Supporting information

Facile preparation and properties of single molecular POSS-based white-light-emitting hybrid materials by click chemistry

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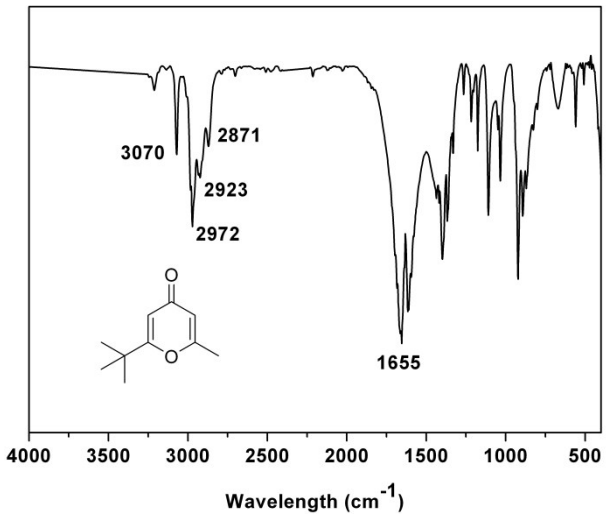

Fig. S1 The FTIR spectrum of 2-(tert-butyl)-6methyl-4H-pyran-4-one (**1**)

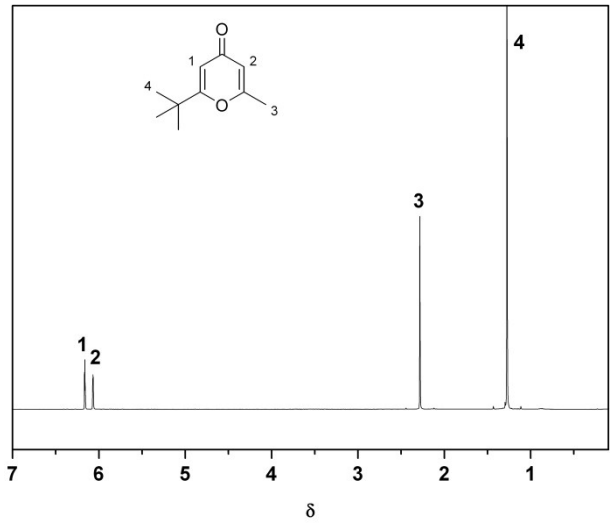

Fig. S2 The ^{1}H NMR spectrum of 2-(tert-butyl)-6methyl-4H-pyran-4-one (**1**)

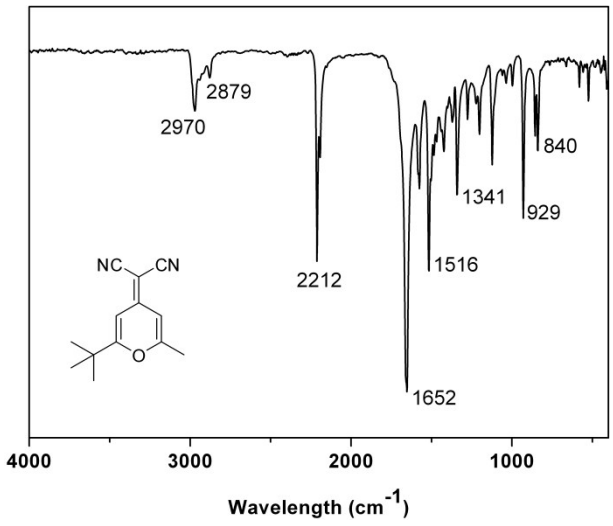

Fig. S3 The FTIR spectrum of 2-(2-tert-Butyl-6-methylpyran-4-ylidene) malononitrile (**3**)

