Supplementary Information

Fig. S1

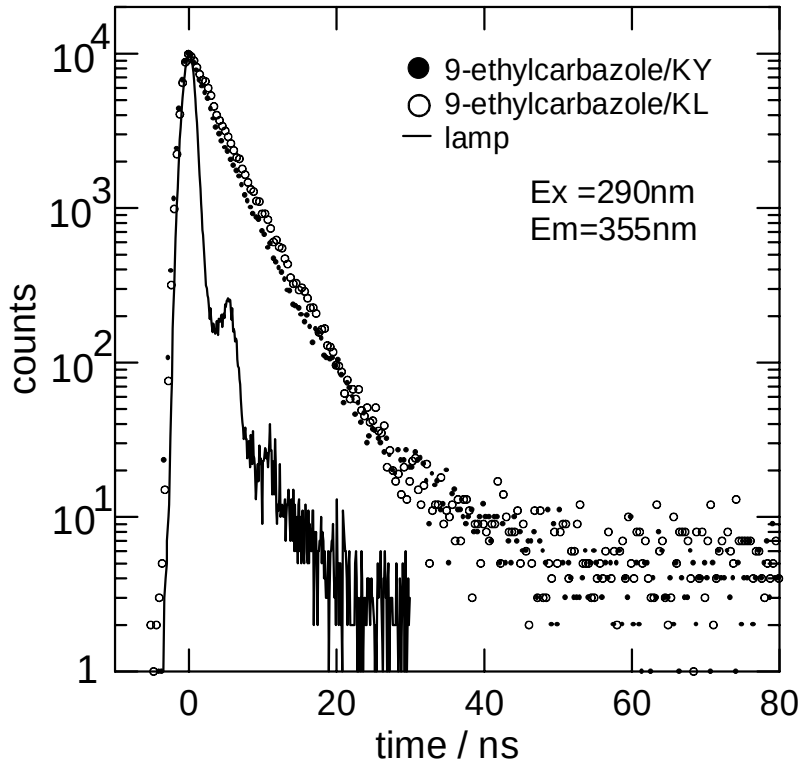

Fig. S1 Fluorescence decay curves of 2.0×10^{-6} mol/g 9-ethylcarbazole adsorbed in zeolites KY and KL excited at 290 nm and observed at 355 nm. Both curves are nearly superimposed indicating a similar decay rate in both systems.

