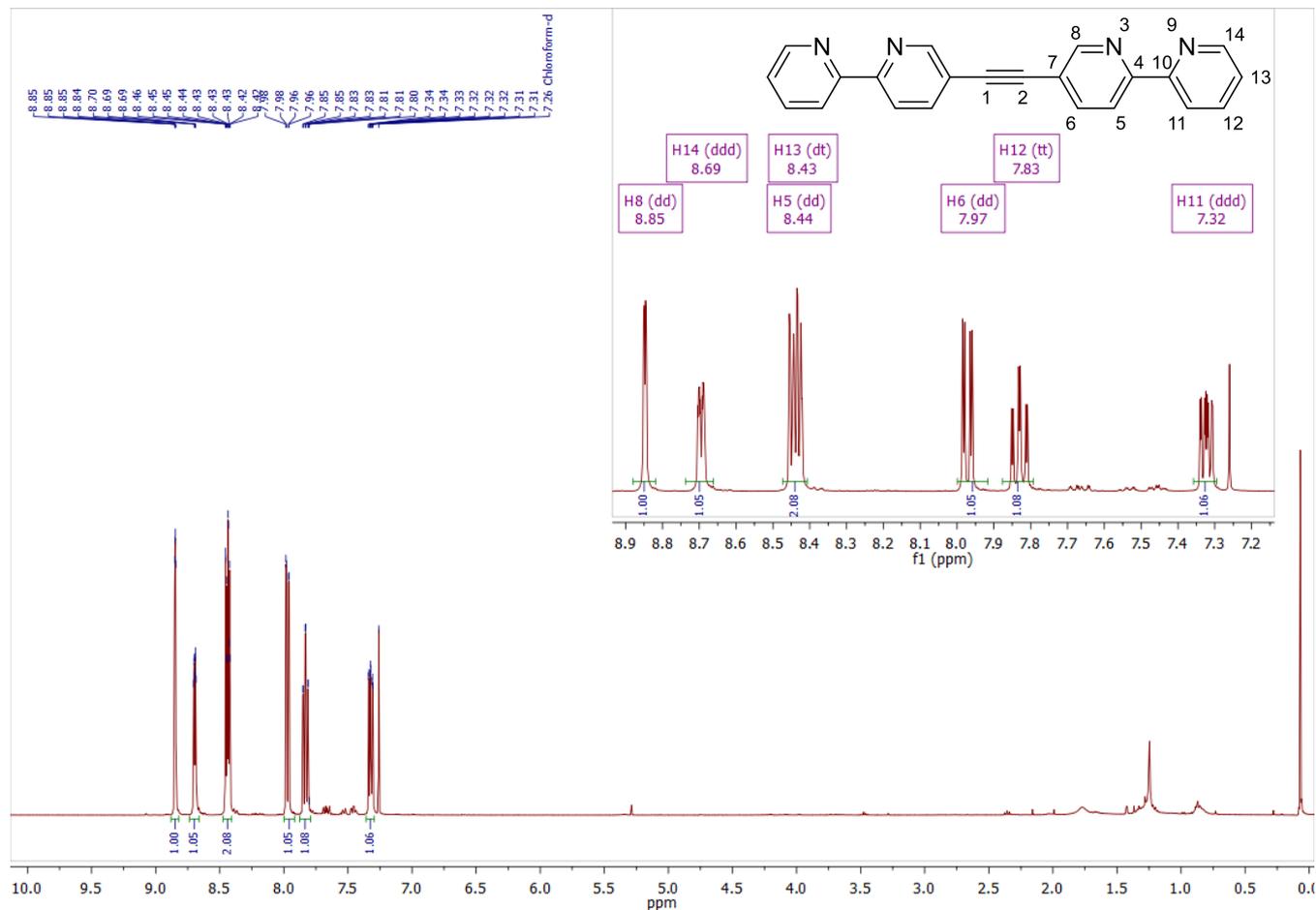
¹H-NMR (400 MHz, CDCl₃) δ = 8.77 (dd, *J* = 2.1, 0.8 Hz, 1H, H6), 8.68 (ddd, *J* = 4.8, 1.8, 0.9 Hz, 1H, H6'), 8.40 (dt, *J* = 8.0, 1.1 Hz, 1H, H3), 8.39 (dd, *J* = 8.2, 0.9 Hz, 1H, H3'), 7.90 (dd, *J* = 8.2, 2.1 Hz, 1H, H4), 7.82 (ddd, *J* = 8.0, 7.5, 1.8 Hz, 1H, H4'), 7.32 (ddd, *J* = 7.5, 4.8, 1.2 Hz, 1H, H5'), 3.29 (s, 1H, Ac-C-H) ppm. ¹³C-NMR (101 MHz, CDCl₃): δ = 155.56 (C2'), 155.46 (C2), 152.33 (C6), 149.42 (C6'), 140.14 (C4), 137.12 (C4'), 124.17 (C5'), 121.55 (C4), 120.40 (C3), 119.23 (C5), 81.45 (Ac-C-H), 80.84 (Py-C-Ac) ppm. IR(FTR): 3296 (C≡C-H) 3177 (C≡C-H), 3062 (Ar-H), 3011 (Ar-H), 2956 (Ar-H), 2919 (Ar-H), 2850 (Ar-H), 2098 (C≡C), 1455 (aromatic C=C), 794 (Ar-C) cm⁻¹.

