

<Electronic Supplementary Information>

**Halogen effects on photoluminescence and catalytic properties: a series of
spatially arranged trimetallic zinc(II) complexes**

Haeri Lee, Tae Hwan Noh and Ok-Sang Jung*

Department of Chemistry, Pusan National University, Pusan 609-735, Korea

Table S1 Weak Inter- and Intra-molecular Interactions (Å) for the Compounds

	[Zn ₃ Cl ₆ L(MeOH) ₃]	[Zn ₃ Br ₆ L(MeOH) ₃]	[Zn ₃ I ₆ L(MeOH) ₃]
$\pi \cdots \pi$	3.6839(5)	3.83(4)	3.954(4)
	3.6940(5)	3.845(4)	4.011(4)
	3.7041(5)	3.86(4)	4.011(4)
Intermolecular interaction	2.206	2.230	2.358
NH $\cdots$ O=C	2.214	2.318	2.494
	2.245	2.385	2.693
Intramolecular interaction	1.776	1.809	1.735
MeOH $\cdots$ O=C	1.785	1.854	1.908

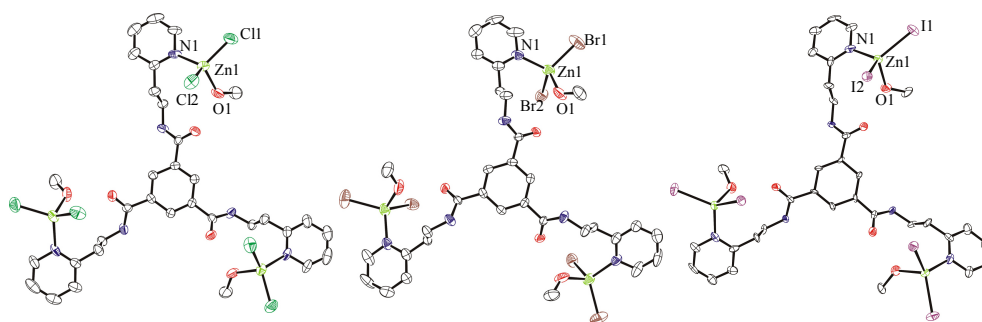


Fig. S1 ORTEP drawings of [Zn₃Cl₆L(MeOH)₃] (left), [Zn₃Br₆L(MeOH)₃] (middle), and [Zn₃I₆L(MeOH)₃] (right).

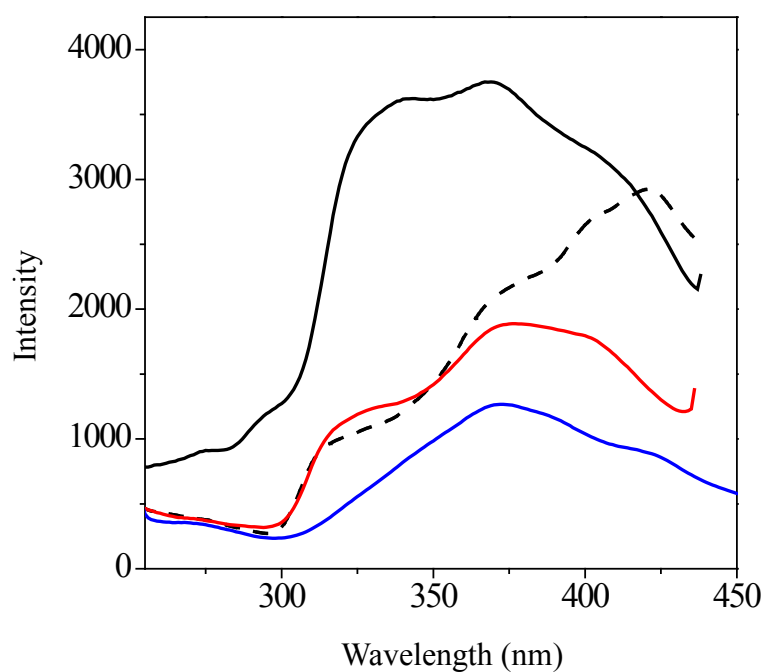


Fig. S2 Solid-state excitation spectra of L (dashed line), [Zn₃Cl₆L(MeOH)₃] (solid black line), [Zn₃Br₆L(MeOH)₃] (solid red line), and [Zn₃I₆L(MeOH)₃] (solid blue line) at room temperature.

