

ELECTRONIC SUPPLEMENTARY INFORMATION FILE of the paper published on RSC Advances

Electronic Supplementary Information for
Characterization of interaction between organic molecules and
Co-Al-LDH, using photo-physical techniques

BY

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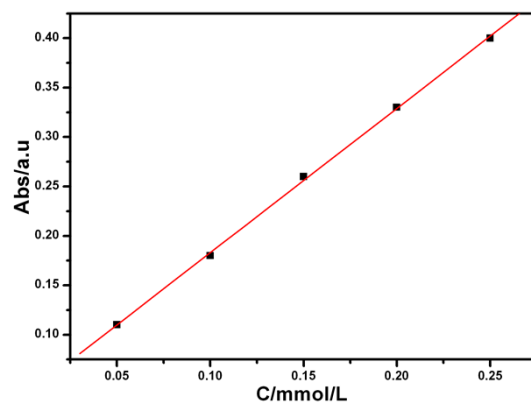


Fig.S1 Concentration-absorption curve of 4-BBA in 274nm

$$y = 1.46x + 0.037, \quad r = 0.99972$$

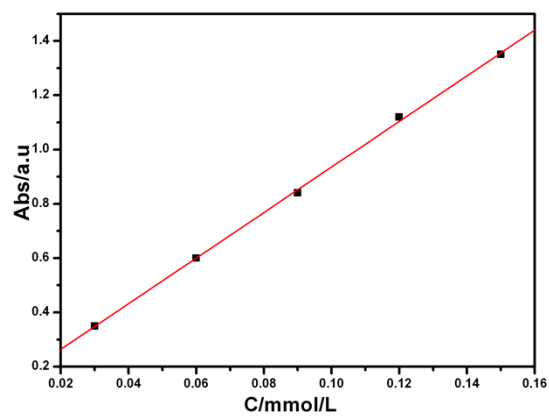


Fig.S2 Concentration-absorption curve of 4-BBA in 226nm

$$y = 8.4x + 0.096, \quad r = 0.99965$$

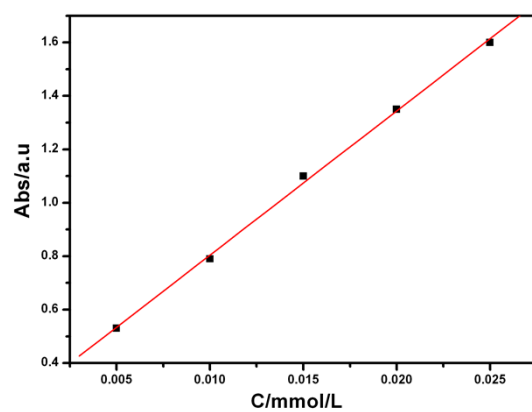


