

## Supplementary Information

For

### Synthesis, characterization and absolute structures of palladium complexes of novel chiral acyclic tellurated Schiff base ligands

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2. <sup>1</sup>H NMR and <sup>13</sup>C{<sup>1</sup>H} NMR data in DMSO-d<sub>6</sub>
3. Secondary bonding interactions in single crystal structure of complexes [Pd((*R*)-L<sup>1</sup>)Cl] (1) [Pd((*S*)-L<sup>2</sup>)Cl] (2)

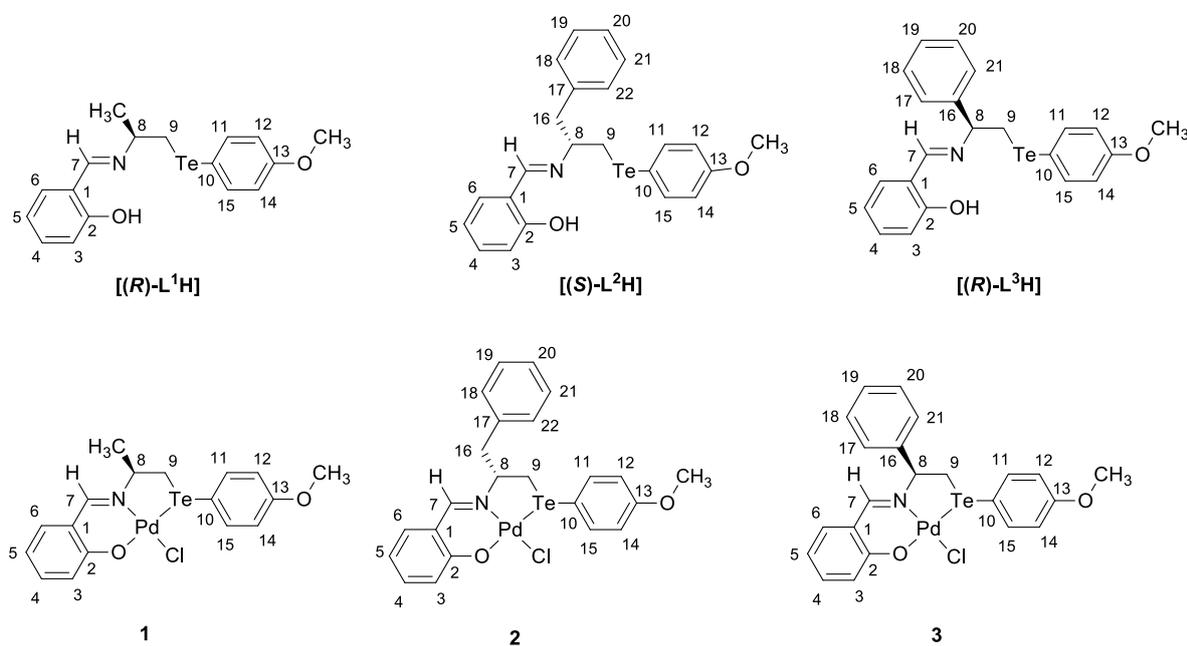


Chart S1. Novel chiral hybrid organotellurium ligands and their palladium complexes