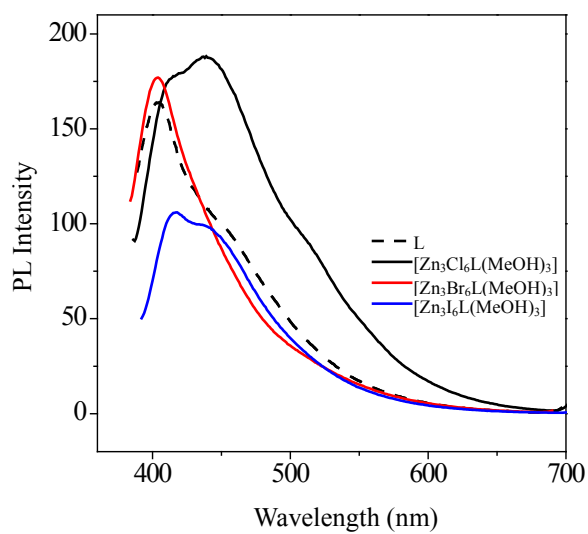


Fig. S3 Photoluminescence spectra of L (dashed line), [Zn₃Cl₆L(MeOH)₃] (solid black line), [Zn₃Br₆L(MeOH)₃] (solid red line), and [Zn₃I₆L(MeOH)₃] (solid blue line) at room temperature in Me₂SO.

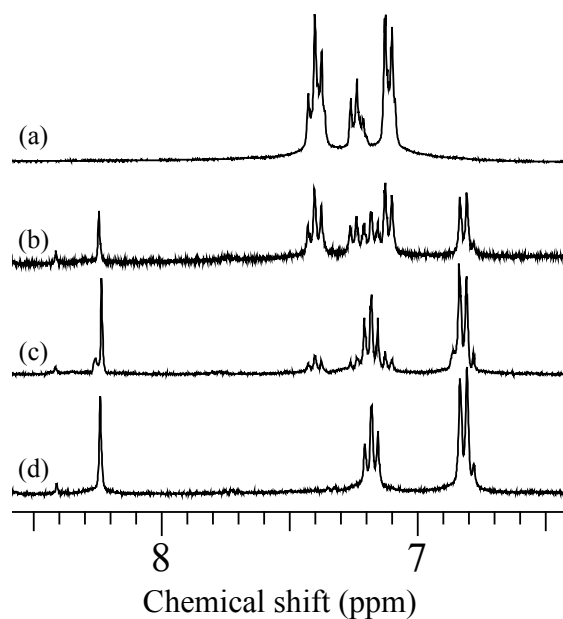


Fig. S4 Partial ^1H NMR spectra ($\text{Me}_2\text{CO}-d_6$) showing the catalytic effects for transesterification of phenyl acetate using $[\text{Zn}_3\text{I}_6\text{L}(\text{MeOH})_3]$ catalyst in a mixture of MeOH and CH_3CN ($v/v=1:1$) at 50°C for 2 h (b), 4 h (c), and 6 h (d). (a) shows the resonance of the authentic phenyl acetate.

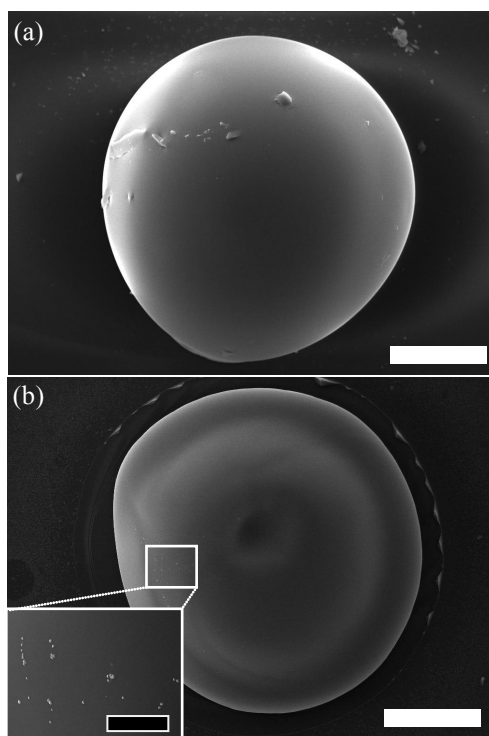


Fig. S5 SEM images of calcined $[\text{Zn}_3\text{I}_6\text{L}(\text{MeOH})_3]$ at 200 °C (a) and 400 °C (b). White bar = 200 μm , black bar = 20 μm .