Elemental Analysis calcd(%) C, 79.98; H, 4.47; N, 15.55 found C, 77.73; H, 4.85; N, 14.44.

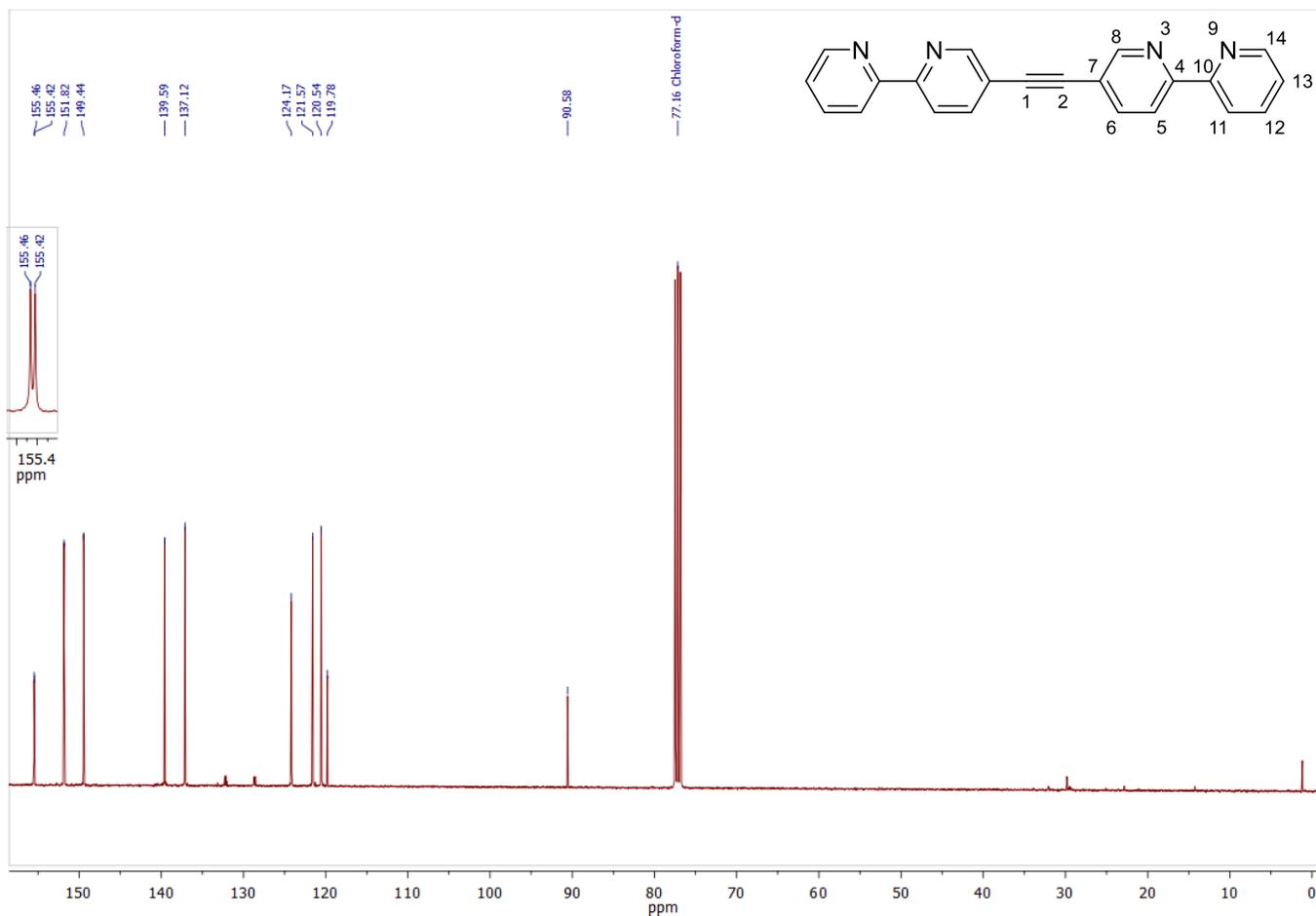
Synthesis of 1,2-di(4,10-bipyridin-7-yl)-ethyne (**8**):

5-(ethynyl)-2,2'-bipyridine (**7**) (104 mg, 0.577 mmol), 5-bromo-2,2'-bipyridine (**6**) (176 mg, 0.750 mmol) and $[\text{Pd}(\text{PPh}_3)_4]$ (49.0 mg, 6 mol-%) were dissolved in 6 ml toluene. After addition of NEt_3 (6 ml, 43.3 mmol) the solution was stirred at 100 °C for 68 h. The solvent was removed in vacuo and the crude product purified by flash column chromatography (cyclohexane/ethylacetate (2:1)) to give **8** as pale-yellow solid (167 mg, 76 %).^[5] The compound is hygroscopic.