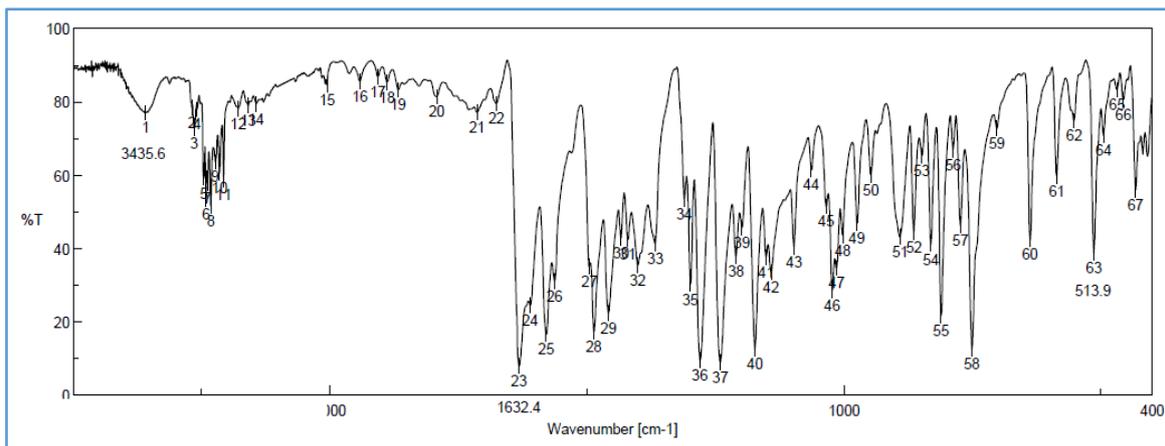


Figure S1-1 FT-IR spectrum of ligand, (*R*)-L<sup>1</sup>H

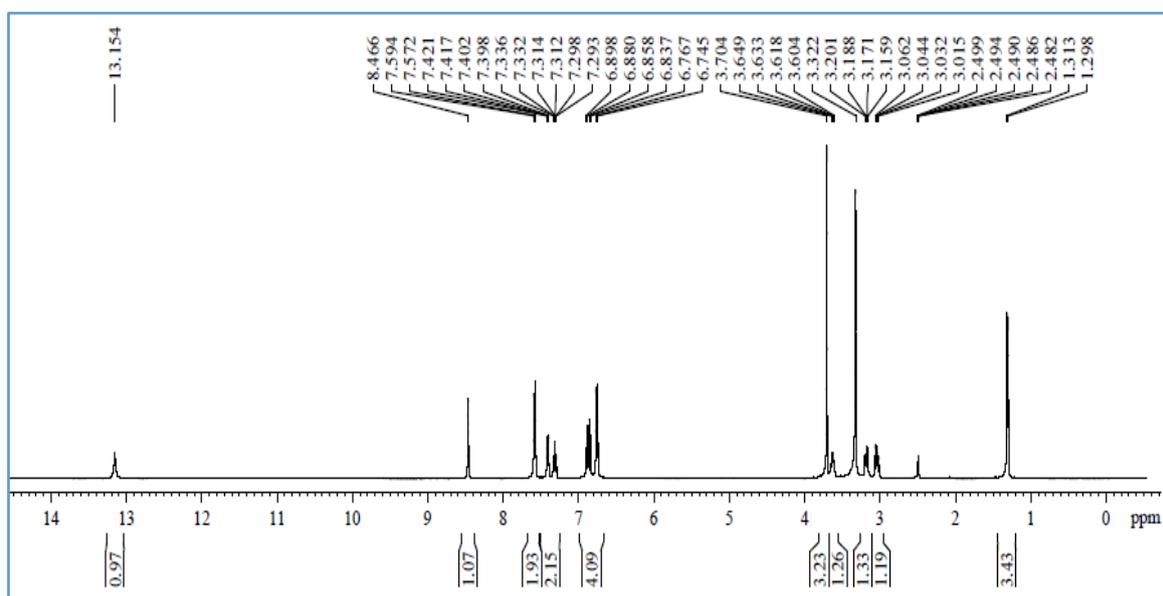


Figure S1-2 <sup>1</sup>H NMR spectrum of ligand, (*R*)-L<sup>1</sup>H

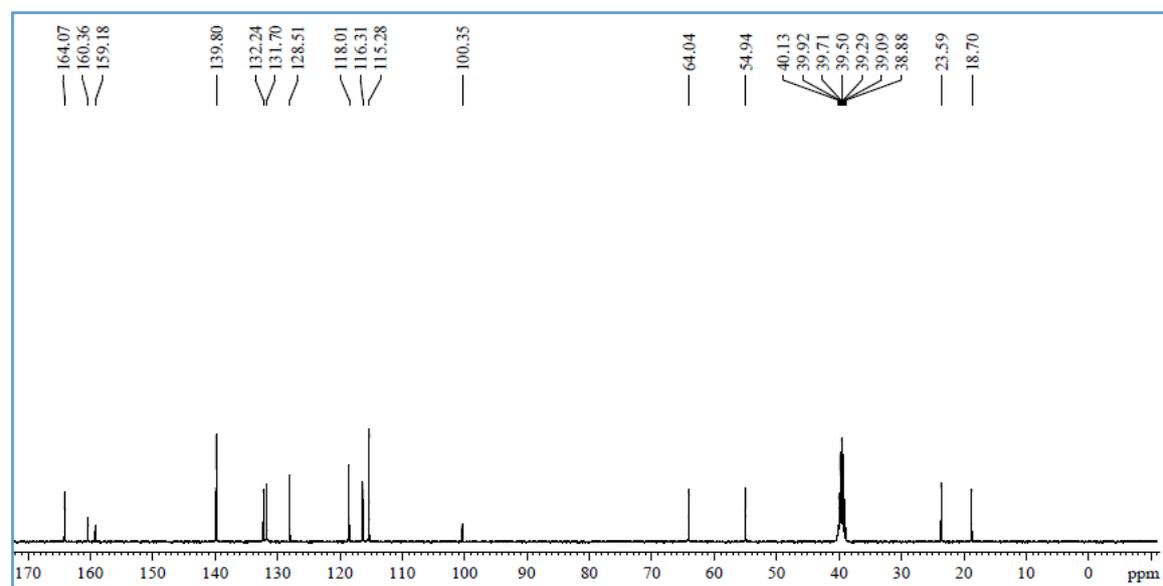


Figure S1-3 <sup>13</sup>C{<sup>1</sup>H} NMR spectrum of ligand, (*R*)-L<sup>1</sup>H