Fig.S3 Concentration-absorption curve of 2-NSA in 226nm

$$y = 54x + 0.264, \quad r = 0.99923.$$

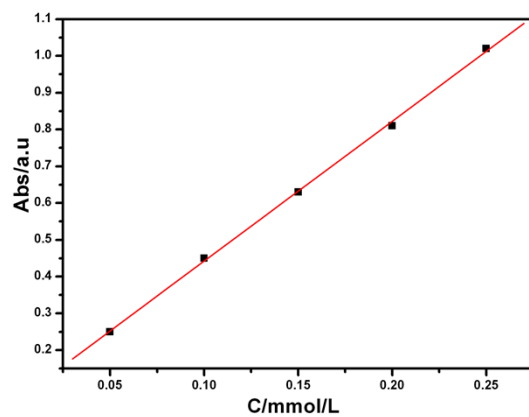


Fig.S4 Concentration-absorption curve of 2-NSA in 274nm

$$y = 3.8x + 0.062, \quad r = 0.99961$$

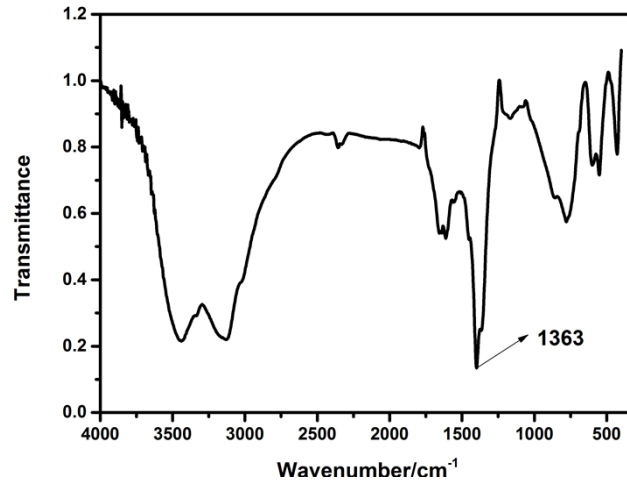


Fig.S5 FTIR spectra of Co-Al-CO₃-LDH

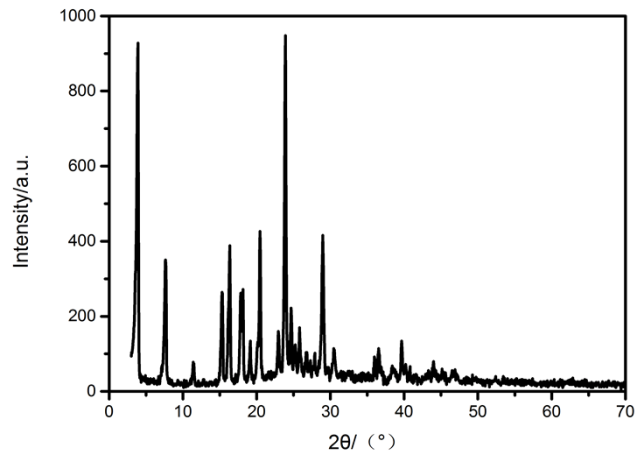


Fig.S6 XRD pattern of 4-BBA

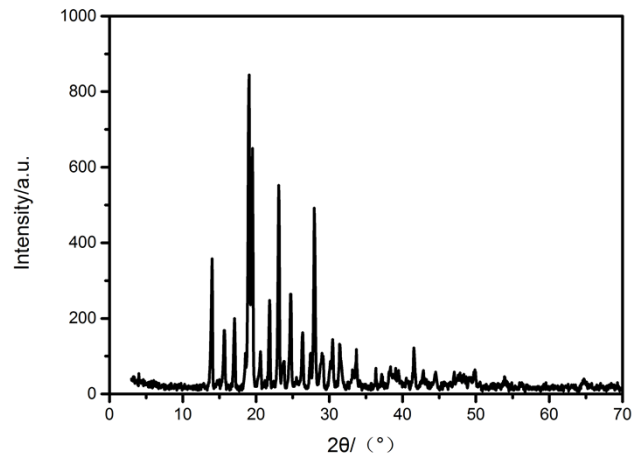


Fig.S7 XRD pattern of 2-NSA

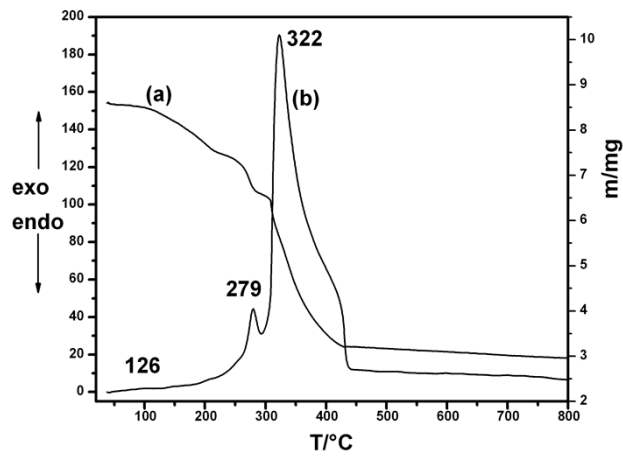


Fig. S8 TG-DTA curves of Co-Al-4-BBA-LDH
(a)TG (b)DTA

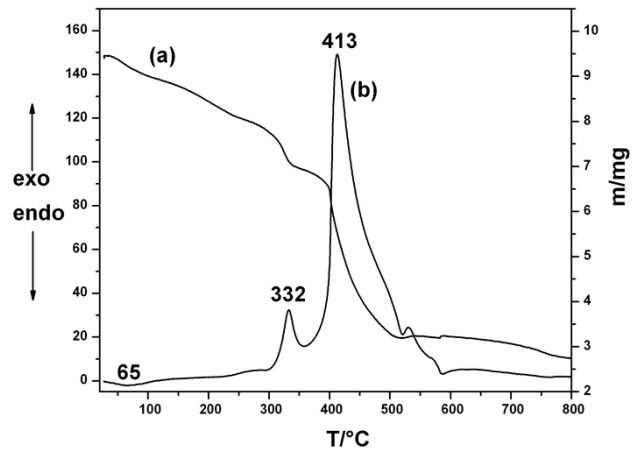


