Supporting Information

Ferroelectric and luminescence properties in zinc(II) and platinum(II) soft complexes

Ryohei Akiyoshi, a Yuma Hirota, Daisuke Kosumi, b, c Ryo Ohtani, a Masaaki Nakamura, a Leonard F. Lindoy d and Shinya Hayami a, c

a Department of Chemistry, Graduate School of Science and Technology, Kumamoto University, 2-39-1 Kurokami, Chuo-ku, Kumamoto 860-0855, Japan. Email: hayami@kumamoto-u.ac.jp

b Department of Physics, Graduate School of Science and Technology, Kumamoto University, 2-39-1 Kurokami, Chuo-ku, Kumamoto 860-0855, Japan.

c Institute of Pulsed Power Science (IPPS), Kumamoto University, 2-39-1 Kurokami, Chuo-ku, Kumamoto 860-8555, Japan

d School of Chemistry, The University of Sydney, NSW 2006, Australia
Fig. S1  DSC curves for (a) 1-R, (b) 1-S, (c) 1-rac, (d) 2-R, (e) 2-S and (f) 2-rac. (red line: heating process, blue line: cooling process)
Fig. S2 Temperature-dependent PXRD patterns for (a) 1-R, (b) 1-S, (c) 2-R, (d) 2-S and (e) 2-rac.
Fig. S3 POM texture of (a) 1-R, (b) 1-S and (c) 1-rac.
Fig. S4 Molecular packing for 1-\textit{rac} (lamellar structure).
Fig. S5 Dielectric constants of (a) 1-R, (b) 1-S, (c) 1-rac, (d) 2-R, (e) 2-S and (f) 2-rac (black line: 100 Hz, red line: 1 kHz).
Fig. S6  $P$-$E$ hysteresis loops for (a) 1-R, (b) 1-S, (c) 2-R and (d) 2-S.
Fig. S7 Results of second harmonic generation (SHG) experiments for (a) 1·R, (b) 1·S, (c) 2·R and (d) 2·S.
Fig. S8 Normalized absorption (black line) and emission (red line) spectra of (a) 1-R, (b) 1-S, (c) 2-R and (d) 2-S.