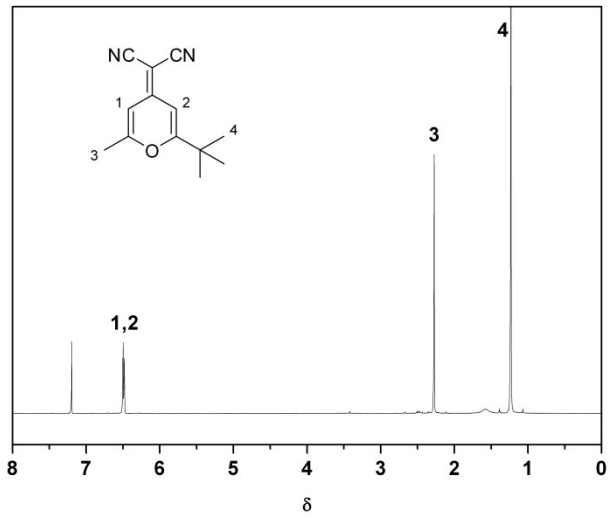

Fig. S4 The ^{1}H NMR spectrum of 2-(2-tert-Butyl-6-methylpyran-4-ylidene) malononitrile (**3**)

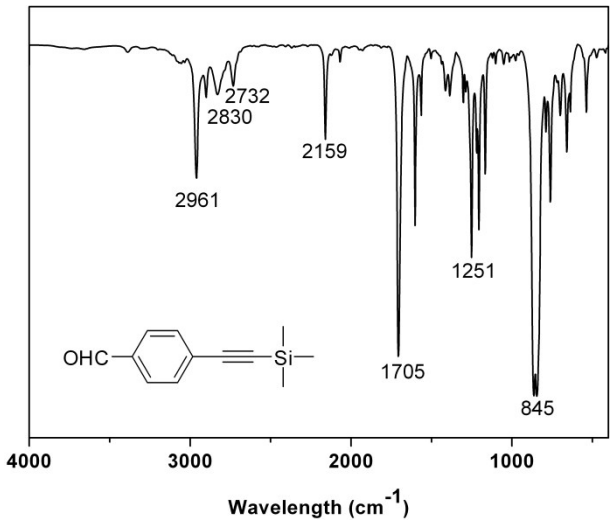

Fig. S5 The FTIR spectrum of 4-((trimethylsilyl)ethynyl)benzaldehyde (**4**)

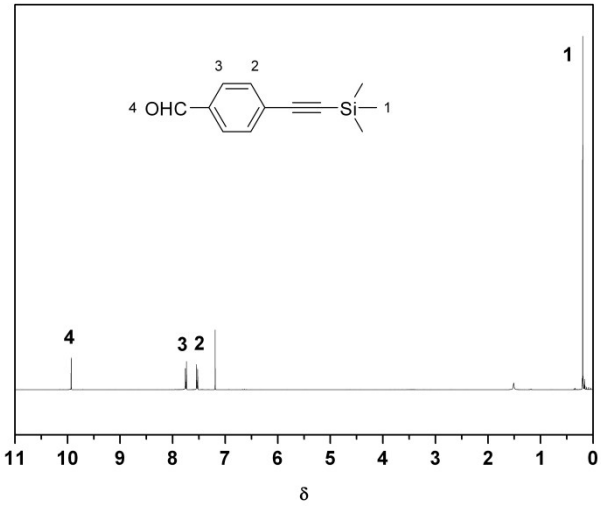

Fig. S6 The ^{1}H NMR spectrum of 4-((trimethylsilyl) ethynyl) benzaldehyde (**4**)

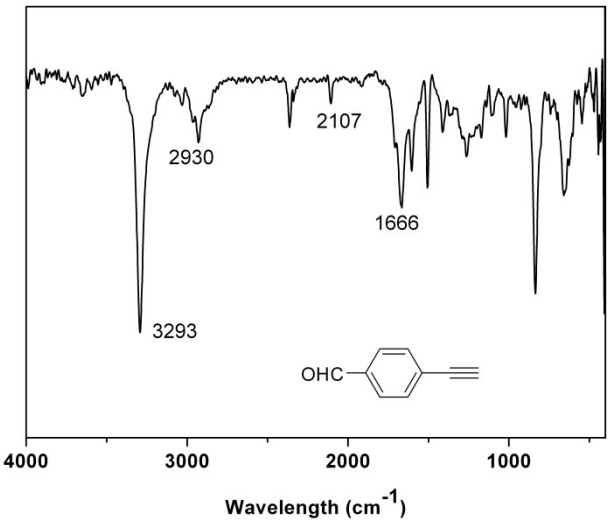

Fig. S7 The FTIR spectrum of 4-ethynylbenzaldehyde (**5**)