Since recently compound **8** can readily be prepared in one step by the reaction of commercially obtainable 5-bromo-2,2'-bipyridine with trimethylsilylacetylene and $[\text{Pd}(\text{PPh}_3)_4]$ in a solution of TBAF in THF following the method of McConnell *et al.*^[6]



$^1\text{H-NMR}$ (400 MHz, CDCl_3): δ = 8.85 (dd, J = 2.1, 0.8 Hz, 2H, H8), 8.69 (ddd, J = 4.8, 1.8, 0.9 Hz, 2H, H14), 8.44 (dd, J = 8.2, 0.8 Hz, 2H, H5), 8.43 (dt, J = 8.0, 1.0 Hz, 2H, H13), 7.97 (dd, J = 8.2, 2.1 Hz, 2H, H6), 7.83 (tt, J = 5.3, 2.7 Hz, 2H, H12), 7.32 (ddd, J = 7.5, 4.8, 1.2 Hz, 2H, H11) ppm.

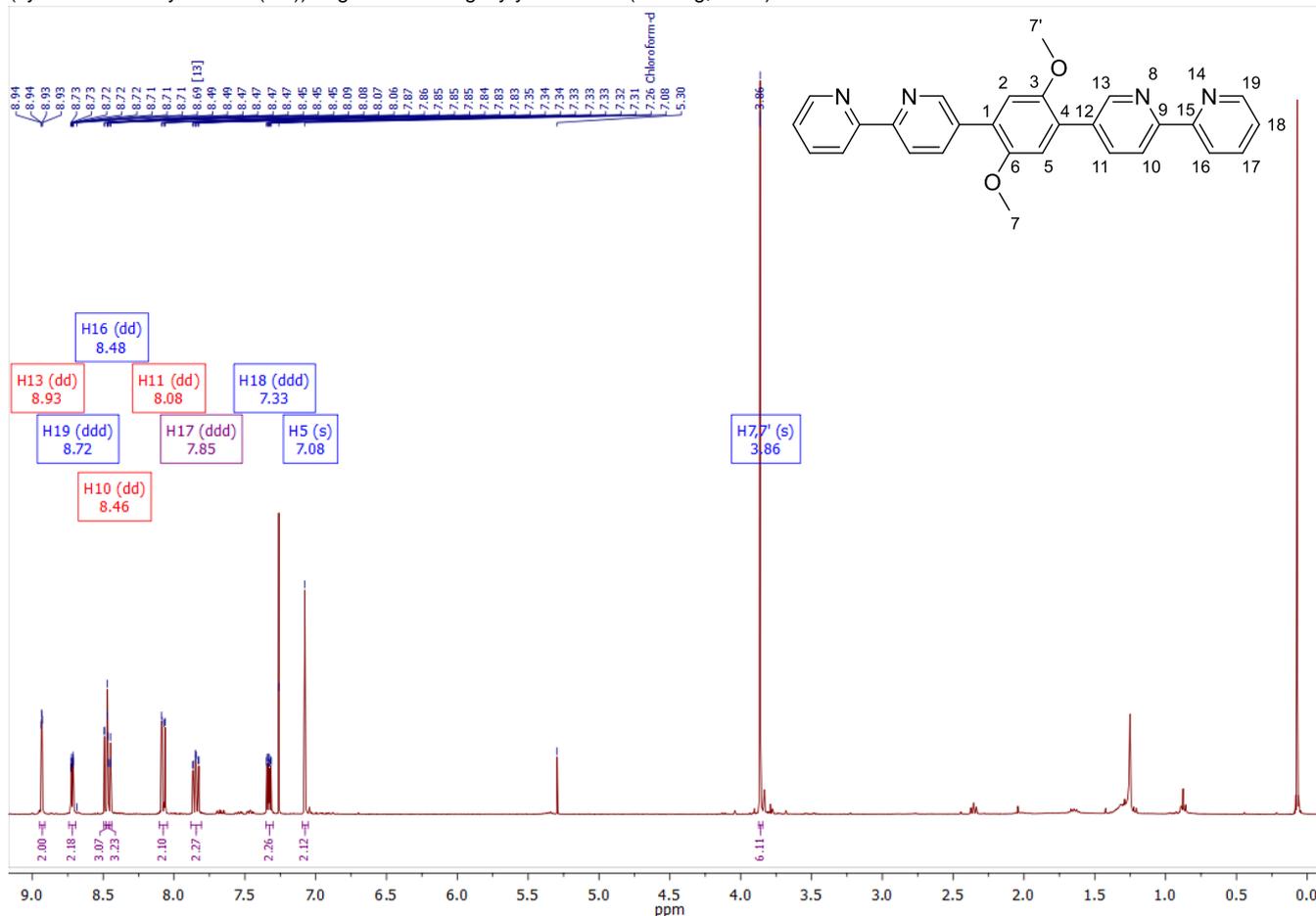


$^{13}\text{C-NMR}$ (101 MHz, CDCl_3): δ = 155.46 (C10), 155.42 (C4), 151.82 (C8), 149.44 (C14), 139.59 (C6), 137.12 (C12), 124.17 (C11), 121.42 (C13), 120.54 (C5), 119.78 (C7), 90.58 (C1,2) ppm.

