

Supporting Information

for

**Achieving high-efficiency and ultrafast removal of Pb(II) by one-pot
incorporation of N-doped carbon hydrogel into FeMg layer double hydroxides**

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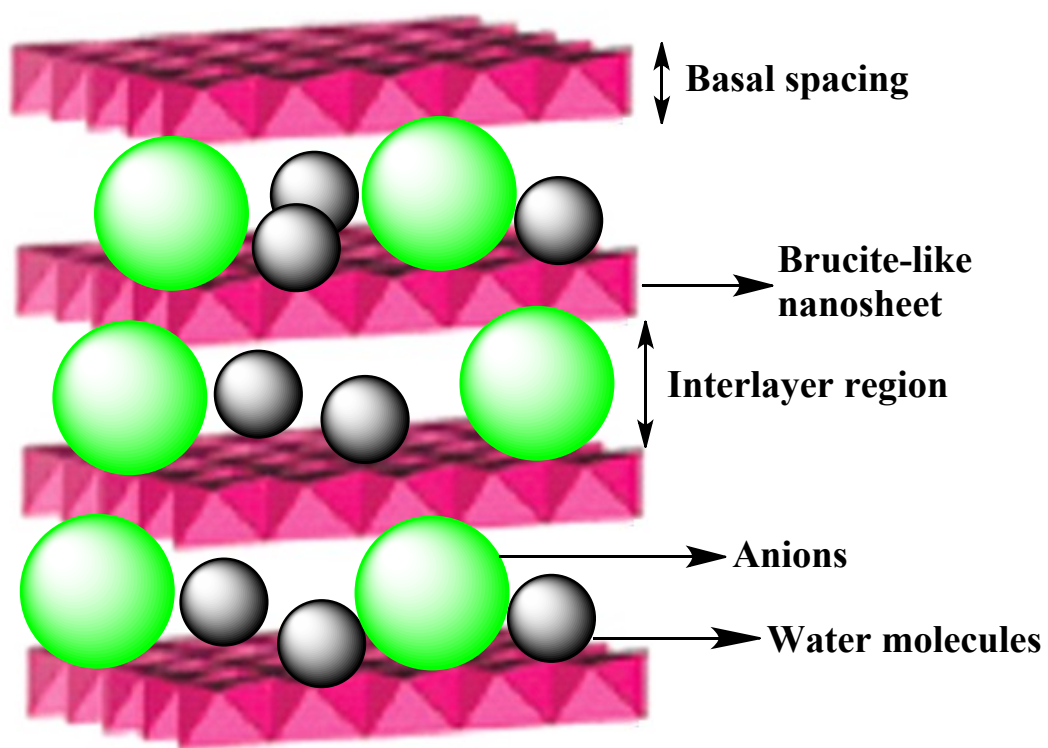