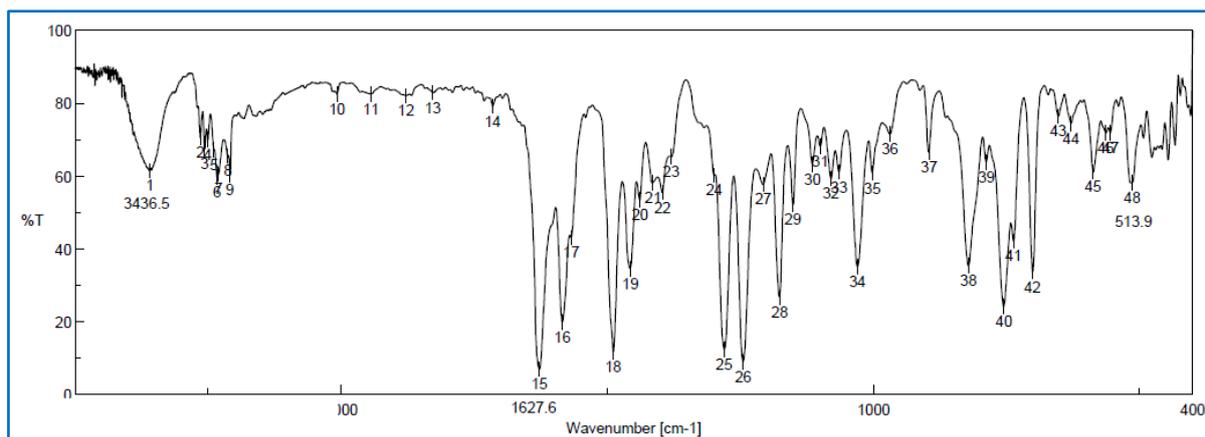


Figure S1-4 FT-IR spectrum of ligand, (S)-L<sup>2</sup>H

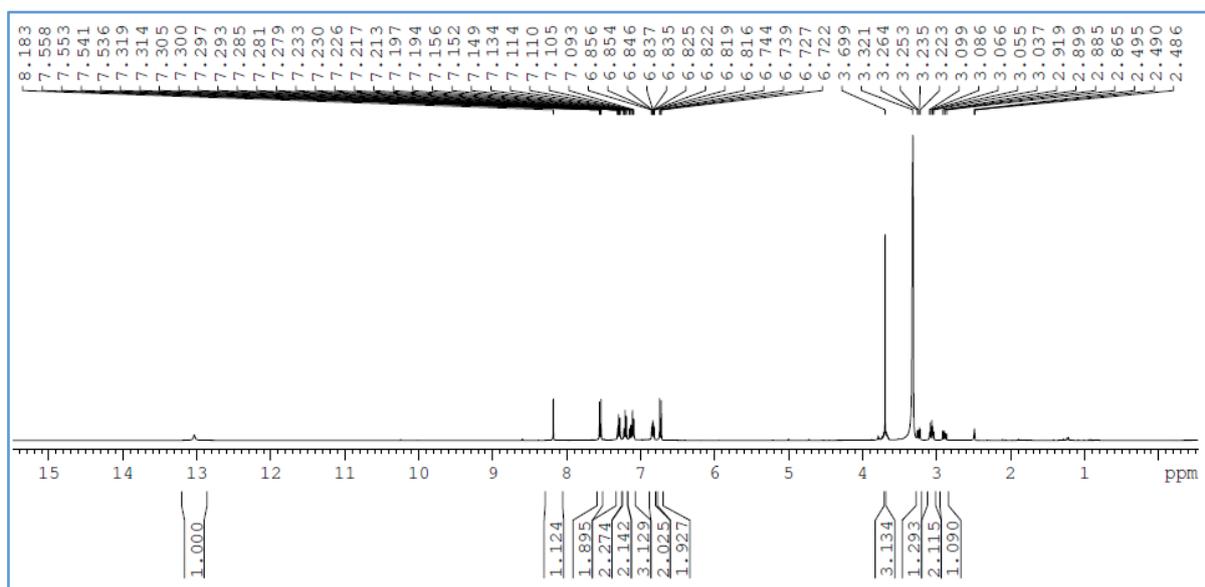


Figure S1-5 <sup>1</sup>H NMR spectrum of ligand, (S)-L<sup>2</sup>H

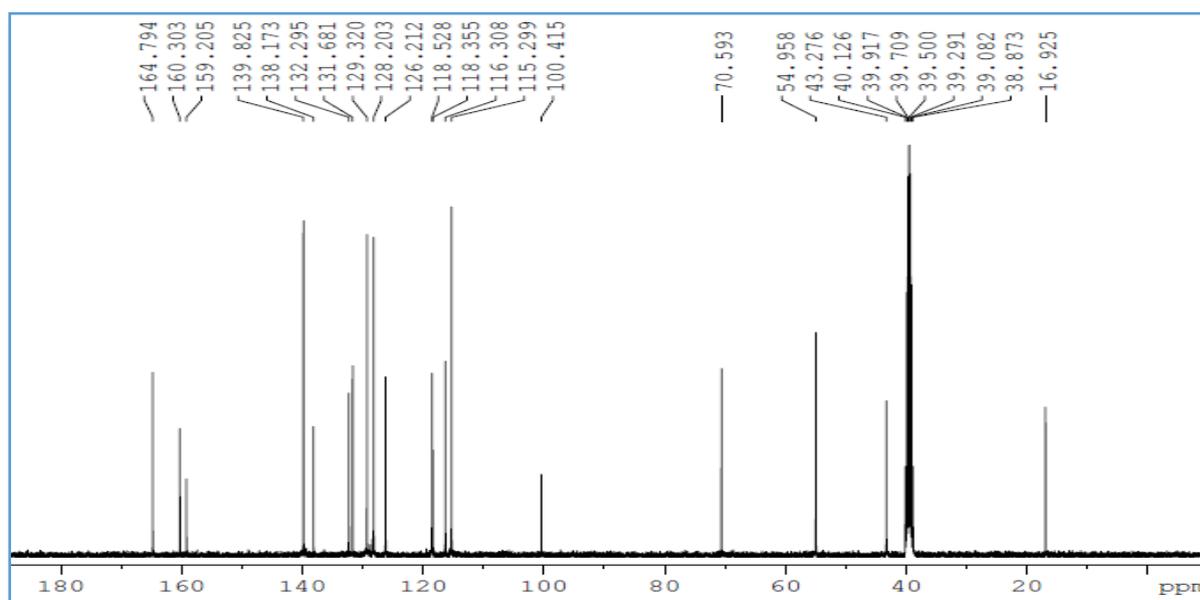


Figure S1-6 <sup>13</sup>C{<sup>1</sup>H} NMR spectrum of ligand, (S)-L<sup>2</sup>H