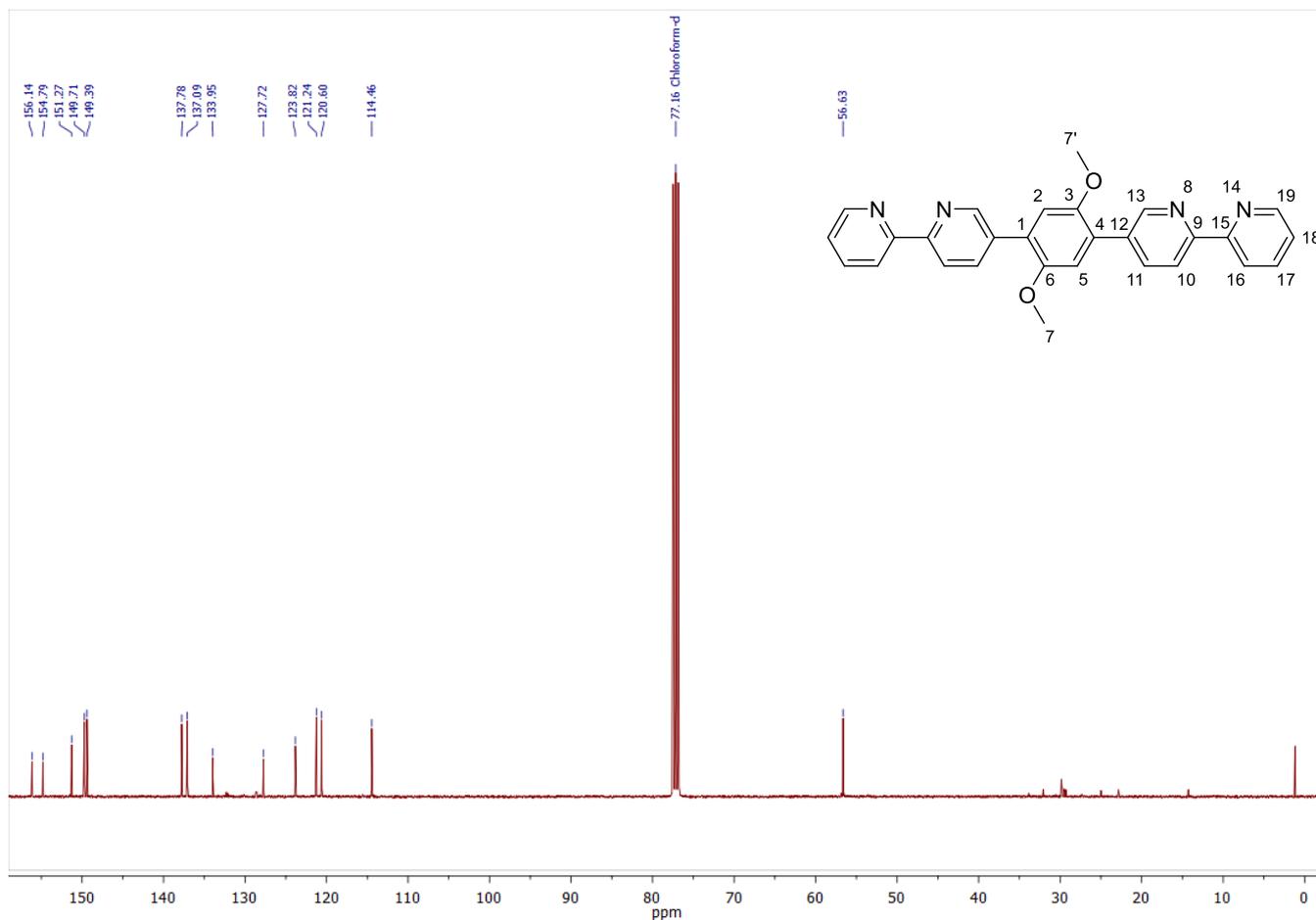
IR(FTR): 3056 (Ar-H), 3050 (Ar-H), 3013 (Ar-H), 2956 (Ar-H), 2923 (Ar-H), 2852 (Ar-H), 1457 (aromatic C=C), 796 (Ar-C) cm^{-1} .
 Elemental Analysis calcd(%) for $\text{C}_{22}\text{H}_{14}\text{N}_4$ ($\times 1/2 \text{H}_2\text{O}$): C, 76.02; H, 4.22; N, 16.76 found C, 76.95; H, 4.40; N, 16.32.

Synthesis of 1,4-di(9,15-bipyridin-12-yl)-3,6-dimethoxybenzene (9):

1,4-Diiodo-3,6-dimethoxyphenol (290 mg, 0.744 mmol) was dissolved in 20 ml tetrahydrofuran and cooled to -78°C , followed by addition of *n*-BuLi (2.5 M in *n*-hexane, 1.2 ml, 2.97 mmol). The resulting colourless suspension was stirred 1.5 h at this temperature and 1.5 h at 0°C . After cooling to 78°C $\text{B}(\text{OMe})_3$ (486 mg, 4.68 mmol) was added, and the reaction mixture was stirred for 15 min at this temperature before warming to 0°C and then to room temperature over 2 h. At room temperature $[\text{Pd}(\text{PPh}_3)_4]$ (112 mg, 13 mol-%) and 5-bromo-2,2'-bipyridine (5) (436 mg, 1.85 mmol) were added followed by K_2CO_3 (617 mg, 4.46 mmol) in 5 ml H_2O . The reaction mixture was stirred at 75°C for 5 d. Then, it was poured into saturated aqueous NH_4Cl -solution and extracted with dichloromethane (2x50 ml). The combined organic layers were dried over MgSO_4 and the solvent removed in vacuo. The crude product was purified by flash column chromatography (cyclohexane/ethylacetate (2:1)) to give **9** as a slightly yellow solid (110 mg, 66 %).^[7]