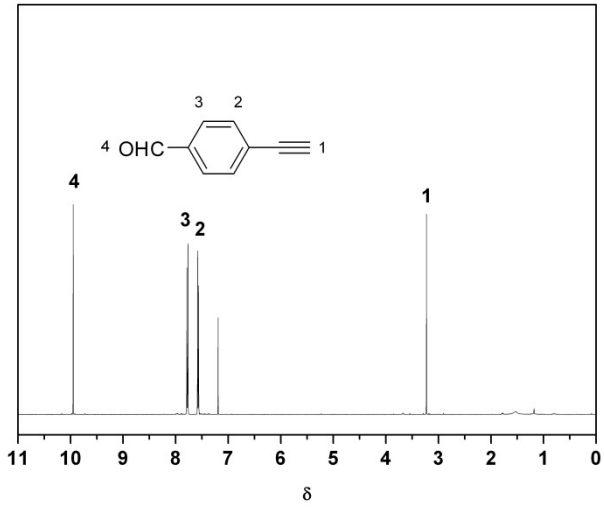

Fig. S8 The ^{1}H NMR spectrum of 4-ethynylbenzaldehyde (**5**)

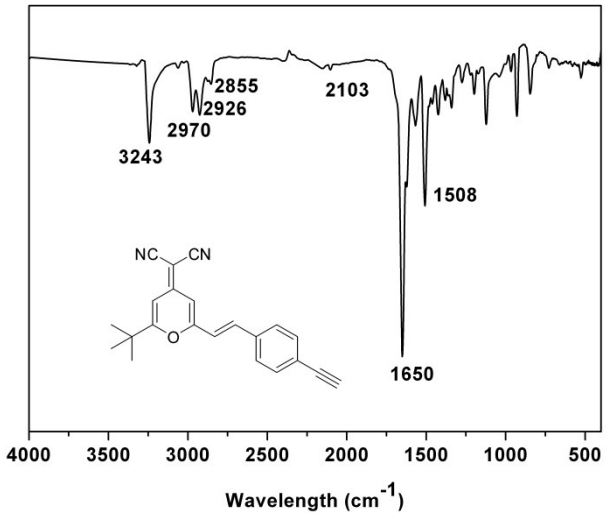

Fig. S9 The FTIR spectrum of 2-(2-tert-Butyl-6-(4-ethynylstyryl)-4-ylidene) malononitrile (**Y**)

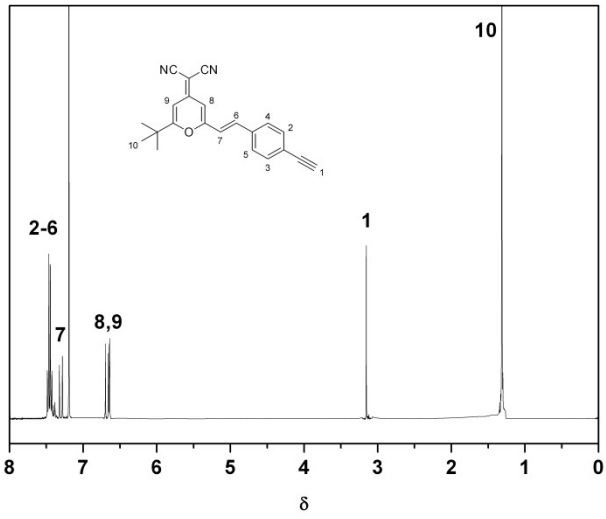

Fig. S10 The ^{1}H NMR spectrum of 2-(2-tert-Butyl-6-(4-ethynylstyryl)-4-ylidene) malononitrile (**Y**)

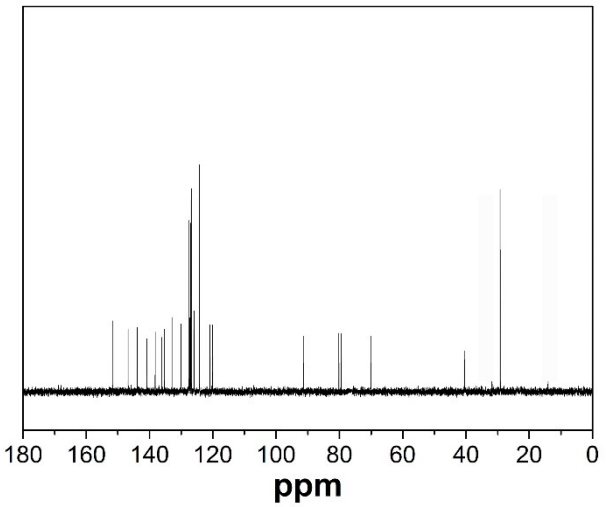

Fig. S11 The ^{13}C NMR spectrum of 2-(2-tert-Butyl-6-(4-ethynylstyryl)-4-ylidene) malononitrile (**Y**)