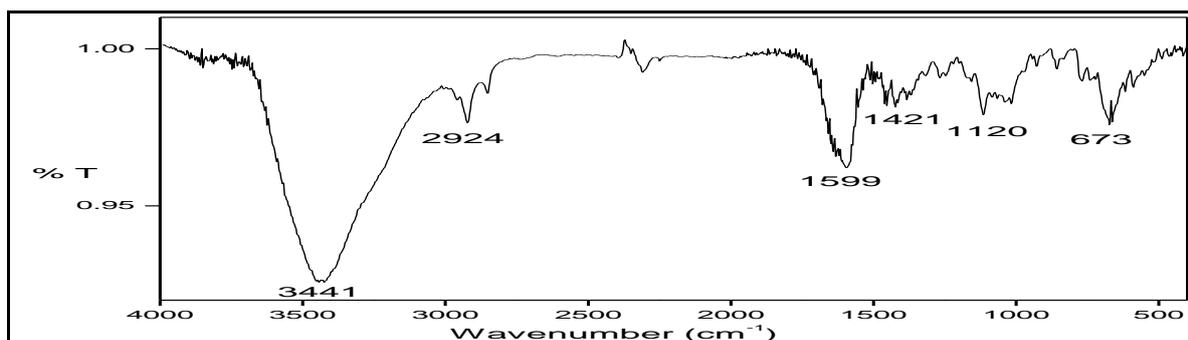


Figure S1-7 FT-IR spectrum of ligand, (*R*)-L<sup>3</sup>H

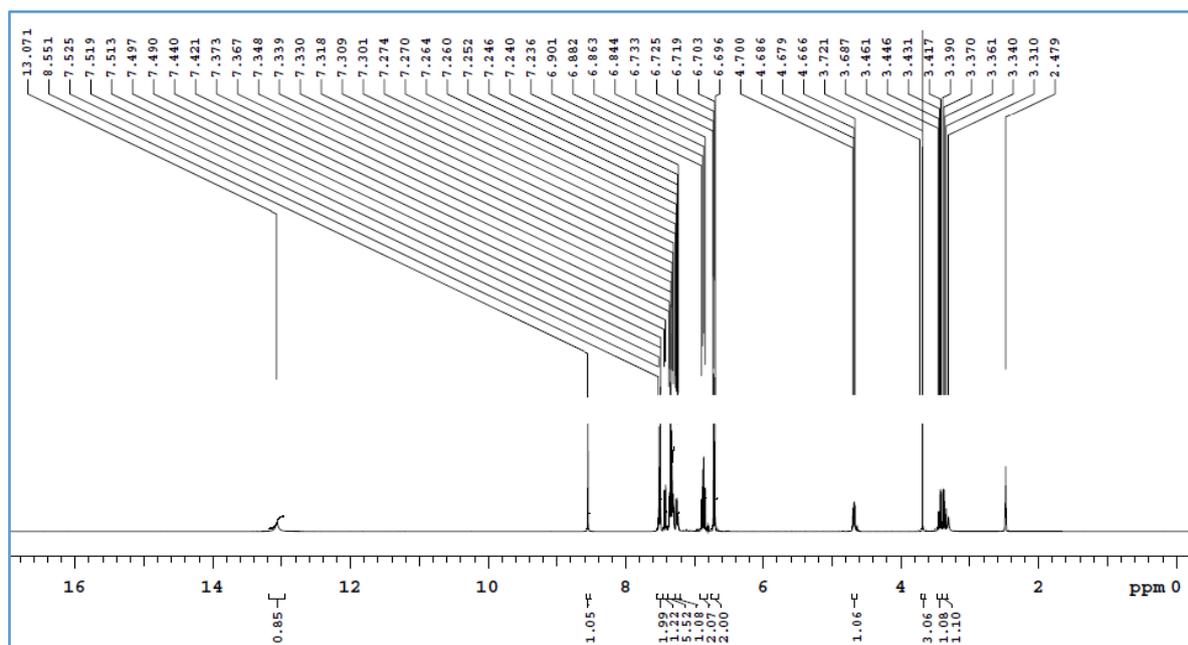


Figure S1-8 <sup>1</sup>H NMR spectrum of ligand, (*R*)-L<sup>3</sup>H

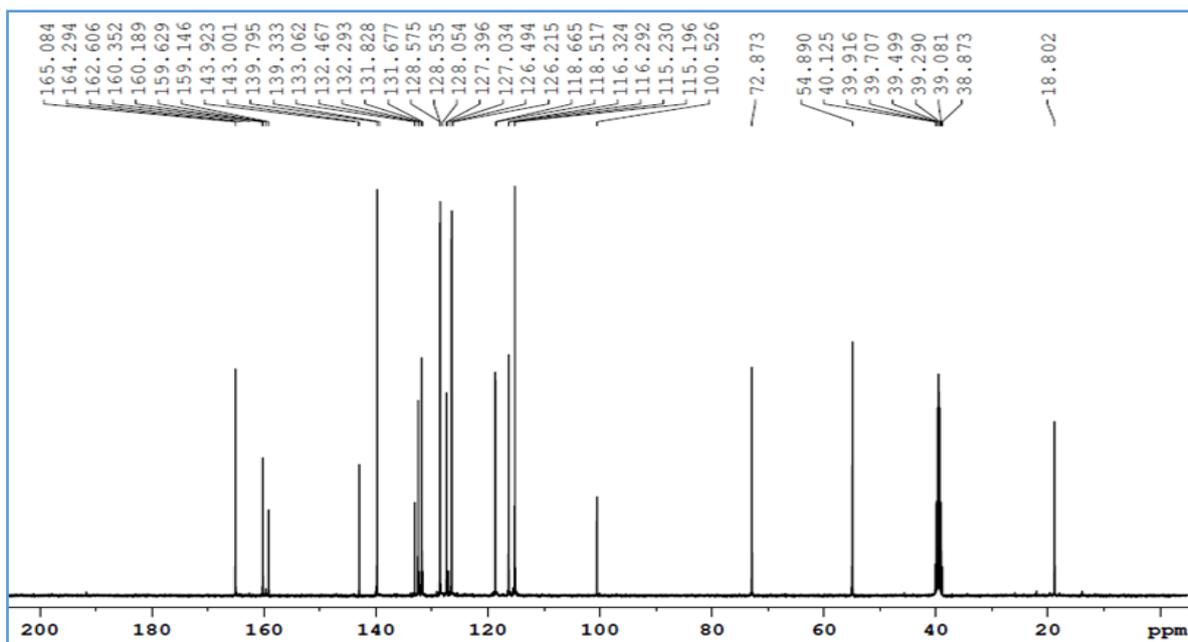


Figure S1-9 <sup>13</sup>C{<sup>1</sup>H} NMR spectrum of ligand, (*R*)-L<sup>3</sup>H