Fig. S2

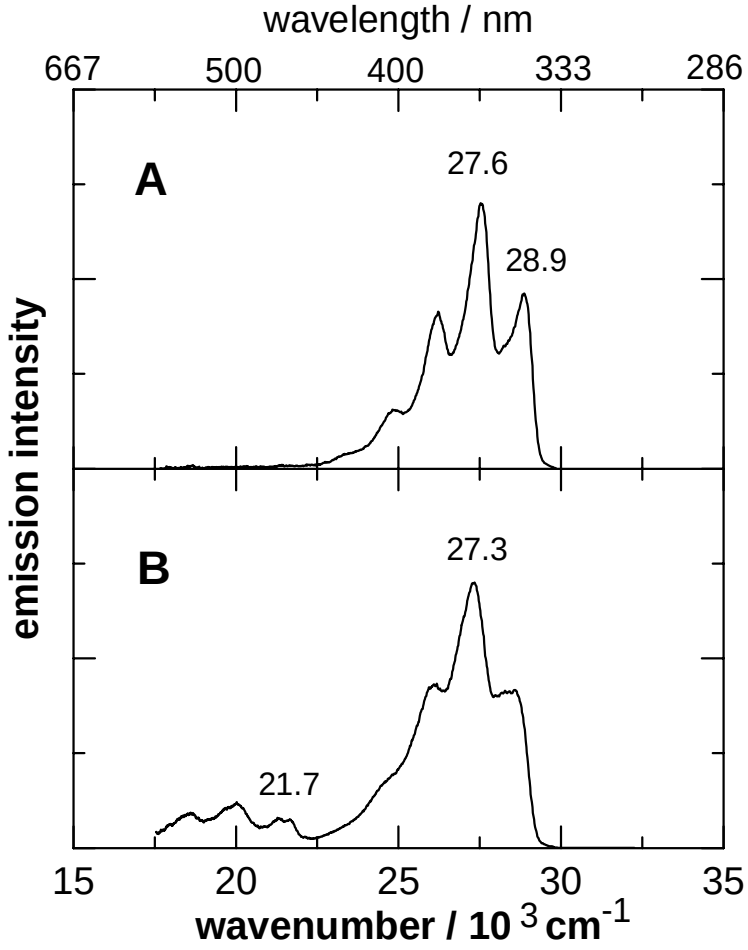

Fig. S2 Emission spectra of phenanthrene incorporaed in zeolite KY and KL: (A) 1.0×10^{-5} mol/g in KY; (B) 1.0×10^{-5} mol/g in KL. Excitation wavelength: 290 nm.

Fig. S3

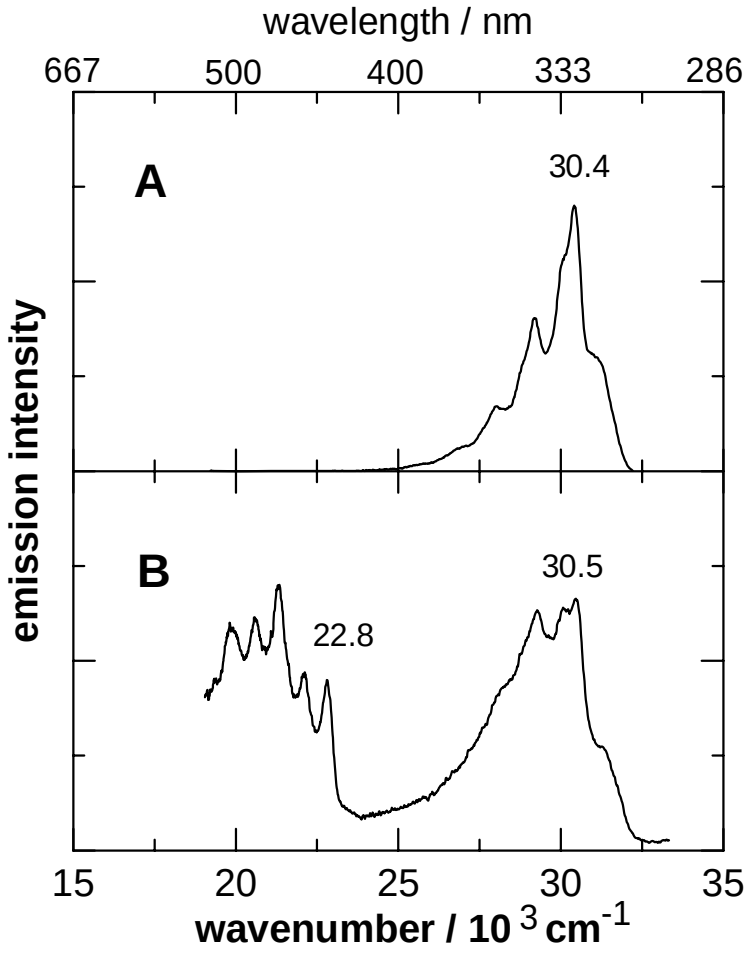

Fig. S3 Emission spectra of 1,2,4,5-tetracyanobenezene incorporated in zeolite NaY and KL: (A) 4.0×10^{-5} mol/g in NaY; (B) 2.0×10^{-5} mol/g in KL. Excitation wavelength: 270 nm.