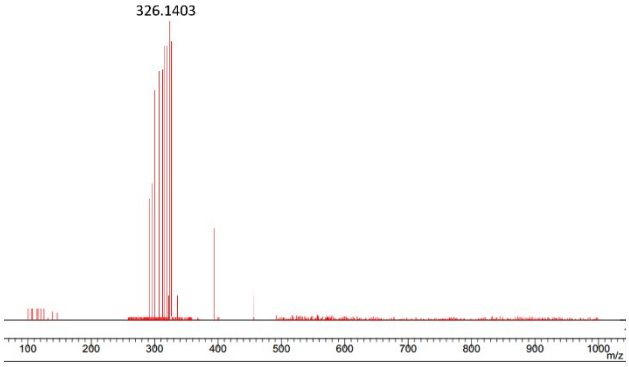

Fig. S12 The MALDI-TOF mass spectrum of 2-(2-tert-Butyl-6-(4-ethynylstyryl)-4-ylidene) malononitrile (**Y**)

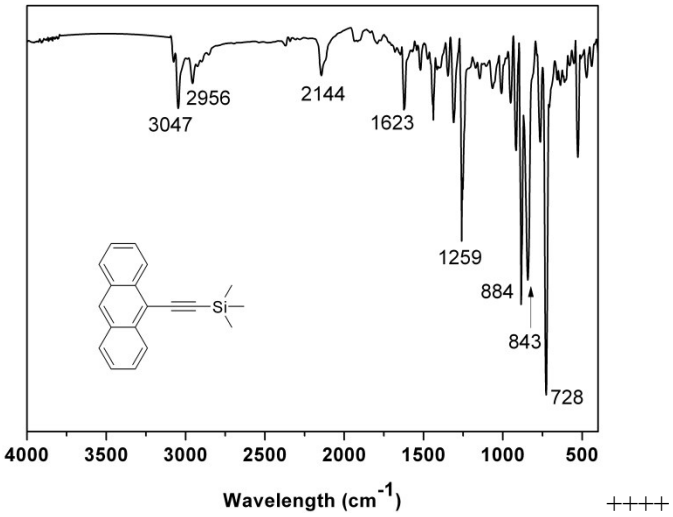

Fig. S13 The FTIR spectrum of (anthracen-9-ylethynyl) trimethylsilane (**6**)

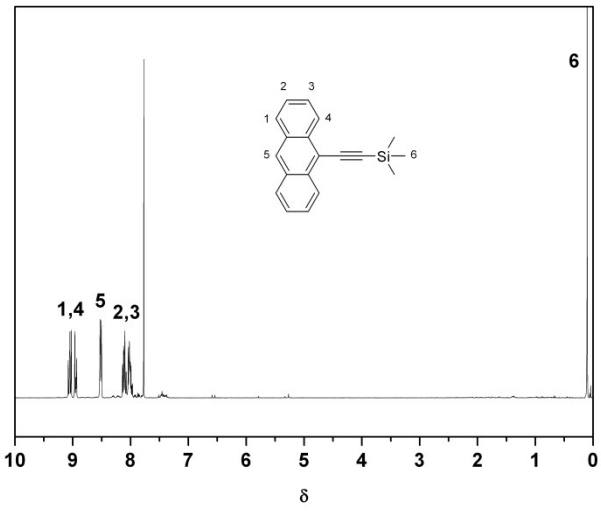

Fig. S14 The ^{1}H NMR spectrum of (anthracen-9-ylethynyl) trimethylsilane (**6**)

