Supplementary Information

Engineering of metal-free bipyridine-based bridged silsesquioxanes for sustainable solid-state lighting

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Table and Figure captions

Table S1. Elemental composition (in $\%_w$) and calculated molar ratios for **M5** and **M6**. The values indicated in parentheses indicate the theoretical ratio. The experimental errors are ±0.3% (absolute) for nitrogen and ±2% (relative error) for silicon.

Figure S1. FTIR spectra of **M5** and **M6**.

Figure S2. ^{29}Si solid-state CP-MAS NMR spectra of **M5** and **M6**. The dotted line represents the fit using Gaussian functions in green solid lines.

Figure S3. ^{13}C CP-MAS solid-state NMR spectra of **M5** and **M6** and ^{13}C NMR of **P5** and **P6** in solution (DMSO-d_6). The asterisk and the paragraph symbol (§) correspond to the solvent (DMSO) and the carbon atoms of residual ethoxy groups, respectively.

Figure S4. XRD patterns of **M5** and **M6**.

Figure S5. Thermogravimetric analysis of **M6**.

Figure S6. Excitation spectra of (a) **M6** and (b) **M5** monitored at 430 nm, 460 nm, 480/490 nm and 520 nm.

Table S1

Hybrid	%N	%Si	N/Si
M5	16.26	11.62	2.8 (3.0)
M6	16.92	10.92	3.1 (3.0)