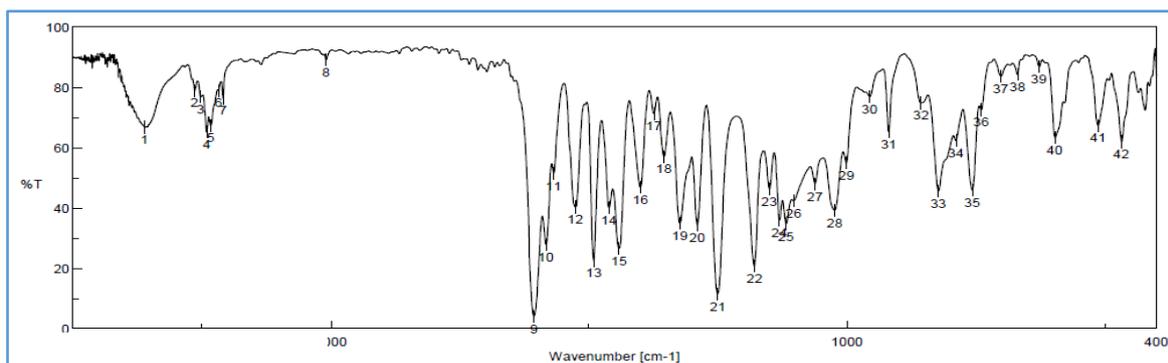


Figure S1-10 FT-IR spectrum of complex 1

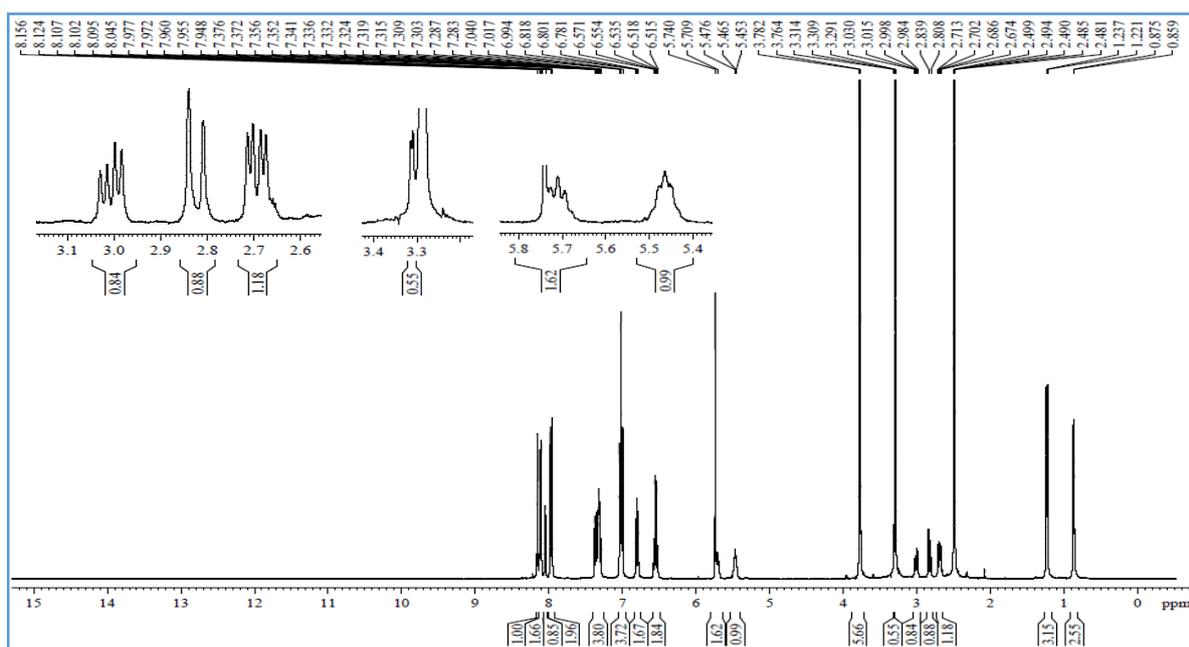


Figure S1-11  $^1\text{H}$  NMR spectrum of complex 1

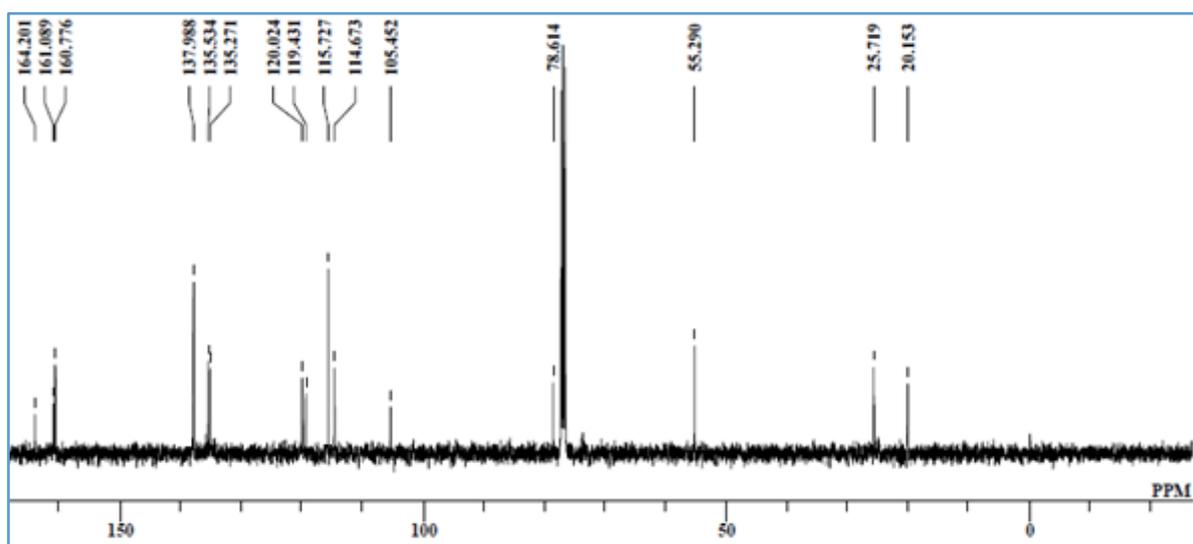


Figure S1-12  $^{13}\text{C}\{^1\text{H}\}$  NMR spectrum of complex 1