Fig. S4

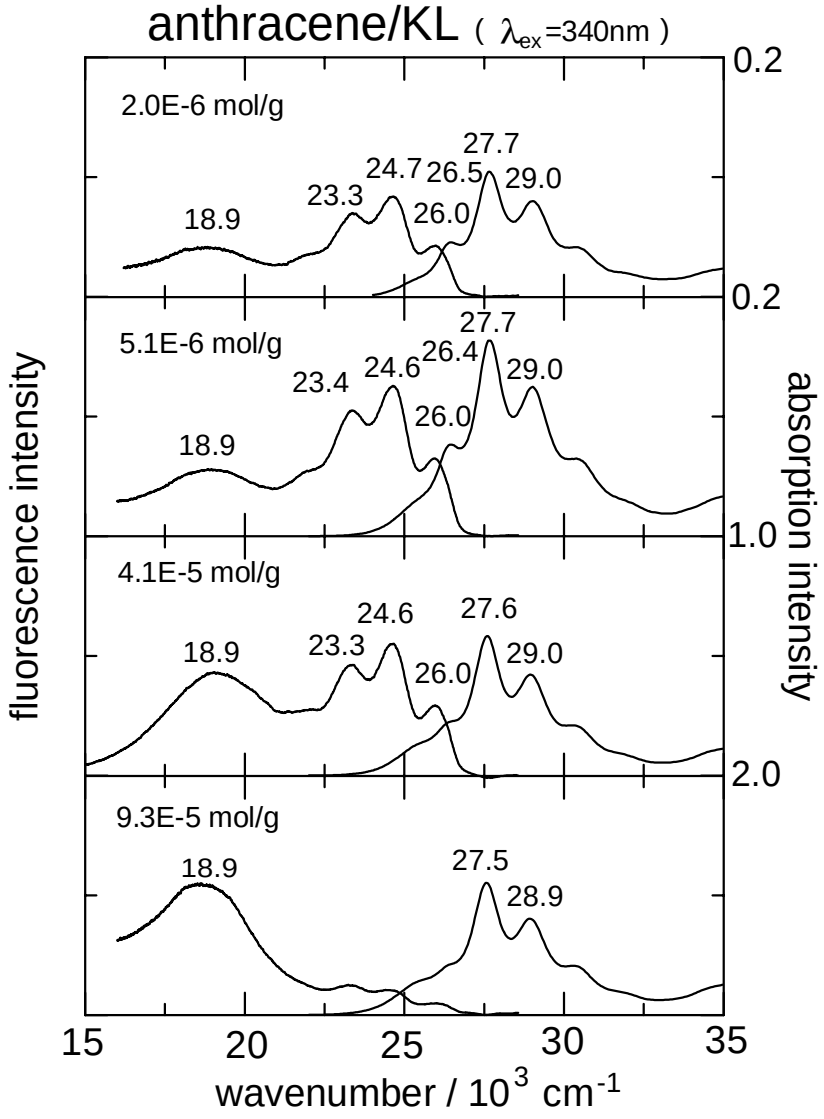

Fig. S4 Absorption and fluorescence (corrected) spectra of anthracene adosorbed into zeolite KL at various loading levels.