$^1\text{H-NMR}$ (400 MHz, CDCl_3): δ = 8.93 (dd, J = 2.3, 0.8 Hz, 2H, H13), 8.72 (ddd, J = 4.8, 1.8, 0.9 Hz, 2H, H19), 8.48 (dd, J = 10.1, 0.9 Hz, 2H, H16), 8.46 (dd, J = 8.0, 1.0 Hz, 2H, H10), 8.08 (dd, J = 8.2, 2.3 Hz, 2H, H11), 7.85 (ddd, J = 8.0, 7.5, 1.8 Hz, 2H, H17), 7.33 (ddd, J = 7.5, 4.8, 1.2 Hz, 2H, H18), 7.08 (s, J = 2.2 Hz, 2H, H2,H5), 3.86 (s, 6H, H7,7') ppm.



^{13}C -NMR (101 MHz, CDCl_3): δ = 156.14 (C9), 154.79 (C12), 151.27 (C3,C6), 149.71 (C13), 149.39 (C19), 137.78 (C11), 137.09 (C17), 133.95 (C9), 127.72 (C1,C4), 123.82 (C18), 121.24 (C10), 120.60 (C16), 114.46 (C2,C5), 56.63 (C7,7') ppm.

IR(FTR): 3060 (Ar-H), 3007 (Ar-H), 2960 (Ar-H), 2931 (Ar-H), 2852 (C-H), 2833 (C-H), 1241 (C-O), 1031 (C-O) cm^{-1} .

Elemental Analysis calcd(%) for $\text{C}_{28}\text{H}_{22}\text{N}_4\text{O}_2$: C, 75.32; H, 4.97; N, 12.55 found C, 74.22; H, 4.92; N, 12.22.

Synthesis of $[\{\text{Fe}(\text{H}_2\text{B}(\text{pz})_2)_2 \mu\text{-}(\text{ac}(\text{bipy})_2)\}]$ (1): To a solution of $\text{Fe}(\text{OTf})_2$ (326 mg, 0.90 mmol) in 1 ml methanol $\text{K}[\text{H}_2\text{B}(\text{pz})_2]$ (343 mg, 1.80 mmol) in 4 ml methanol, was added. After stirring at room temperature for 15 min the solvent was carefully removed and the resulting $[\text{Fe}(\text{H}_2\text{B}(\text{pz})_2)_2(\text{MeOH})_2]$ redissolved in 5 ml tetrahydrofuran to allow addition of the bridging ligand **8** (150 mg, 0.45 mmol) in 15 ml tetrahydrofuran. The reaction mixture was stirred 45 min at room temperature whilst a green precipitate formed. It was filtered, washed with respectively 3 ml methanol and dichloromethane, and dried in vacuo to give **1** as a pale green solid (372 mg, 78 %).

IR(FTR): 3113 (Ar-H), 3058 (Ar-H), 2425 (B-H), 2395 (B-H), 2350 (B-H), 2291 (B-H) cm^{-1} . FT-Raman: 2223 (C=C), 2194 (C=C) cm^{-1} .

Elemental analysis calcd(%) for: $\text{C}_{46}\text{H}_{46}\text{N}_{20}\text{B}_4\text{Fe}_2$: C, 53.44; H, 4.48; N, 27.09 found C, 53.12; H, 4.59; N, 26.78 .

Synthesis of $[\{\text{Fe}(\text{H}_2\text{B}(\text{pz})_2)_2 \mu\text{-}(\text{Ph}(\text{OMe})_2(\text{bipy})_2)\}]$ (2): To a solution of $\text{Fe}(\text{OTf})_2$ (476 mg, 1.34 mmol) in 2 ml methanol $\text{K}[\text{H}_2\text{B}(\text{pz})_2]$ (500 mg, 2.69 mmol) in 5 ml methanol, was added. The mixture was stirred 15 min before the solvent was removed and the resulting $[\text{Fe}(\text{H}_2\text{B}(\text{pz})_2)_2(\text{MeOH})_2]$ was redissolved in 5 ml tetrahydrofuran and given to a suspension of the bridging ligand **9** (300 mg, 672 μmol) in 15 ml tetrahydrofuran giving a dark green suspension. The reaction mixture was stirred for 2.5 h at room temperature, filtered to give **2** as a dark green solid which was washed with 5 ml tetrahydrofurane and dried in vacuo (525 mg, 68 %).

IR(FTR): 3105 (Ar-H), 2960 (Ar-H), 2925 (Ar.H), 2841 (C-H), 2400 (B-H), 2349 (B-H), 2287 (B-H), 1247 (C-O), 1026 (C-O) cm^{-1} .