Fig. S9 TG-DTA curves of Co-Al-2-NSA-LDH
(a)TG (b)DTA

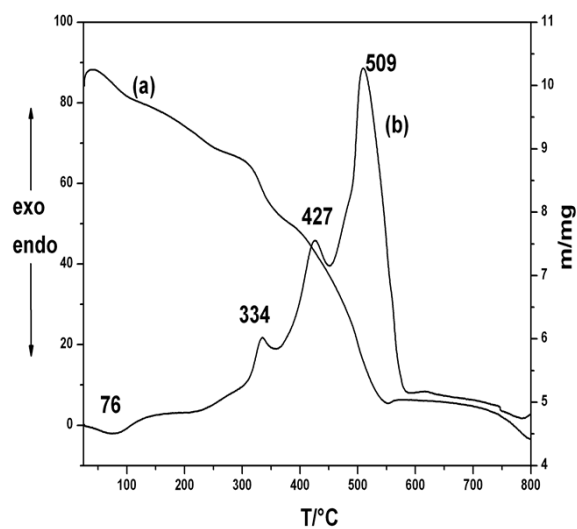


Fig. S10 TG-DTA curves of the co-intercalation compound
(a)TG (b)DTA

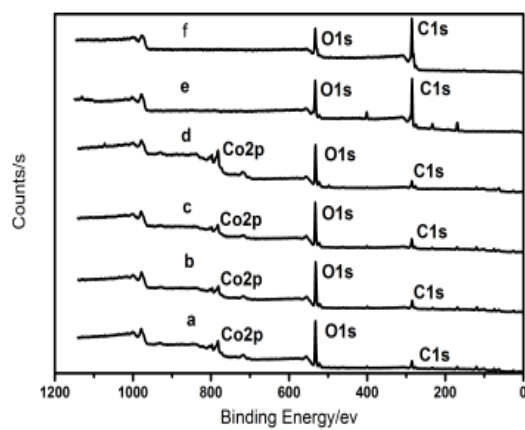


Fig. S11 The X-ray photoemission whole scan spectra for (a) Co-Al-4-BBA-2-NSA-LDH, (b) Co-Al-2-NSA-LDH, (c) Co-Al-4-BBA-LDH, (d)Co-Al-CO₃-LDH, (e)2-NSA, (f)4-BBA

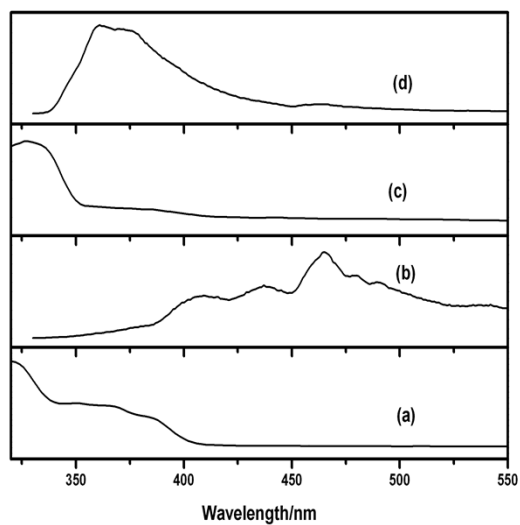


Fig.S12 The absorption and emission spectra of 4-BBA and 2-NSA
 (a)4-BBA absorption (b)4-BBA emission ($\lambda_{exc}=310\text{nm}$)
 (c)2-NSA absorption (d)2-NSA emission ($\lambda_{exc}=310\text{nm}$)

