Supporting Information

Crystal engineering of salen type cerium complexes induced by various cerium counterions

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Fig. S1 IR spectra of H$_2$L and complexes 1–5.

Fig. S2 UV-vis absorption spectra of H$_2$L and complexes 1–5 in CH$_3$OH.
**Fig. S3** The powder X-ray diffraction patterns and the simulated patterns of complex 1.

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**Fig. S14** CV curve of complex 4 in CH$_3$CN solution at 298K with 0.1 M $n$-Bu$_4$NPF$_6$ as supporting electrolyte (scan rate, 20 mV/s; working electrode, glassy carbon).

**Fig. S15** CV curve of complex 5 in CH$_3$CN solution at 298K with 0.1 M $n$-Bu$_4$NPF$_6$ as supporting electrolyte (scan rate, 20 mV/s; working electrode, glassy carbon).