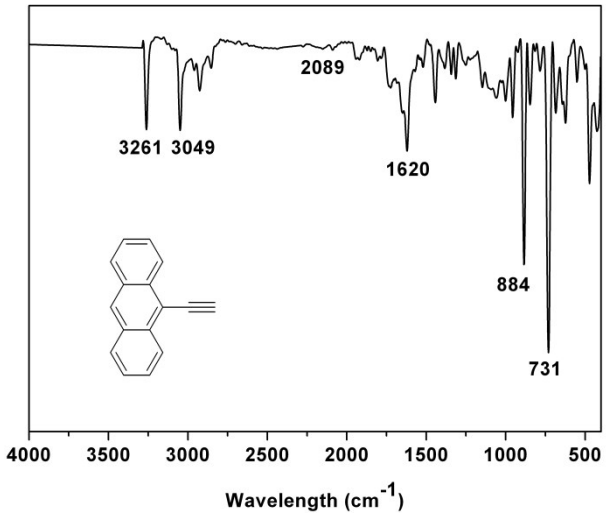

Fig. S15 The FTIR spectrum of 9-ethynylanthracene (**B**)

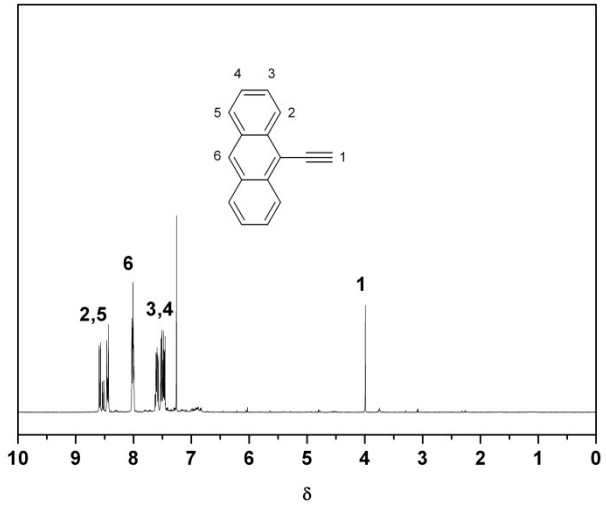

Fig. S16 The ^{1}H NMR spectrum of 9-ethynylanthrac (**B**)