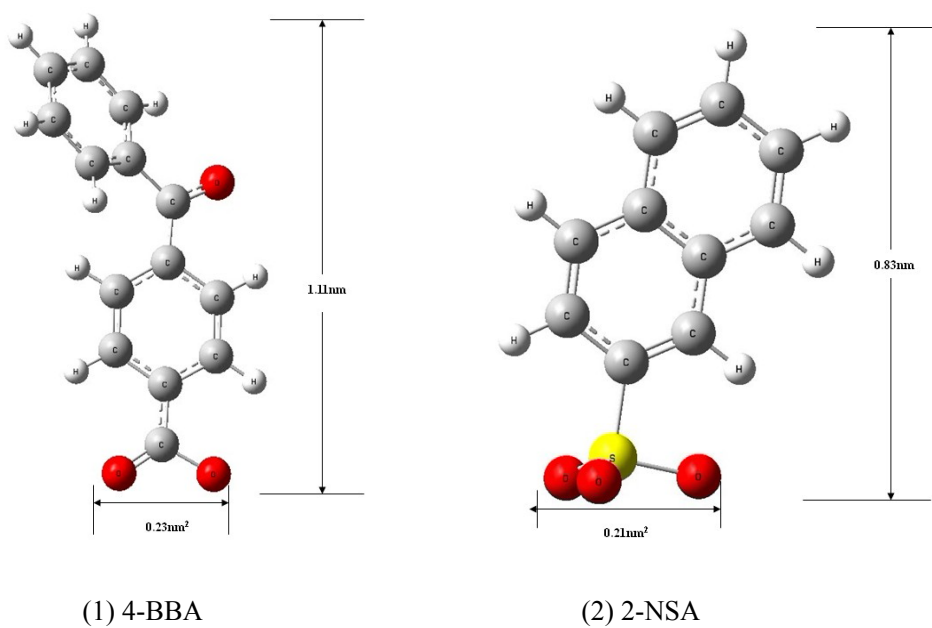


Fig.S13 Structure of each guest anion (1) 4-BBA (2) 2-NSA

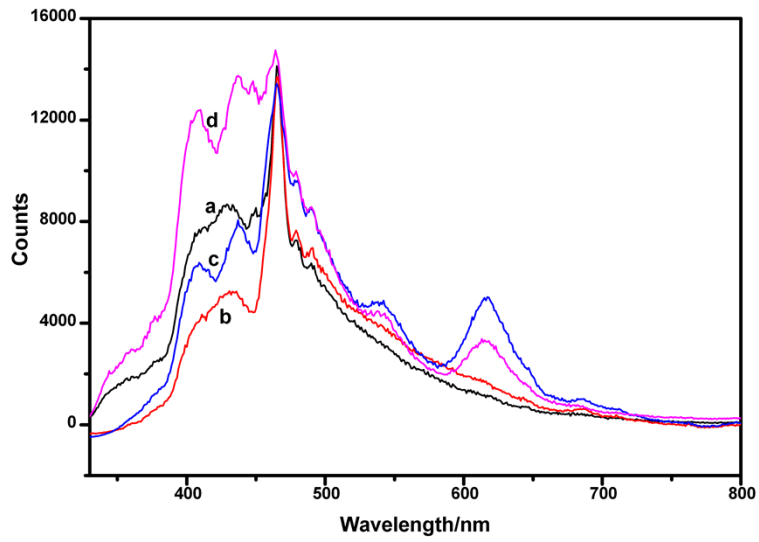


Fig.S14. Emission spectra of ($\lambda_{exc}=310\text{nm}$) 4-BBA

a ---V-V b-----V-H c-----H-H d---H-V

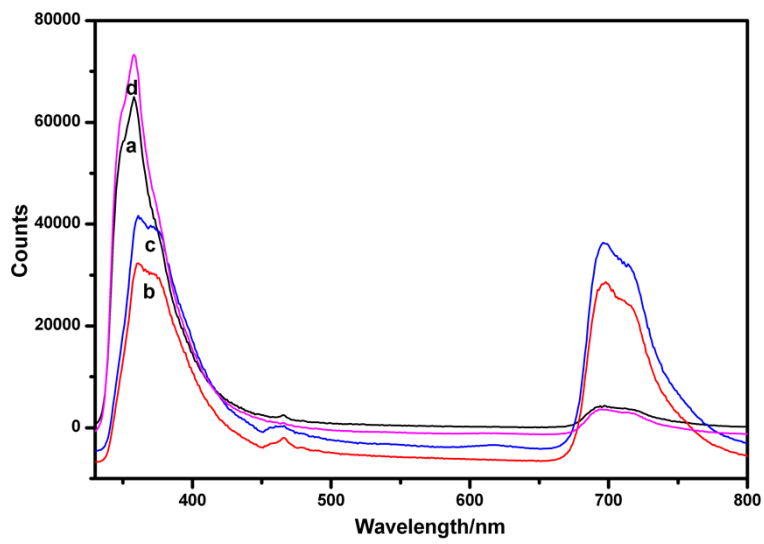


Fig.S15. Emission spectra of ($\lambda_{exc}=310\text{nm}$) 2-NSA

a-----V-V b-----H-H c-----H-V d----V-H

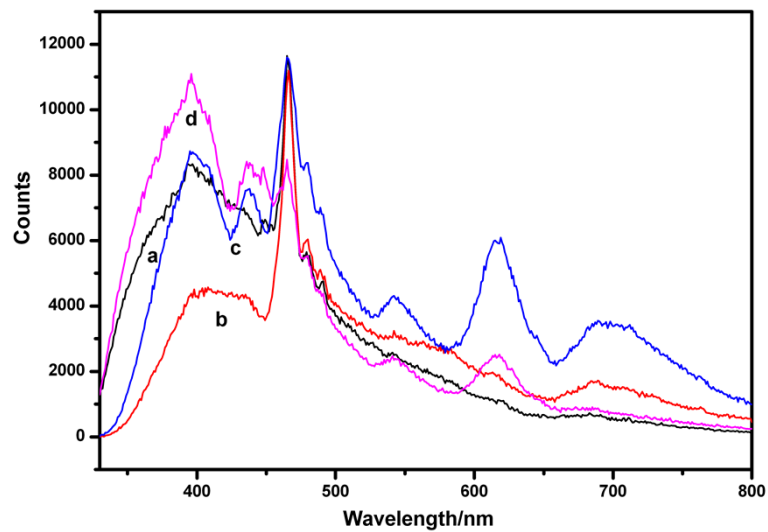