Elemental Analysis calcd(%) for $\text{C}_{52}\text{H}_{54}\text{N}_{20}\text{O}_2\text{B}_4\text{Fe}_2$: C, 54.50; H, 4.75; N, 24.44 found C,53.96; H, 4.93; N, 24.78.

IR and Raman spectra of 1 and 2

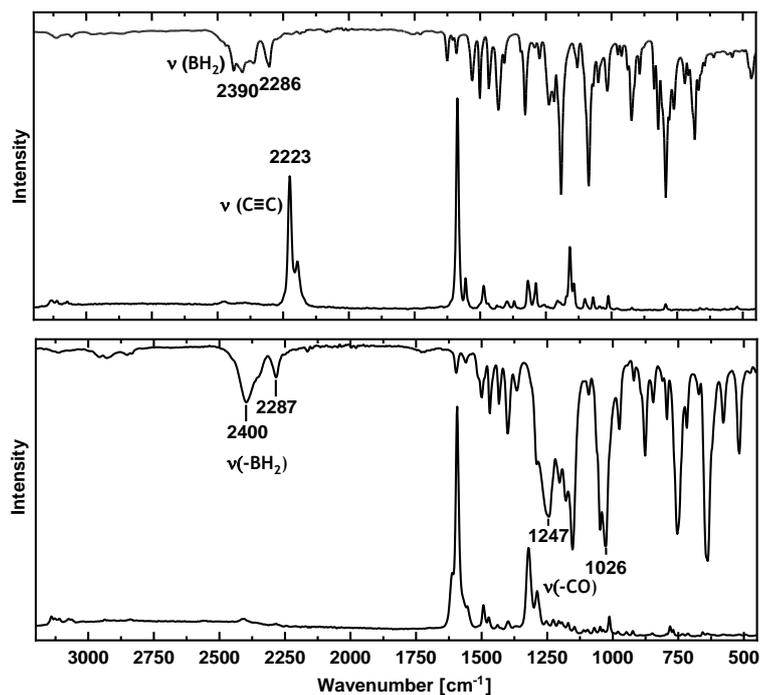


Figure 1. IR and Raman spectra of $\{[\text{Fe}(\text{H}_2\text{B}(\text{pz})_2)_2]_2 \mu\text{-}(\text{ac}(\text{bipy})_2)\}$ (**1**) (upper chart) and $\{[\text{Fe}(\text{H}_2\text{B}(\text{pz})_2)_2]_2 \mu\text{-}((\text{OMe})_2\text{Ph}(\text{bipy})_2)\}$ (**2**) (lower chart). The BH₂-stretching vibrations confirm the coordination of bispyrazolborate for both compounds. Regarding the spectra of **1**, the C≡C stretching vibration of the acetylene group, firstly, confirms the coordination of the bridging ligand, secondly, the appearance of this vibration in the Raman but not in the IR spectra imply the presence of a symmetry center in the acetylene unit and therefore, the dinuclear complex **1**.