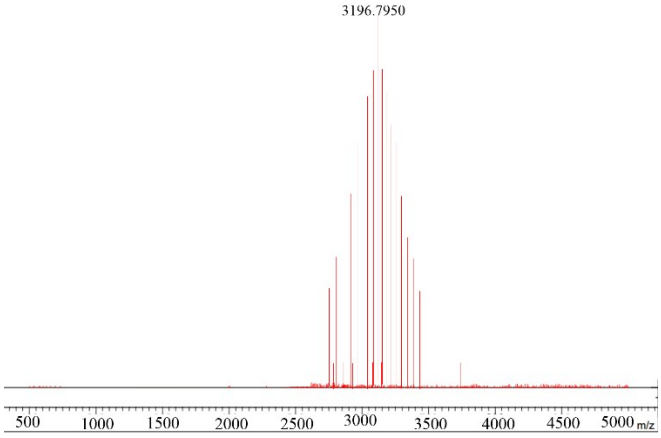

Fig. S17 The MALDI-TOF mass spectrum of $\mathbf{W_{71}}$

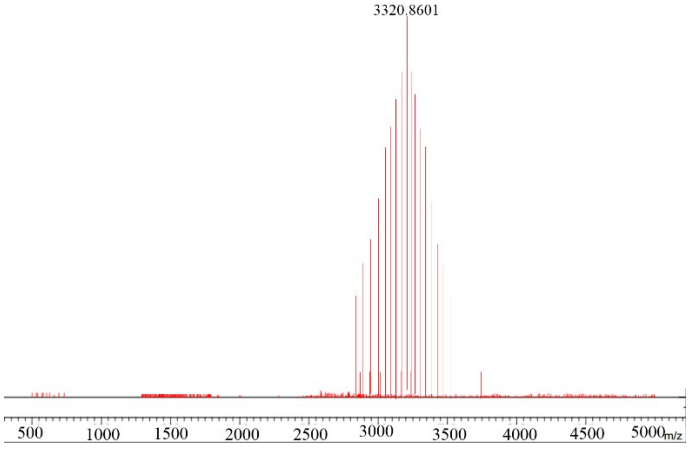

Fig. S18 The MALDI-TOF mass spectrum of $\mathbf{W_{62}}$

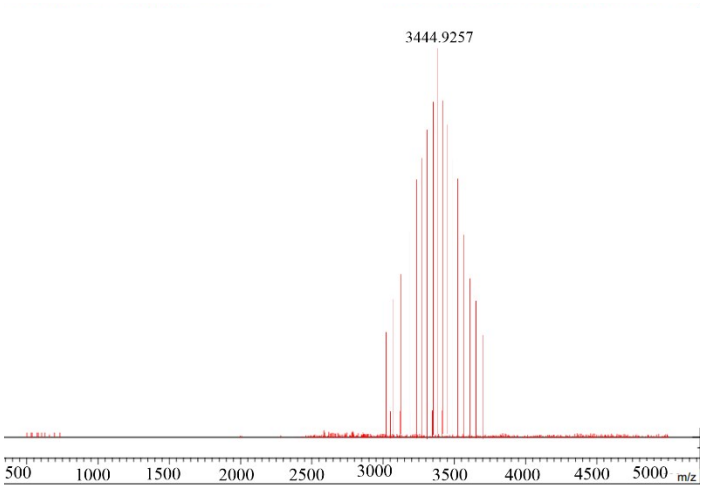

Fig. S19 The MALDI-TOF mass spectrum of $\mathbf{W_{71}}$

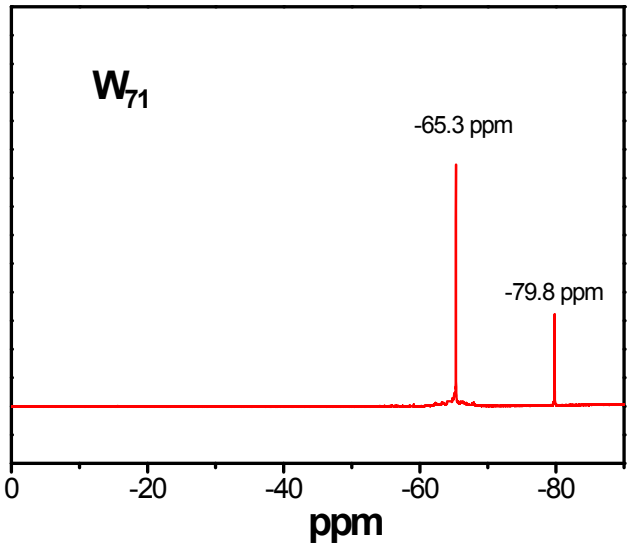

Fig. S20 The ^{29}Si NMR spectra of $\mathbf{W_{71}}$

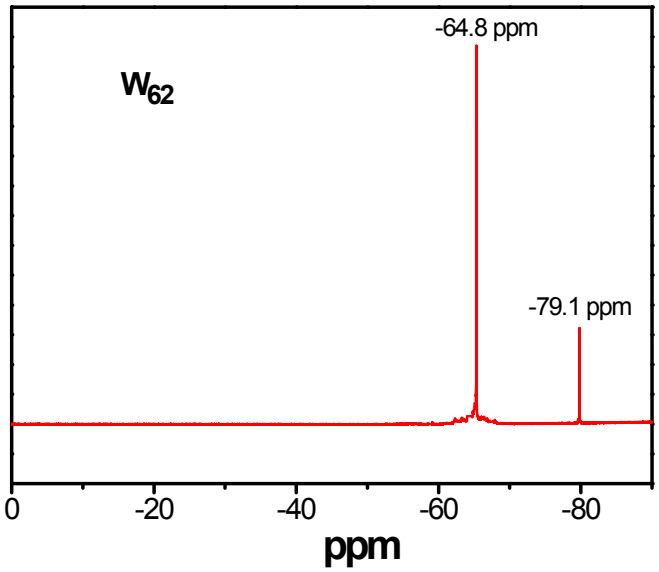

Fig. S 21 The ^{29}Si NMR spectra of $\mathbf{W_{62}}$