Fig. S5

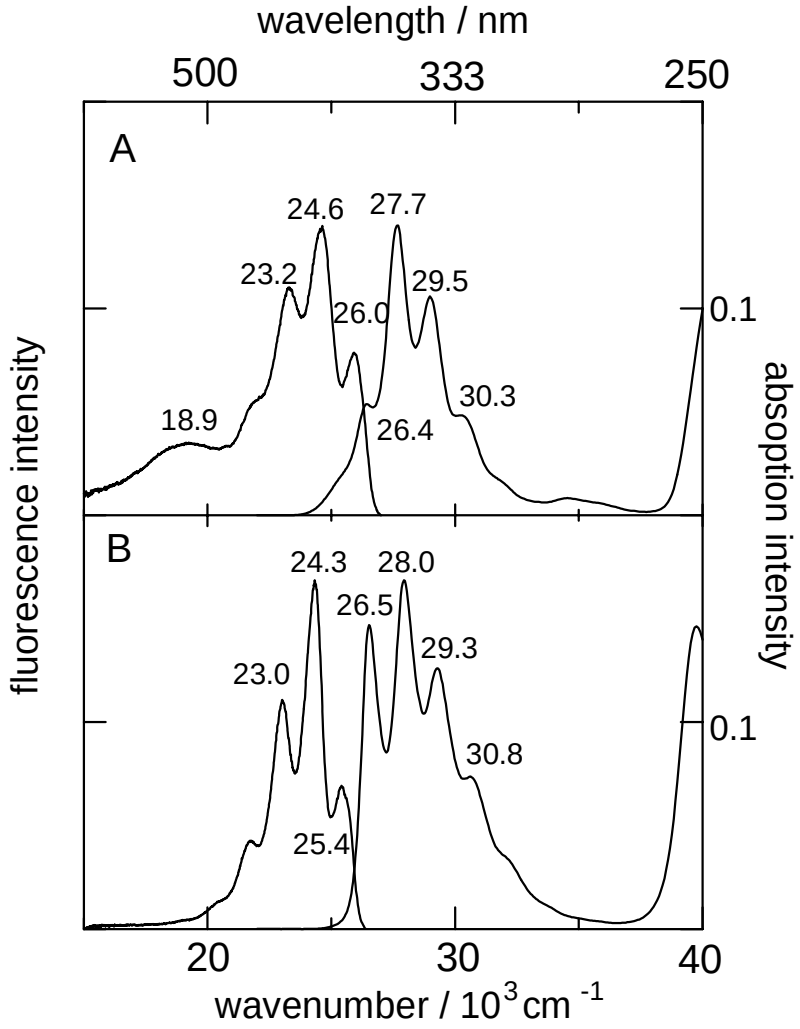

Fig. S5 Absorption and fluorescence spectra (corrected) of 5×10^{-6} mol/g anthracene in dehydrated (A) and 0.10 cm^3/g hydrated (B) KL.

Fig. S6

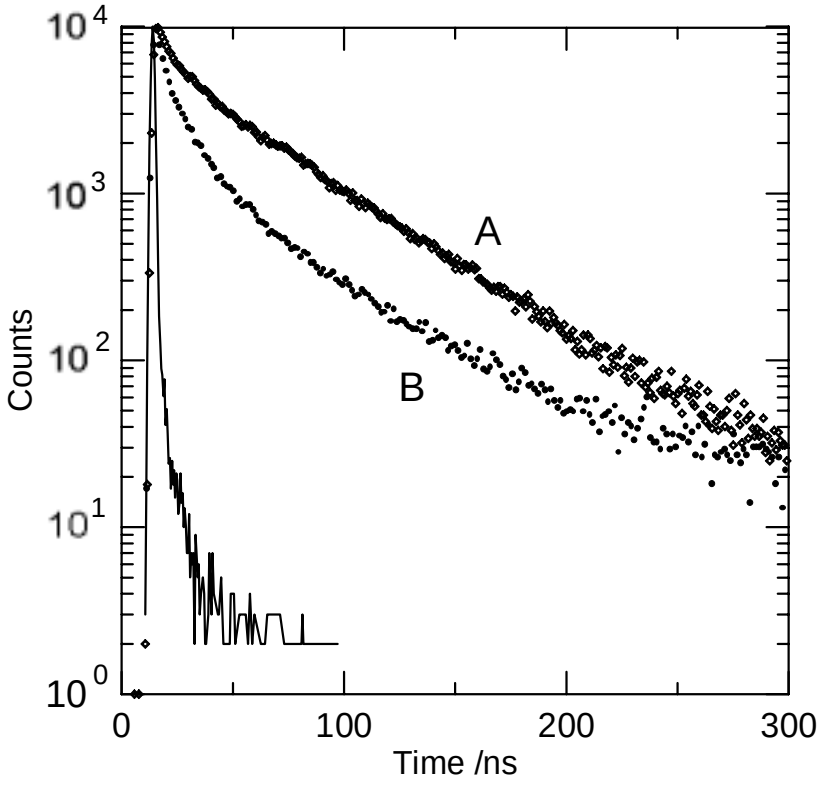

Fig. S6 Fluorescence decay curves of anthracene excimers in KL (A) and KY (B).