Fig. S1. Schematic illustration of the typical structure of the LDH

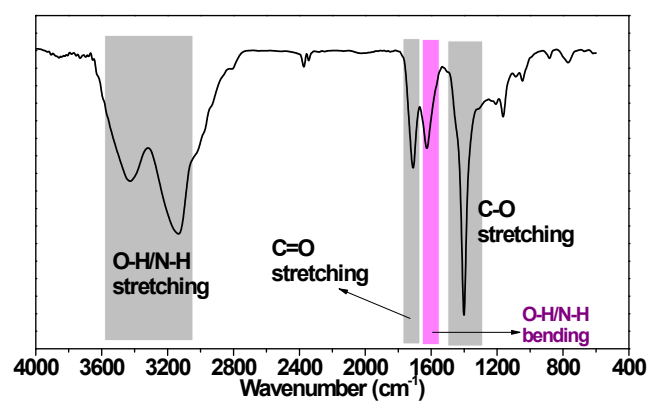


Fig. S2. The FTIR spectrum of the nitrogen doped carbon hydrogel

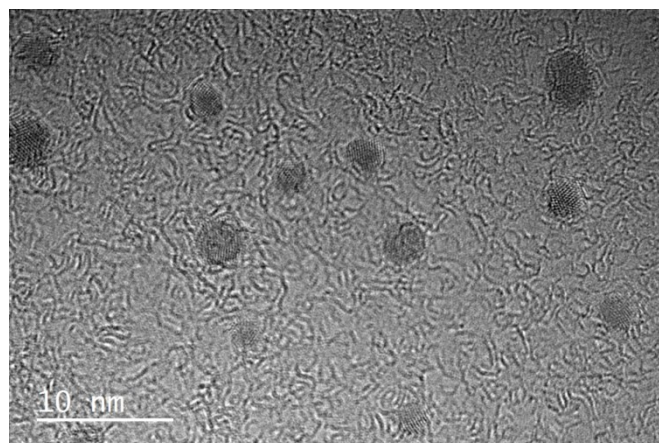


Fig. S3. The TEM image of the nitrogen doped carbon hydrogel

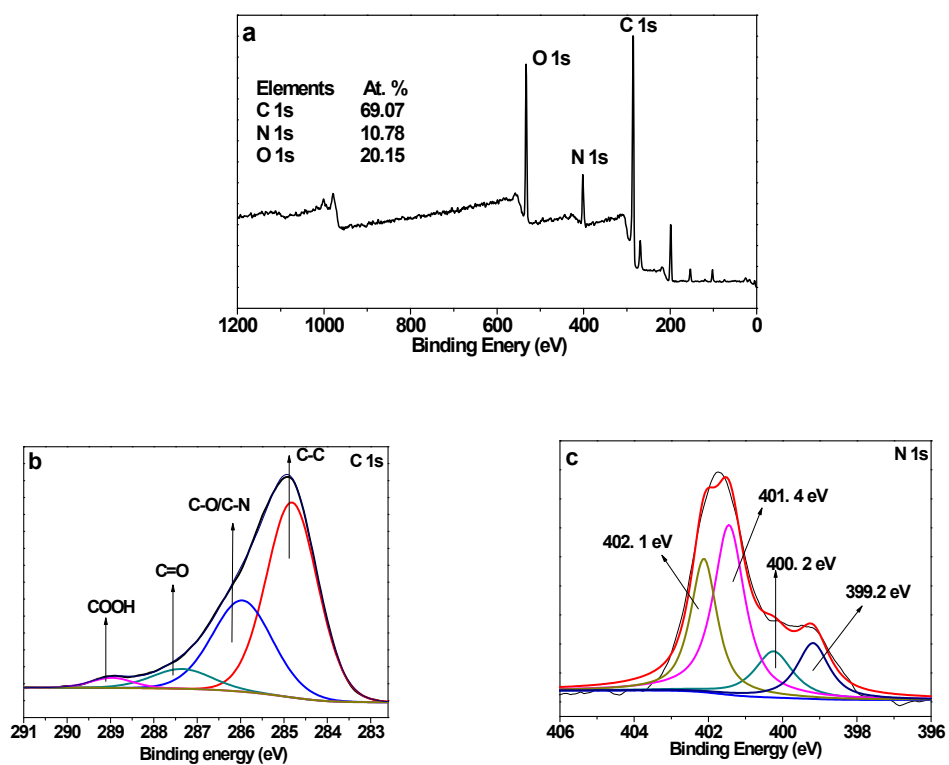


Fig. S4. The XPS spectra of the nitrogen doped carbon hydrogel. (a) Survey spectrum; (b) C 1s spectrum; and (c) N 1s spectrum.