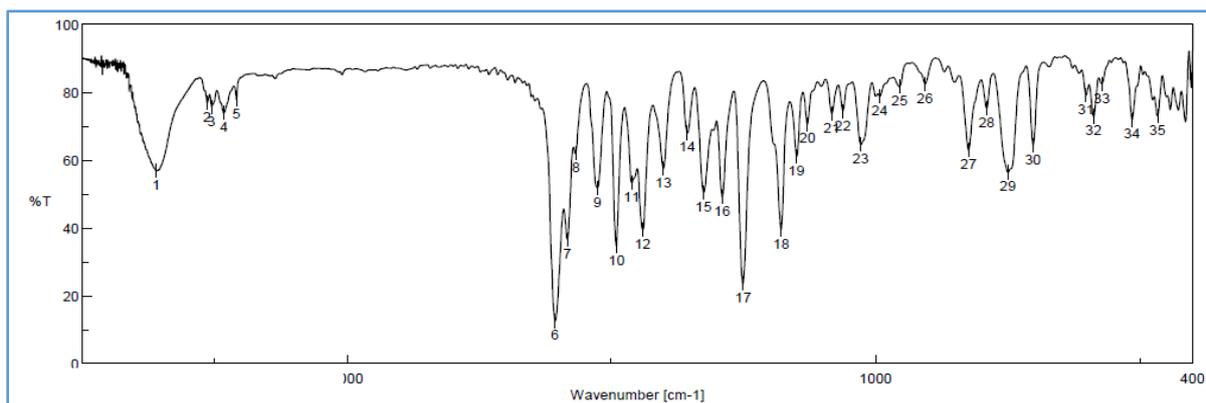


Figure S1-13 FT-IR spectrum of complex 2

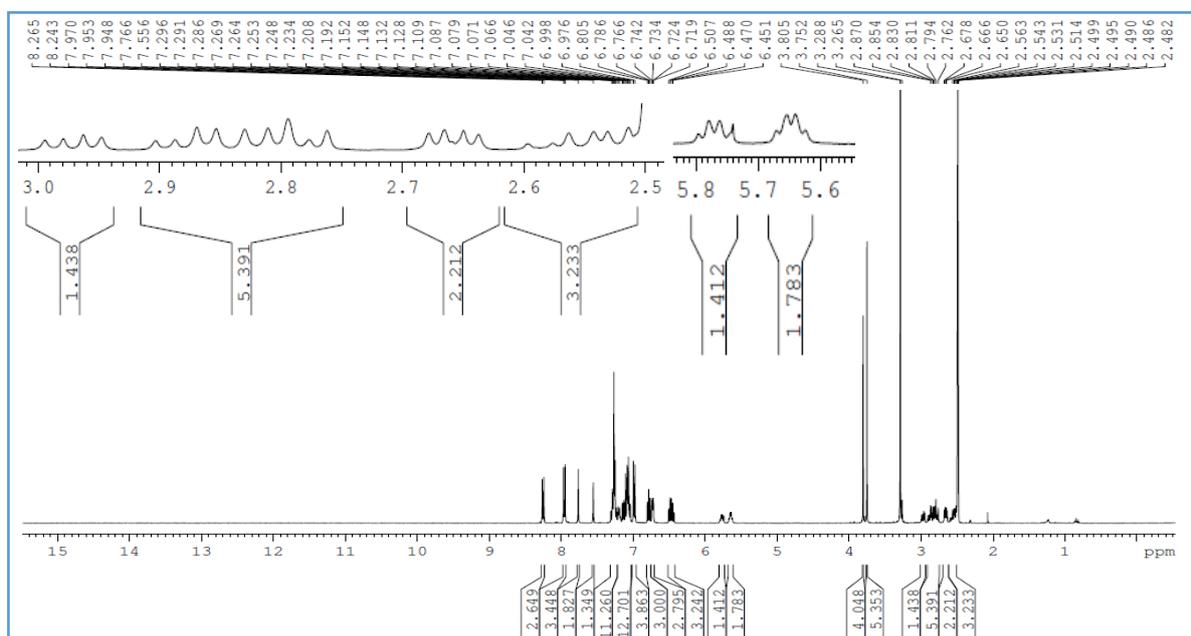


Figure S1-14 <sup>1</sup>H NMR spectrum of complex 2

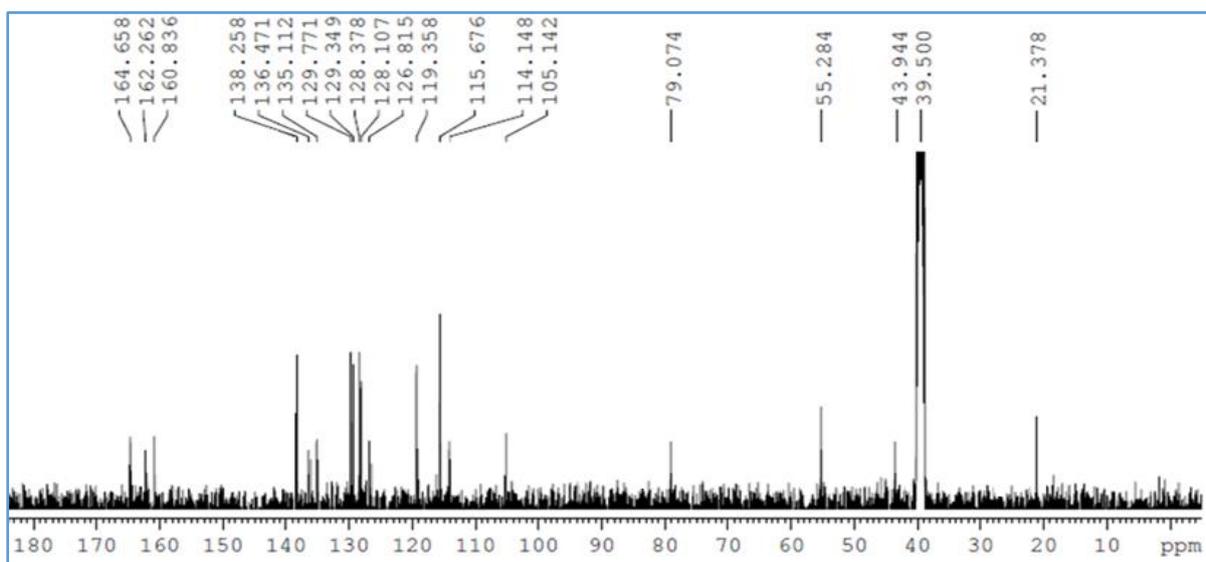


Figure S1-15 <sup>13</sup>C NMR spectrum of complex 2

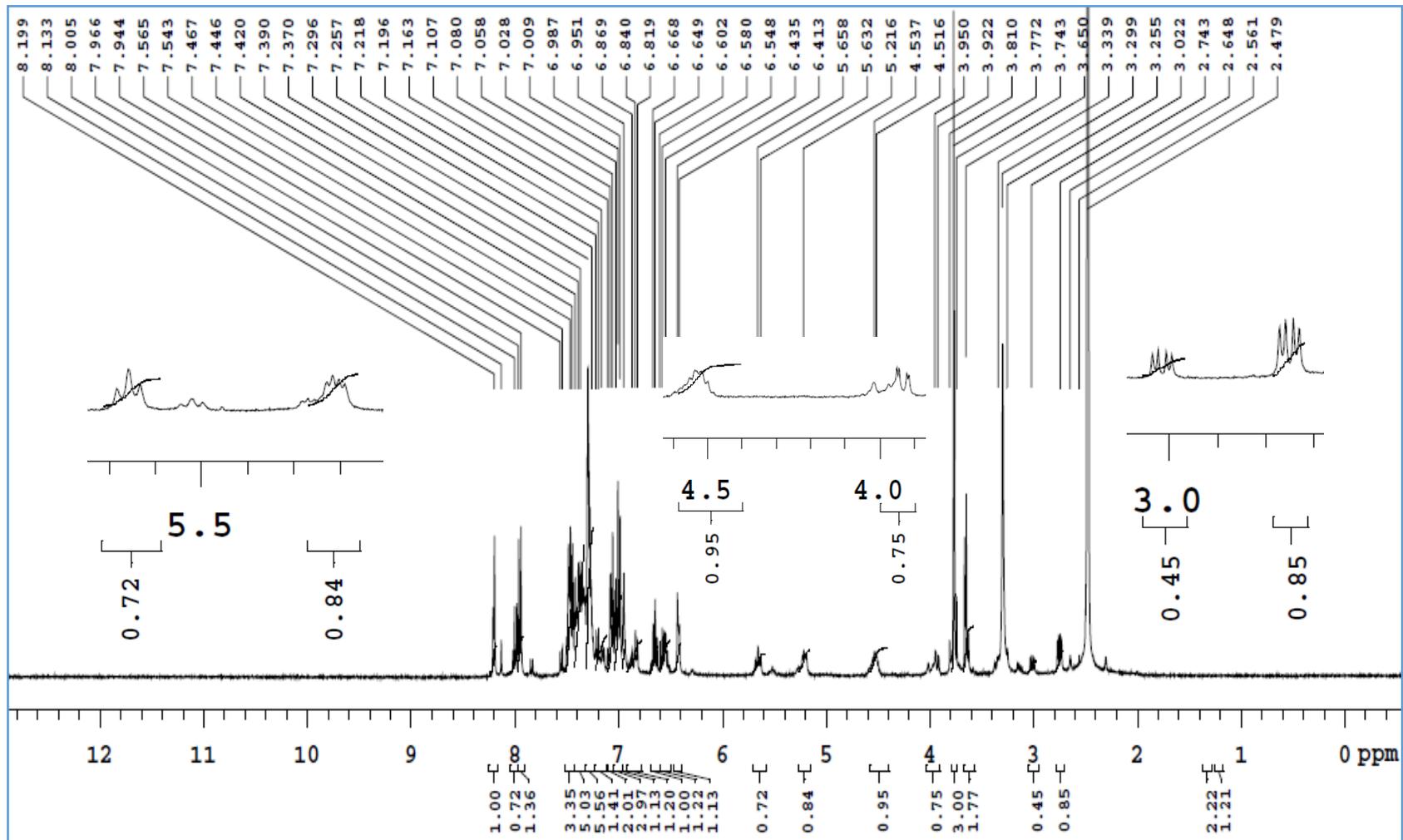


