Electronic Supplementary Material (ESI) for Nanoscale Advances.

Supplementary information

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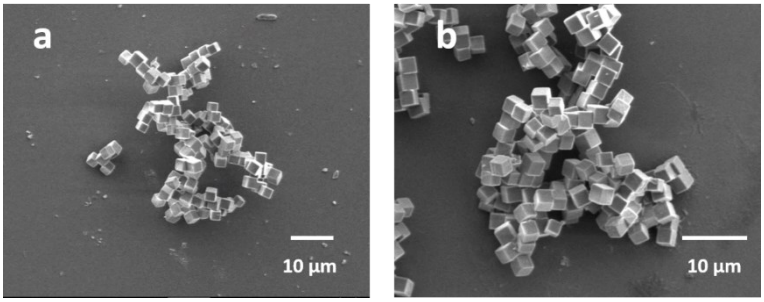

Fig. S1. SEM images of the calcined SAPO-20 zeolites synthesized in the presence of pyrrolidine and TEAOH, which were calcined at (a) 600℃ and (b) 800℃ respectively.

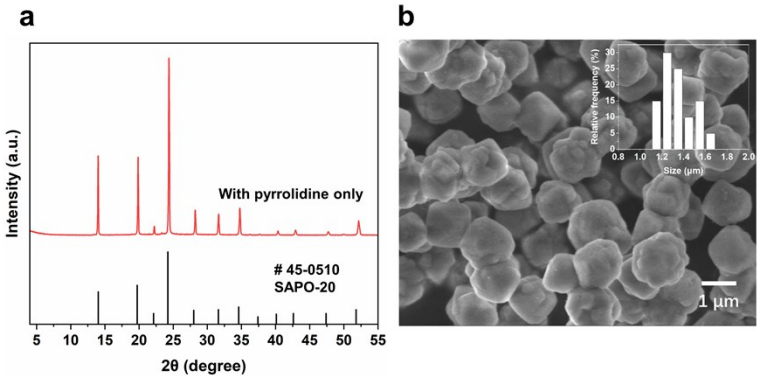

Fig. S2. (a) Powder XRD patterns of the washed and calcined SAPO-20 synthesized in the presence of pyrrolidine as referenced to simulated (lower) pattern. (b) SEM image of the as-synthesized SAPO-20, inset is the particle size distribution of the as-synthesized SAPO-20.

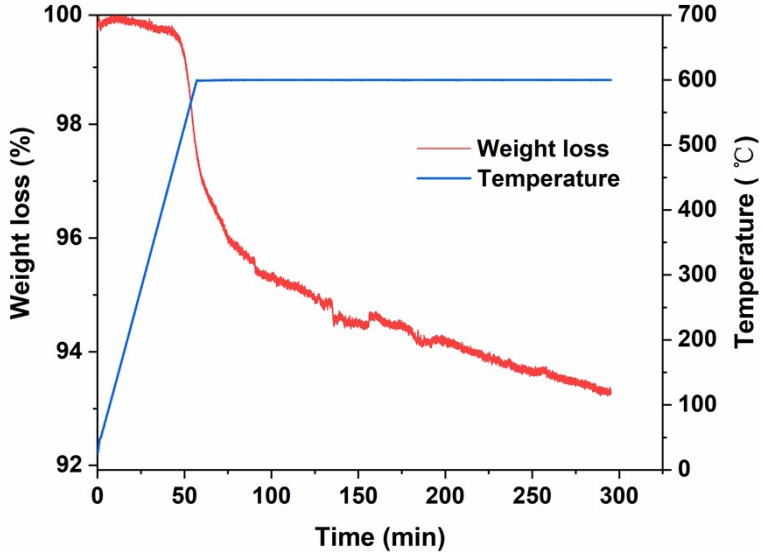

Fig. S3. The TGA curve of as-synthesized SAPO-20.

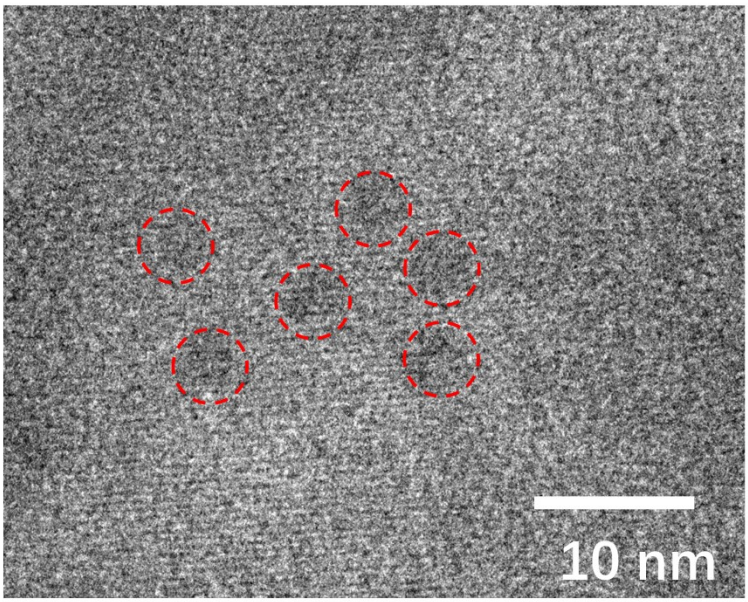

Fig. S4. TEM images of the CQDs entrapped in the SAPO-20 framework after calcination.