Fig.S16. Emission spectra of ($\lambda_{exc}=310\text{nm}$) Co-Al-4-BBA-LDH

a-----V-V b-----H-H c-----H-V d----V-H

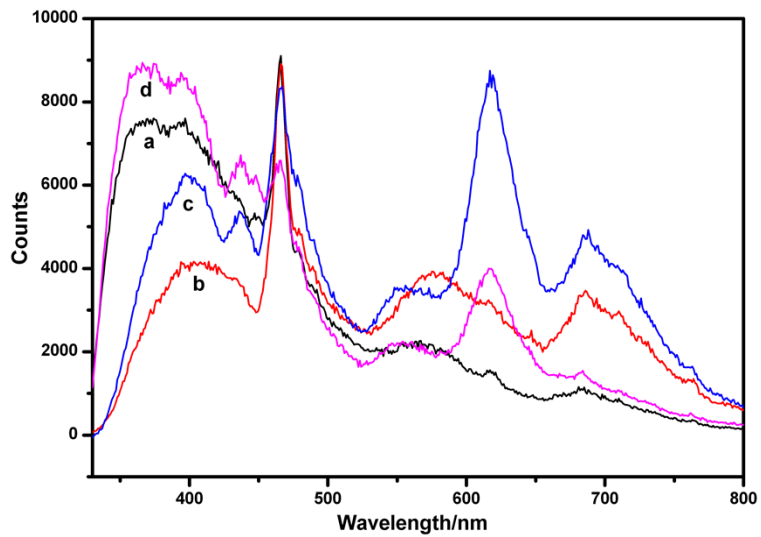


Fig.S17. Emission spectra of ($\lambda_{exc}=310\text{nm}$) Co-Al-2-NSA-LDH

a-----H-H b-----V-H c-----H-V d----V-V

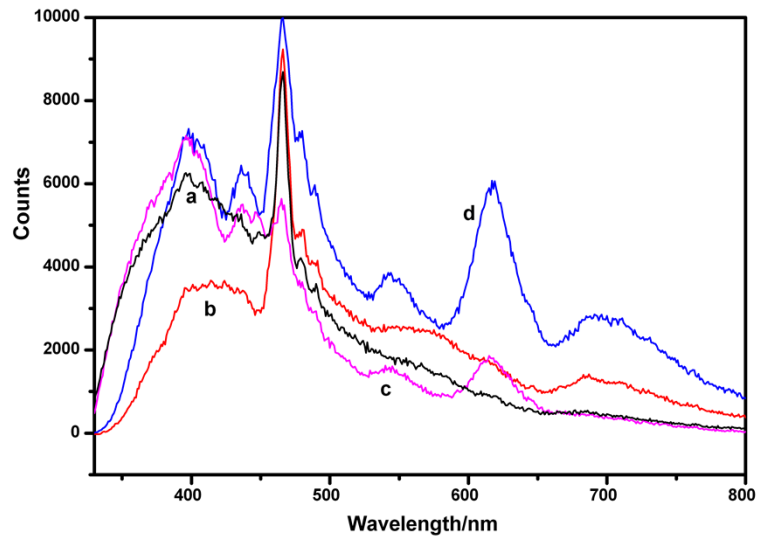


Fig.S18. Emission spectra of ($\lambda_{exc}=310nm$) Co-Al-4-BBA-2-NSA-LDH

a-----H-H b-----H-V c-----V-H d----V-V

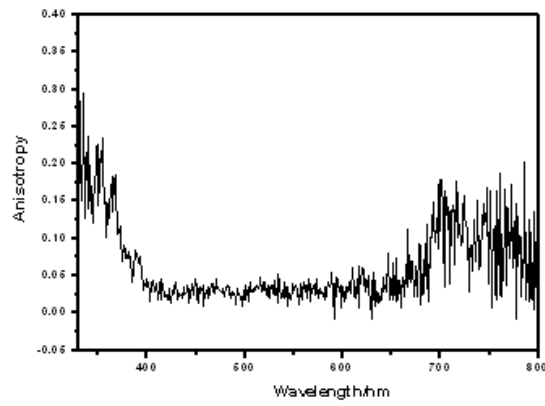