Figure S1

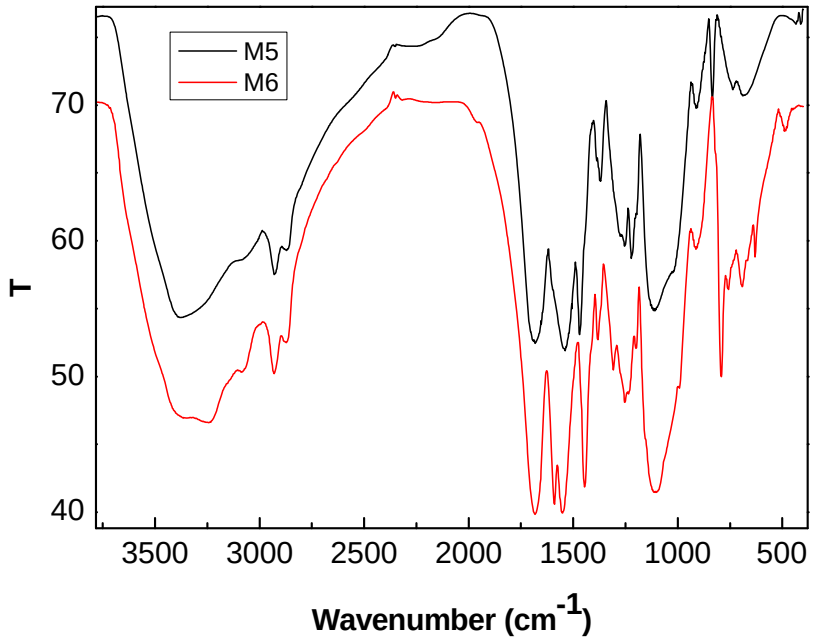

Figure S2

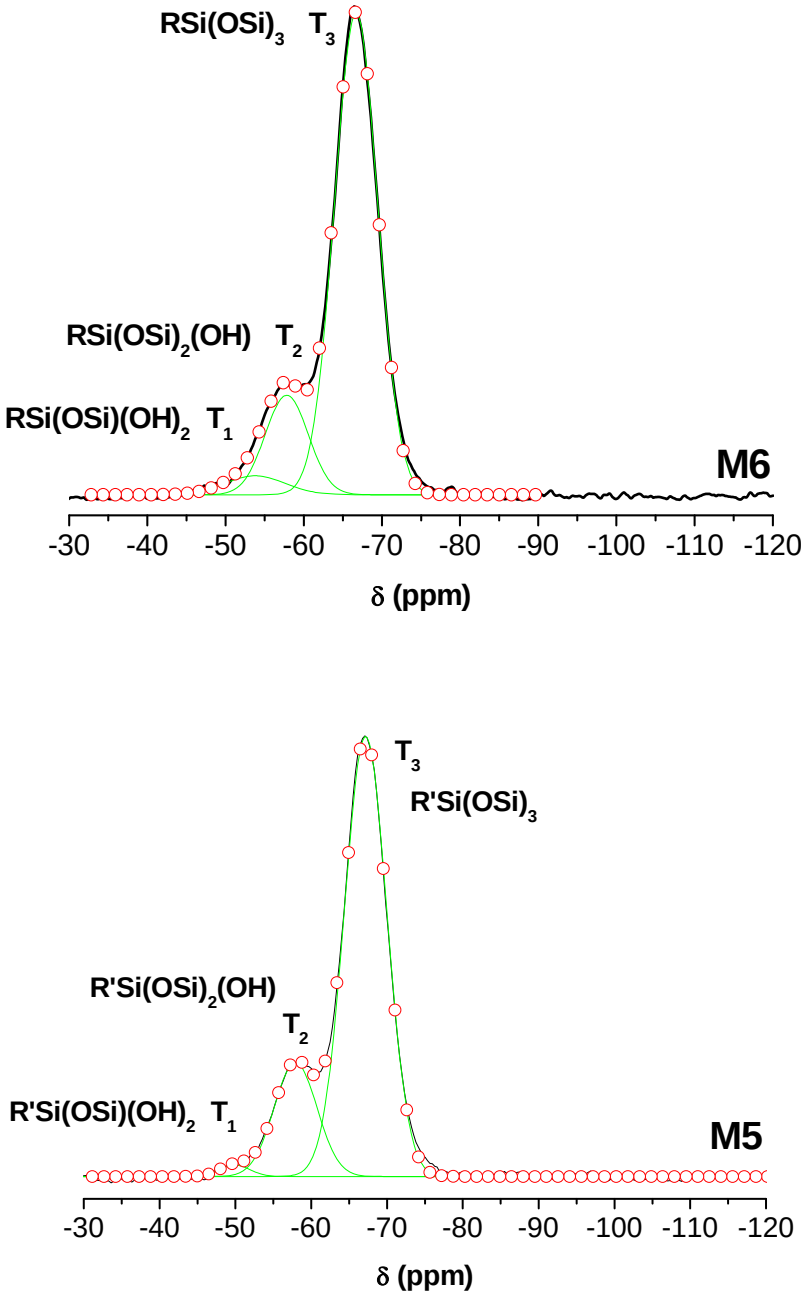

Figure S3