Figure S1-16  $^1\text{H}$  NMR spectrum of complex 3

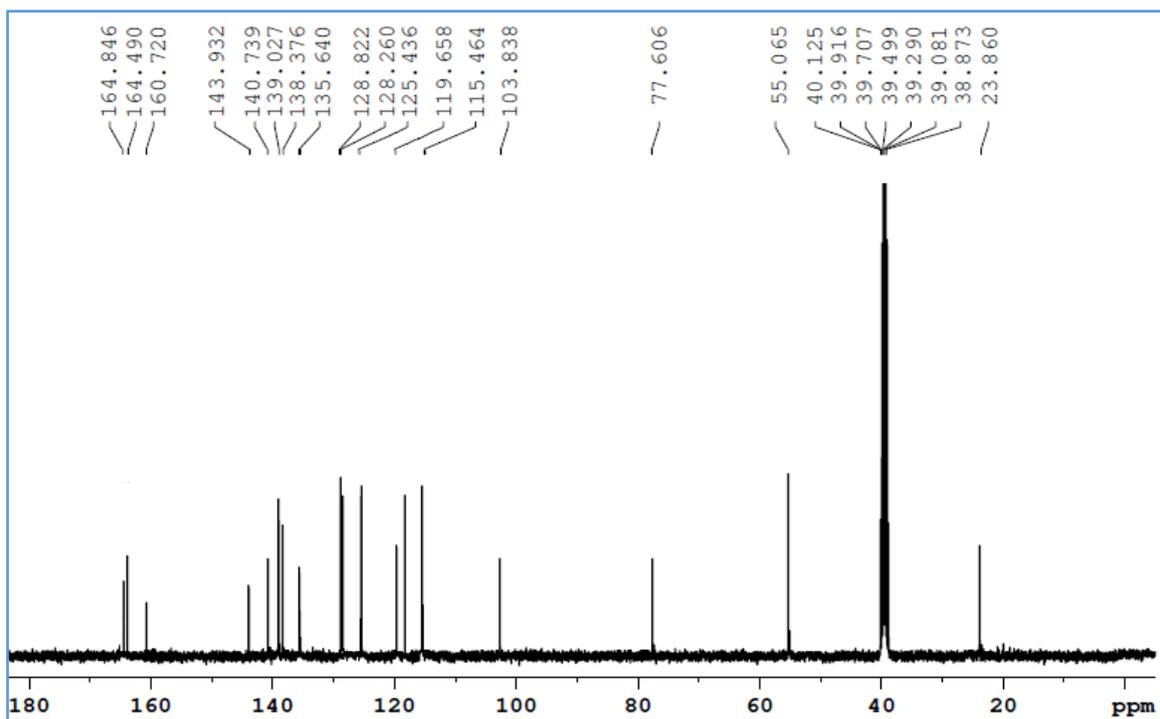


Figure S1-17  $^{13}\text{C}\{^1\text{H}\}$  NMR spectrum of complex **3**

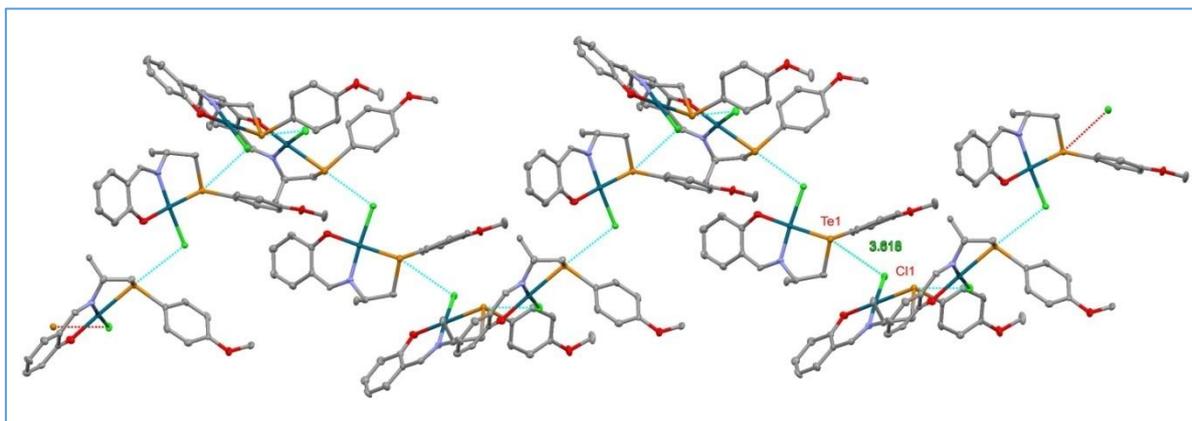
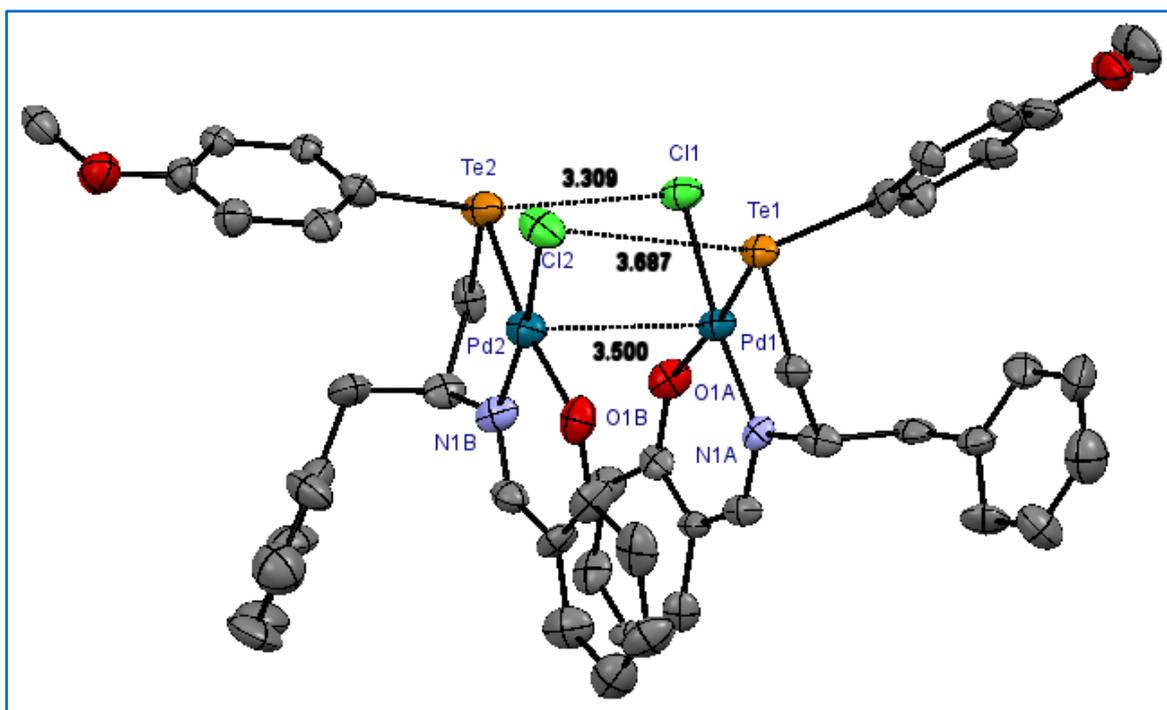


Fig. S1-18 Te $\cdots$ Cl secondary bonding interactions in  $[\text{Pd}((R)\text{-L}^1)\text{Cl}]$  (**1**) (H atoms are omitted for clarity).



**Fig. S1-19** Te...Cl Secondary bonding interactions in [Pd((S)-L<sup>2</sup>)Cl] (**2**) resulting in bimolecular aggregates with a short Pd...Pd distance (H atoms are omitted for clarity).