Fig.S19. Anisotropy traces of fluorescence of 4-BBA

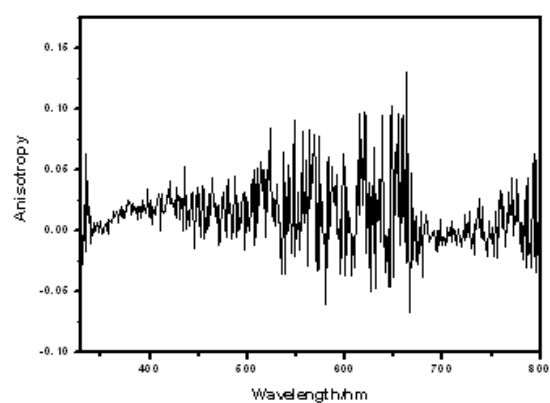


Fig.S20. Anisotropy traces of fluorescence of 2-NSA

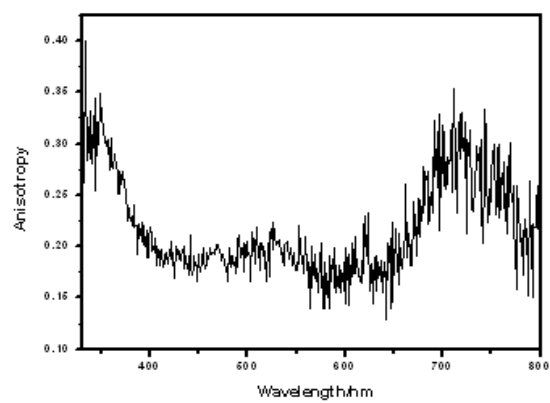


Fig.S21. Anisotropy traces of fluorescence of Co-Al-4-BBA-LDH

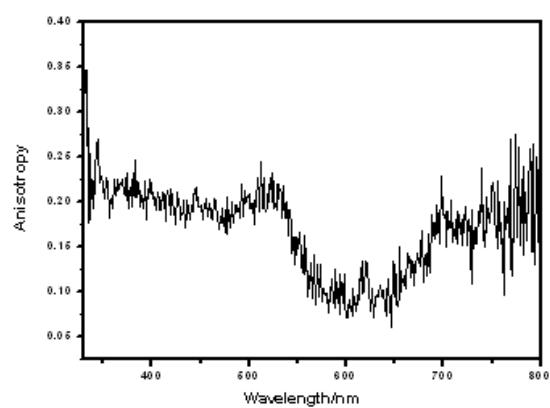


Fig.S22. Anisotropy traces of fluorescence of Co-Al-2-NSA-LDH

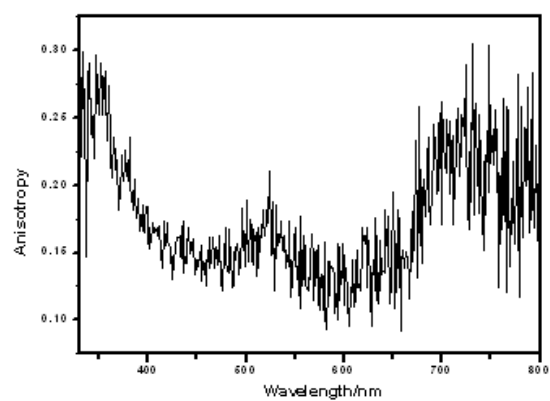


Fig.S23. Anisotropy traces of fluorescence of Co-Al-4-BBA-2-NSA-LDH