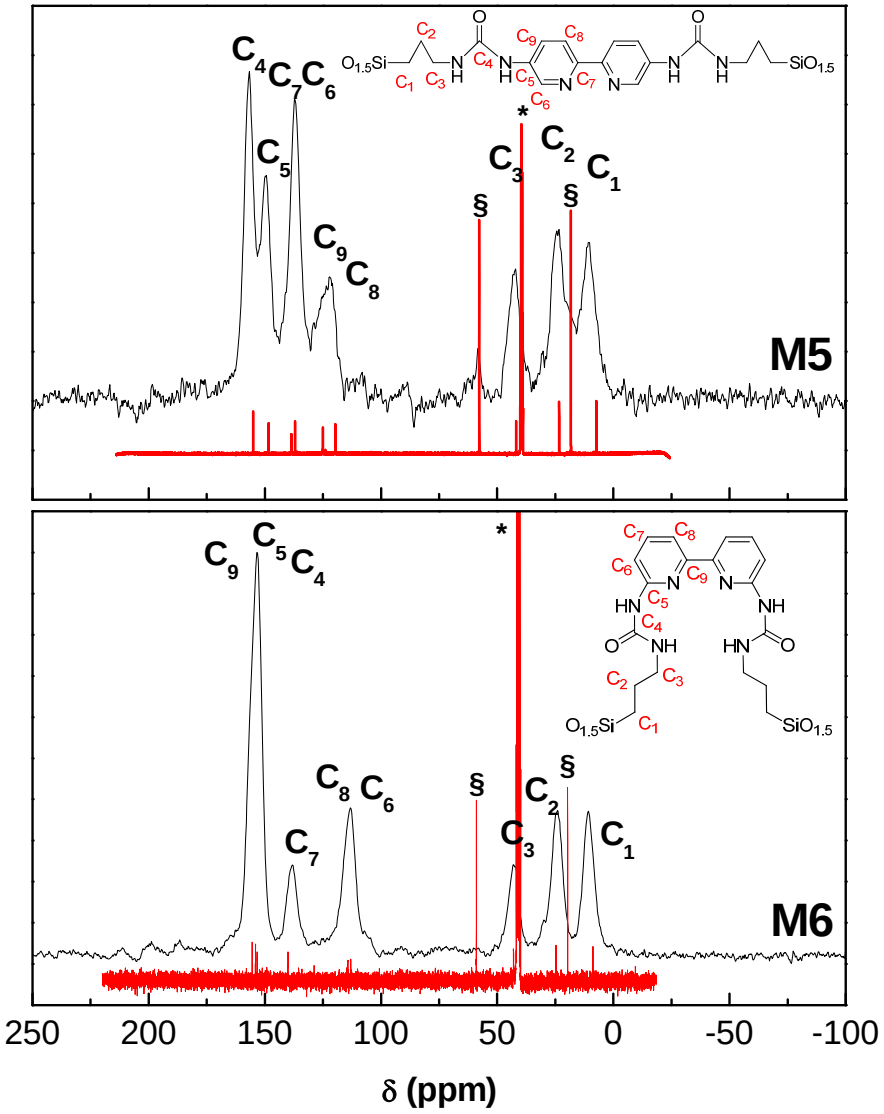

Figure S4

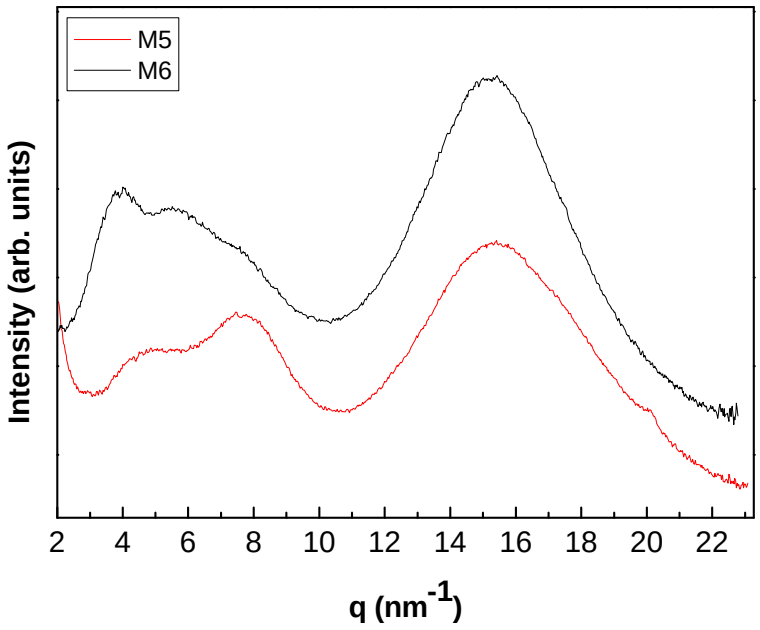

Figure S5

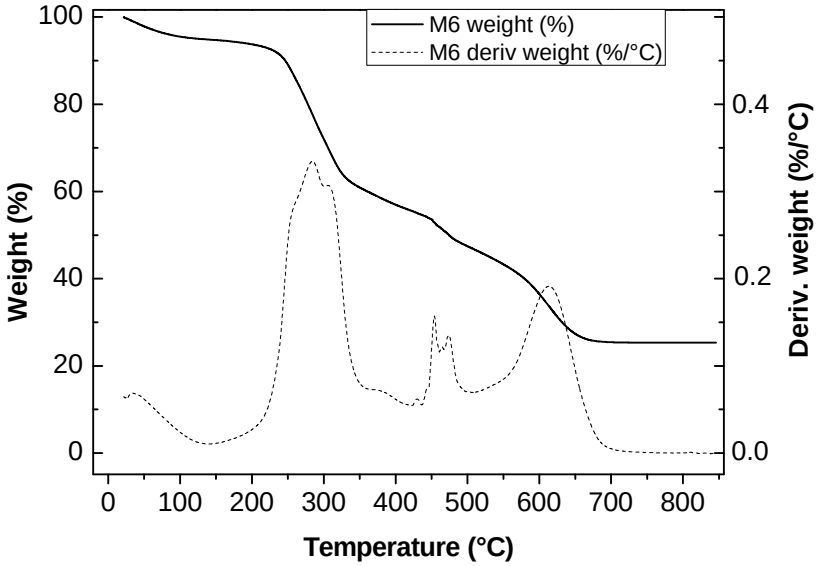

Figure S6