UV/Vis additional data

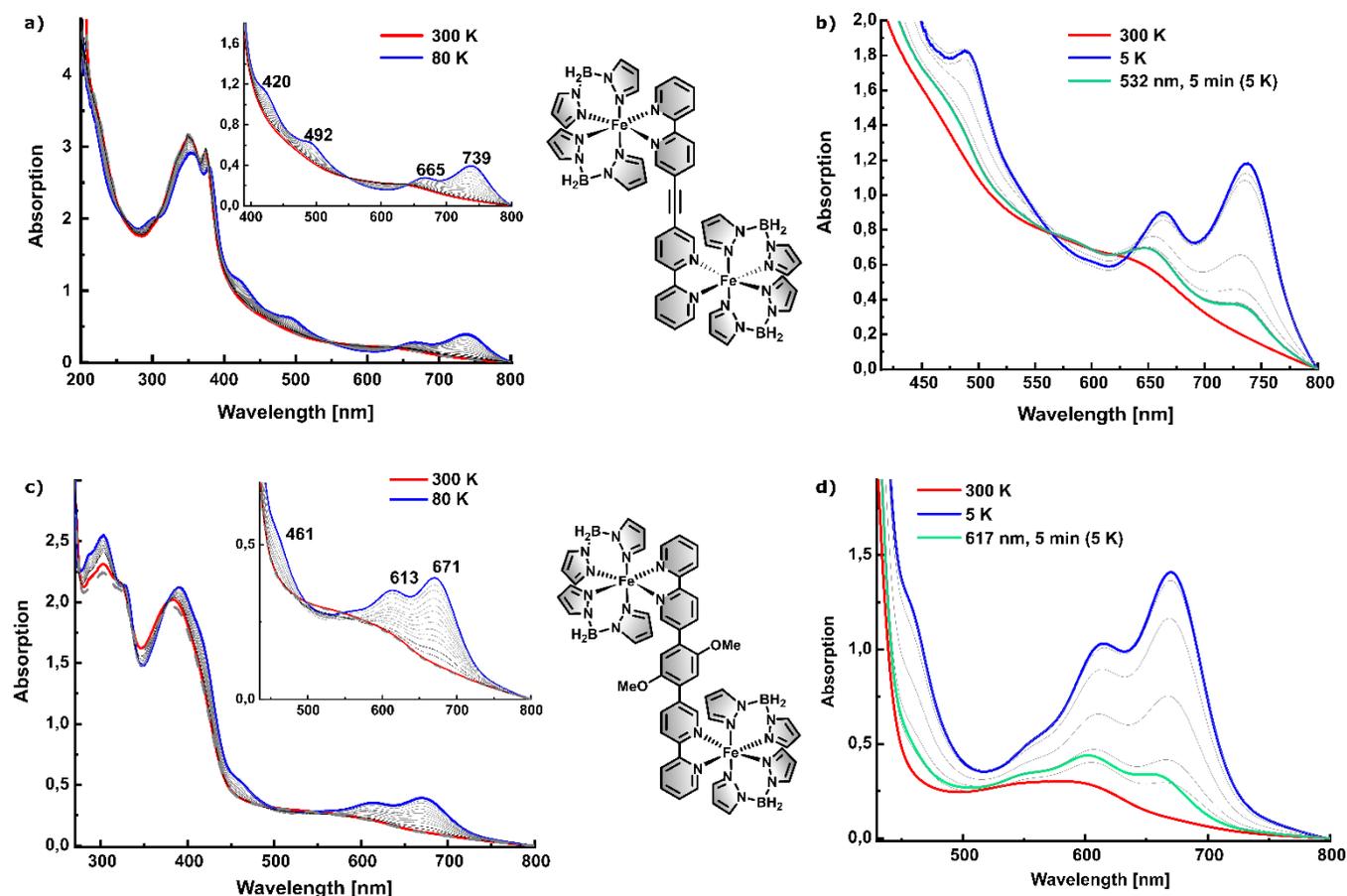


Figure 2: Temperature dependent UV/vis spectra of **1** and **2** with **a)** and **c)** showing the overview spectra and **b)** and **d)** the spectra in the MLCT region at RT and 5 K and after illumination.

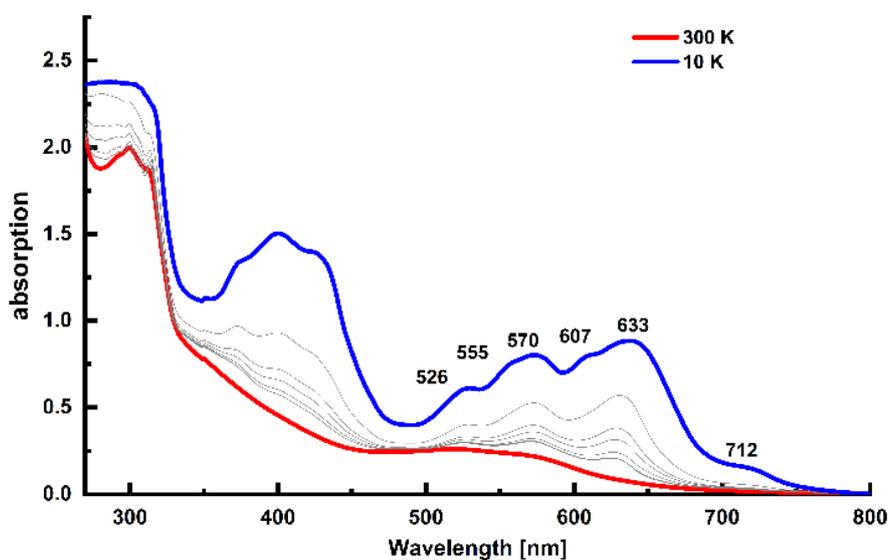


Figure 3: UV/vis spectra of the mononuclear parent compound $[\text{Fe}(\text{H}_2\text{B}(\text{pz})_2)_2(\text{bipy})]$ on quartz glass between 10 K and 300 K. In comparison to the 80 K spectra as visualised in the main article (fig. 4) the bands of the LS state split up into a more complicated pattern.