A. 4.1×10^{-5} mol/g anthracene; excitation wavelength: 390 nm; emision wavelength: 550 nm. Note that a fast decaying component is due to the contribution of monomer emission and the decay of the excimer is nearly exponential with a lifetime of 50 ns.

B. 5.0×10^{-5} mol/g anthracene; excitation wavelength: 350 nm; emision wavelength: 550 nm. The decay is non-exponential.

Fig. S7

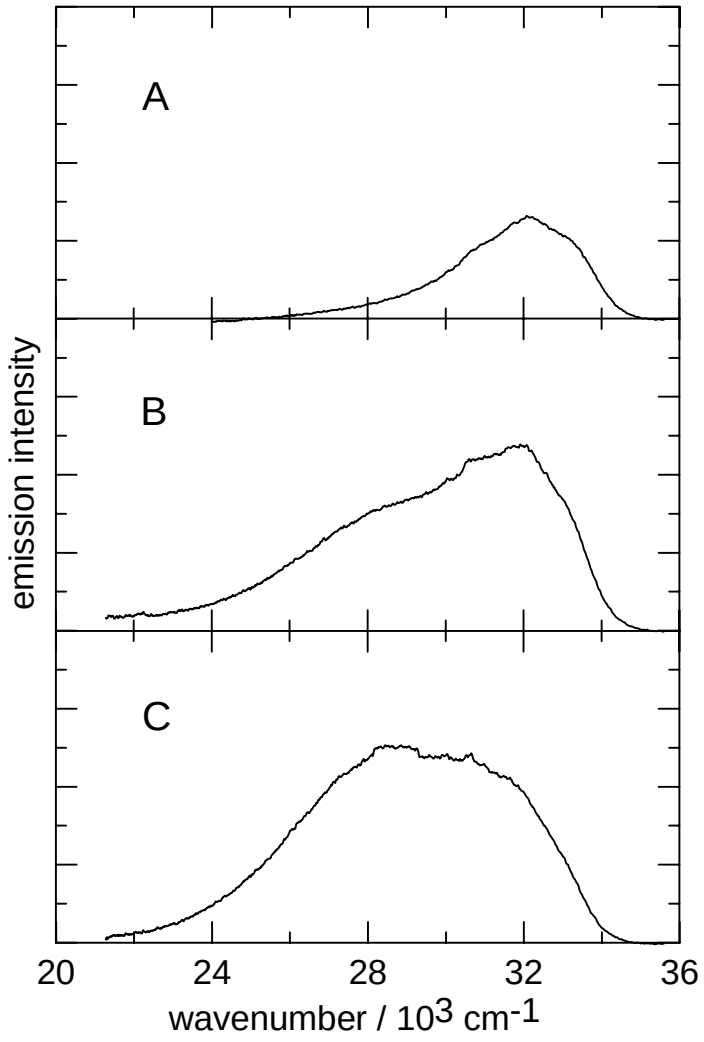

Fig. S7 Fluorescence spectra (corrected) of biphenyl adsorbed in dehydrated NaKL at various loading levels: (A) 1.0×10^{-5} mol·g^{-1} ; (B) 1.0×10^{-4} mol·g^{-1} ; (C) 2.8×10^{-4} mol·g^{-1} (λ_{ex}=250 nm).
At a low loading such as in (A), emission from the monomer is observed while at high loadings, (B) and (C), the emission spectra are appreciably broader, suggesting the superposition of the excimer emission on the monomer emission. However, the separation of the monomer and the excimer is not distinct compared with the zeolite KL system (Fig. 3B). This observation suggests that a less overlapped dimer structure is formed in the NaKL than that in the KL is formed.