

## Summary of data/files

### Compound identification

(±)-tris(4-[4-methyl-2,2'-bipyridyl]methyl)-cyclotriguaiacylene = L1

(±)-tris(4-[4-methyl-2,2'-bipyridoyl])-cyclotriguaiacylene = L2

(±)-tris(4-[2,2',6',2''-terpyridyl]benzyl)cyclotriguaiacylene = L3

$[\{\text{Re}(\text{CO})_3\text{Br}\}_3(\text{L1})]$  = complex 1

$[\{\text{Re}(\text{CO})_3\text{Br}\}_3(\text{L2})]$  = complex 2

$[\{\text{Re}(\text{CO})_3\text{Br}\}_3(\text{L3})]$  = complex 3

### Crystal.zip

X-Ray crystal structure data and refinement files, all readable as text files.

Crystallographic Information Files (prefix.CIF)

Final refinement files (prefix.RES)

Datafiles: Observed and calculated structure factors (prefix.FCF)

Original hkl data before use of SQUEEZE procedure (complex#\_presqueeze.hkl)

Compound	Filename prefix
L1·(Et <sub>2</sub> O)	ligandL1
$[\{\text{Re}(\text{CO})_3\text{Br}\}_3(\text{L1})]\cdot n(\text{CH}_3\text{NO}_2)$	complex1_rebpy
$[\{\text{Re}(\text{CO})_3\text{Br}\}_3(\text{L3})]\cdot n(\text{SOMe}_2)$	complex3_retpy

### NMR.zip

NMRspectra.pdf contains processed Nuclear Magnetic Resonance <sup>1</sup>H NMR, <sup>1</sup>H-<sup>1</sup>H COSY NMR, <sup>13</sup>C NMR spectra for ligand L2, complexes 1, 2, 3.

Compound name.mnova files are corresponding Mestrelab Mnova data files

### IR.zip

As recorded Infrared Spectra

### MS.zip

<b>Filetype</b>	<b>Content</b>
Compound name MS.pdf	Recorded mass spectra
Assigned MS spectra.pdf	Assigned MS spectra

### **EA.zip**

CHN elemental analysis

### **Electronic.zip**

Electronic spectroscopy.pdf shows absorption spectra, Emission and Excitation Spectra, Lifetime data for ligands and complexes.

Raw data file designations:

L1 – ligand 1; L2-ligand 2; L3 - ligand 3

C1 – complex 1; C2- complex 2; C3 – complex 3

UV – UV absorption data

EE – excitation and emission