Resonance Raman Spectra of 1 and 2

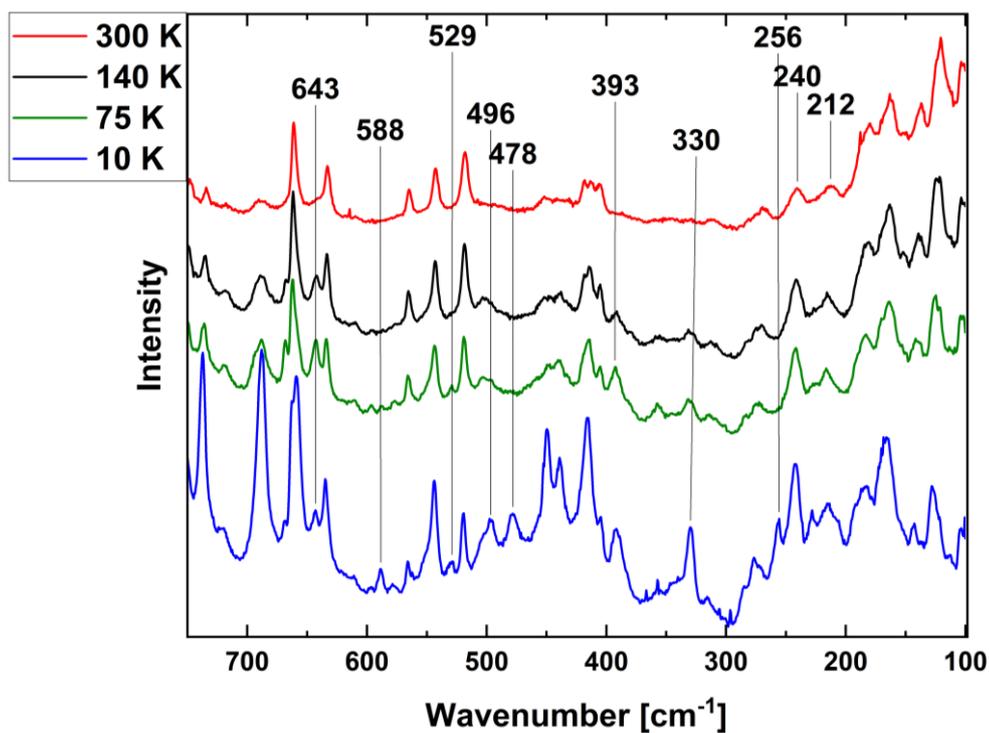


Figure 4. Resonance Raman spectra of compound 1 in the spectral region at 750-100 cm⁻¹ at different temperatures. Peaks disappearing or emerging upon cooling are indicated.

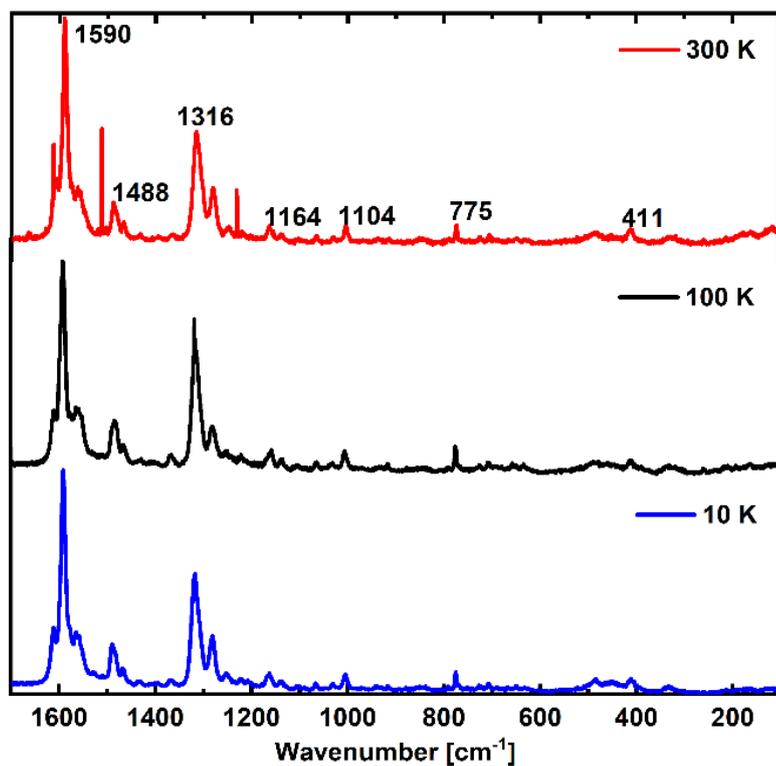
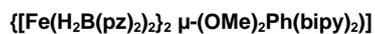


Figure 5. Resonance Raman spectra of $\{[\text{Fe}(\text{H}_2\text{B}(\text{pz})_2)_2]_2 \mu\text{-(OMe)}_2\text{Ph}(\text{bipy})_2\}$ (2) between 1700 cm⁻¹ and 150 cm⁻¹ at 10, 100 and 300 K measured with an excitation wavelength of 532 nm. No change of the spectra is observed.

Table 1. Mössbauer parameters of **9** in temperature-dependent measurements.

T [K] ¹	Γ [mm/s]	δ_{IS} [mm/s]	Δ_{EO} [mm/s]	rel. fraction
[[Fe(H ₂ B(pz) ₂) ₂] ₂ μ -((Ph(OMe) ₂ (bipy) ₂)] (2)				
HS				
300	0.51	0.94	2.01	
240	0.47	0.98	2.11	88
210	0.58	1	2.18	83
180	0.57	1	2.37	75
150	0.56	1	2.47	59
120	0.56	1.02	2.65	50
80	0.58	1.05	2.76	43
LS				
300	0.21	0.35	0.59	
240	0.33	0.35	0.55	12
210	0.3	0.35	0.55	17
180	0.27	0.41	0.62	25
150	0.27	0.41	0.66	41
120	0.25	0.41	0.65	50
80	0.27	0.41	0.65	57
[[Fe(H ₂ B(pz) ₂) ₂] ₂ μ -((ac)(bipy) ₂)] (1)				
HS				
300	0.32	0.94	2.10	100
80	0.26	1.08	2.56	6
LS				
80	0.27	0.42	0.49	94

References

- [1] R. F. Pettifer, C. Brouder, M. Benvatto, C. R. Natoli, C. Hermes, M. F. Ruiz-López, *Phys. Rev. B* **1990**, *42*, 37–42.
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