Supporting Information

A family of rare earth complexes with chelating furan biradicals: syntheses, structures and magnetic properties

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**Fig. S1**  Simplified view of the crystal structure of 2. Fluorine, hydrogen, and some carbon atoms are omitted for clarity.

**Fig. S2**  Simplified view of the crystal structure of 3. Fluorine, hydrogen, and some carbon atoms are omitted for clarity.

**Fig. S3**  Simplified view of the crystal structure of 5. Fluorine, hydrogen, and some carbon atoms are omitted for clarity.
**Fig. S4**  Simplified view of the crystal structure of 6. Fluorine, hydrogen, and some carbon atoms are omitted for clarity.

**Fig. S5** Temperature dependence of the in-phase(top) and out-of-phase(bottom) components of the AC magnetic susceptibility for complex 5 in a 3000 Oe DC field with an oscillation of 3 Oe.

**Fig. S6** Temperature dependence of the in-phase(top) and out-of-phase(bottom) components of the AC magnetic susceptibility for complex 6 (right) in zero DC field with an oscillation of 3 Oe.
Fig. S7 Powder X-ray diffractions of 1-3.

Fig. S8 Powder X-ray diffractions of 4-6.