Table S1 Comparison of the sizes of carbon dots prepared by zeolite-confined in-situ pyrolysis of organic templates.

Zeolite framework	**Organic template**	**Carbon dot size (nm)**	**Fluorescence properties**		**Reference**
			Excitation (nm)	**Emission (nm)**	
SAPO-46 (AFS)[1]	dipropylamine	1.5–4	N.A.	N.A.	[1]
silicalite-1 (MFI)[2]	tetrapropyl ammonium hydroxide	4	368	450	[2]
LEV zeotype[3]	N-methylpiperidine	3.1–3.2	360	460	[3]
MgAPO-44 (CHA)[4]	N-methylpiperidine	3.4	360	430	[4]
AlPO-5 (AFI)[5]	triethylene glycol (TEG)	3.7	370	430	[5]
MgAPO-44 (CHA)[6]	N-methylpiperazine (NMP)	2.5	380	460	[6]
JU92-300[7]	N-methylpiperazine (NMP)	3–4	365	492	[7]
SAPO-20 (SOD)	pyrrolidine and tetraethylammonium hydroxide	1.53 ± 0.42 with size range 0.7-3	470	523	This work

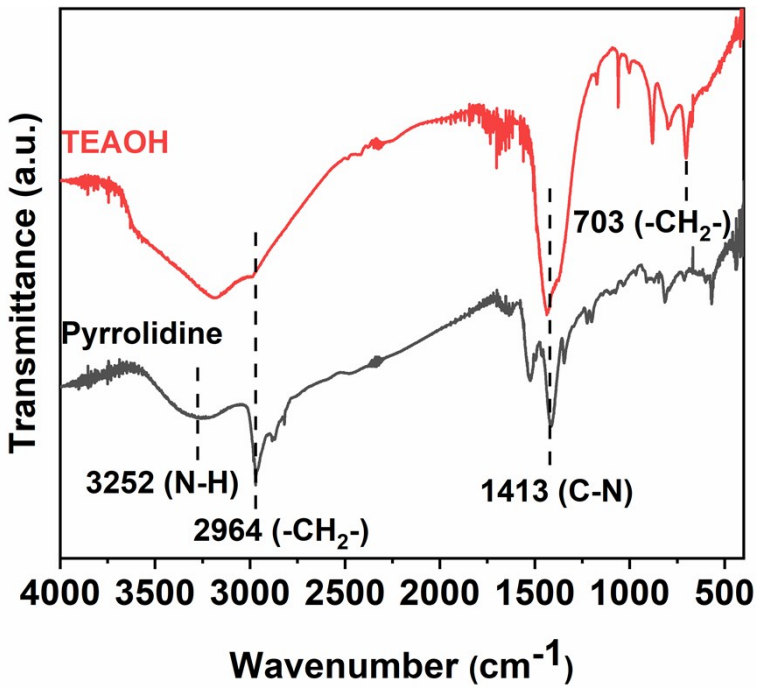

Fig. S5 The FTIR spectra of Pyrrolidine and TEAOH.

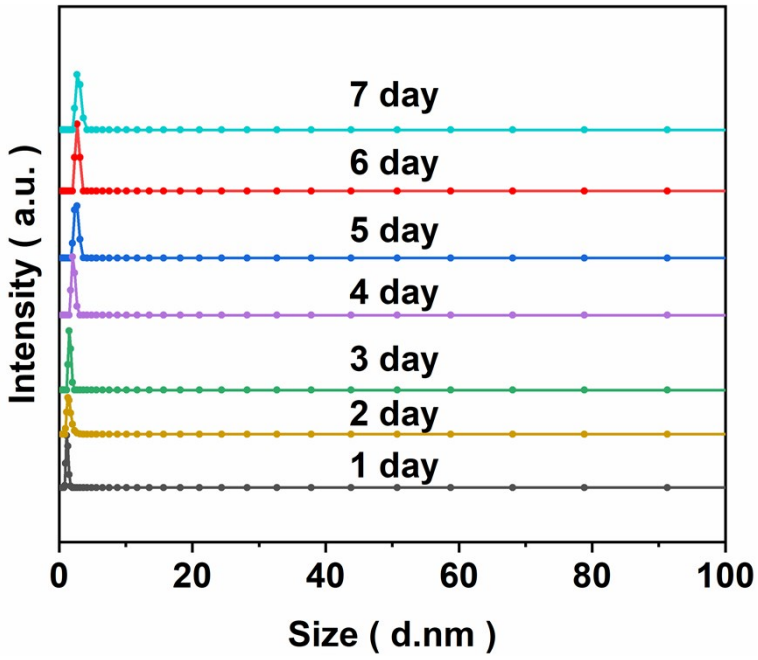

Fig. S6 Comparative particle size distribution curves measured by DLS characterization of CQDs in PBS solution simulating the physiological environment for consecutive 7 days.

References

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