Supporting Information for

Tunable Photoluminescence Properties of Fluorescein in a Layered Double Hydroxide Matrix by Changing the Interlayer Microenvironment

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Table S1: Chemical Compositions of the FLU- $C_nH_{2n+1}SO_3/LDH$ (*n*=5, 6, 7, 10 and 12 respectively) Samples.



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nominal content <i>x</i>	chemical composition	Zn/Al ration	experimental content x
1.00×10 ⁻³	$[\text{Zn}_{0.67}\text{Al}_{0.33}(\text{OH})_2](\text{FLU})_{A_1}(\text{C}_5\text{H}_{11}\text{SO}_3)_{B_1} \cdot 0.56\text{H}_2\text{O}$	2.03	1.00×10^{-3}
1.00×10^{-3}	$[\text{Zn}_{0.68}\text{Al}_{0.32}(\text{OH})_2] (\text{FLU})_{A_2} (\text{C}_6\text{H}_{13}\text{SO}_3)_{B_2} \cdot 0.89\text{H}_2\text{O}$	2.13	1.01×10^{-3}
1.00×10^{-3}	$[Zn_{0.66}Al_{0.34}(OH)_2] (FLU)_{A_3}(C_7H_{15}SO_3)_{B_3} \cdot 0.79H_2O$	1.94	1.00×10^{-3}
1.00×10^{-3}	$[\text{Zn}_{0.69}\text{Al}_{0.31}(\text{OH})_2] (\text{FLU})_{A_4}(\text{C}_{10}\text{H}_{21}\text{SO}_3)_{B_4} \cdot 0.45\text{H}_2\text{O}$	2.22	1.03×10^{-3}
1.00×10^{-3}	$[\text{Zn}_{0.67}\text{Al}_{0.33}(\text{OH})_2]$ (FLU) $_{A_5}(\text{C}_{12}\text{H}_{25}\text{SO}_3)_{B_5} \cdot 0.36\text{H}_2\text{O}$	2.03	1.05×10^{-3}
$A_1 = 3.30 \times 10^{-4}, B_1 = 0.329; A_2 = 3.23 \times 10^{-4}, B_2 = 0.319; A_3 = 3.40 \times 10^{-4}, B_3 = 0.339; A_4 = 3.19 \times 10^{-4}, B_4 = 0.309$			
$A_5=3.46\times10^{-4}, B_5=0.329.$			

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