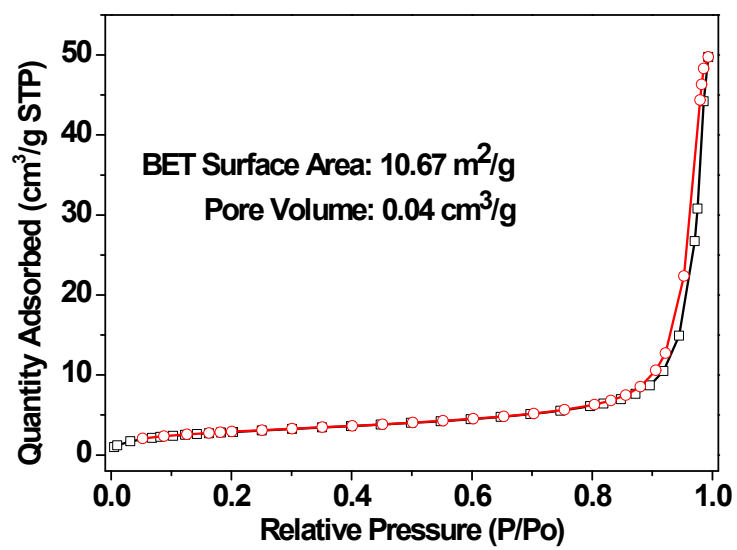


Fig. S5. The nitrogen adsorption-desorption isotherms of the NC-FeMg LDH

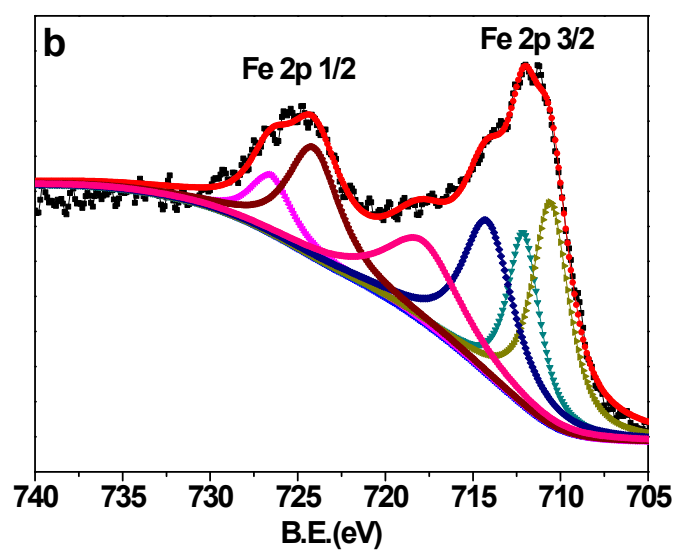
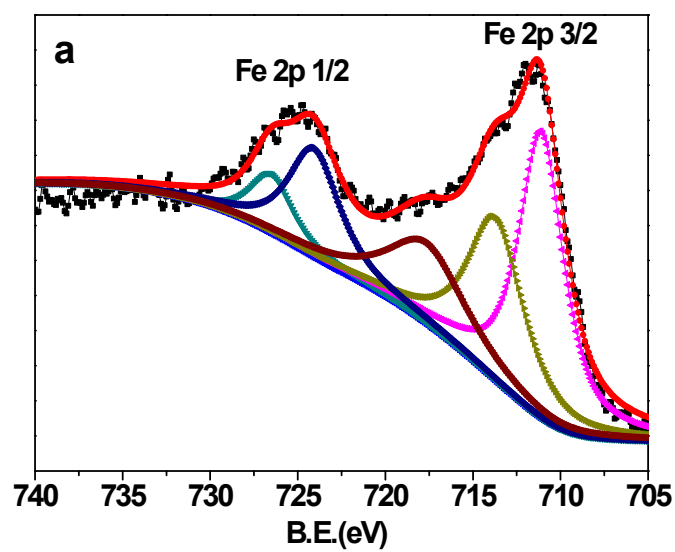


Fig. S6. XPS Fe 2p spectra of the FeMg LDH (a); and NC-FeMg LDH (b)

Table S1. The elemental compositions of the N doped carbon hydrogel and NC-FeMg LDH

	N [%]	C [%]	H [%]
N doped carbon hydrogel	10.2	46.1	5.8
NC-FeMg LDH	3.3	26.5	4.0