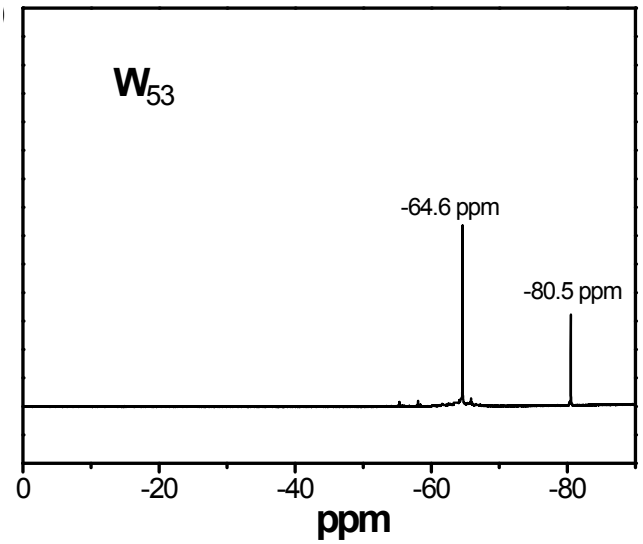

Fig. S 22 The ^{29}Si NMR spectra of $\mathbf{W_{53}}$

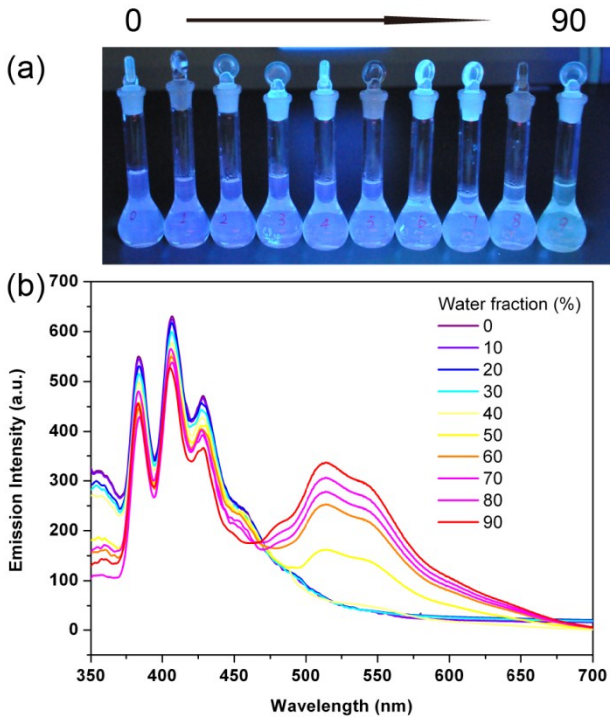

Fig. S23 (a) The emission image of W_{71} in THF/H_2O mixture solvent; (b) the emission spectra of W_{71} in THF/H_2O mixture solvent (10^{-5} mol L^{-1}, λex=365 nm).

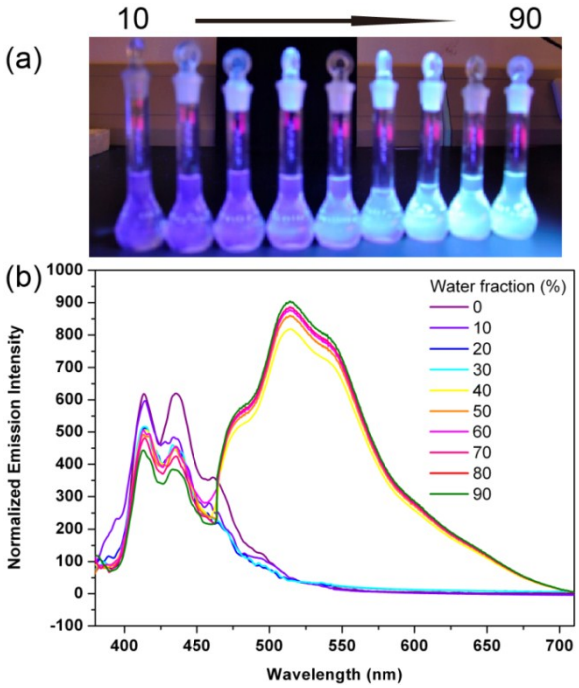

Fig. 24 (a) The emission image of W_{53} in THF/H_2O mixture solvent; (b) the emission spectra of W_{53} in THF/H_2O mixture solvent (10^{-5} mol L^{-1}, λex=365 nm).