

Nets-stacked hierarchical CdOHF architectures: controllable synthesis and visible-light driven photocatalytic performance

Yingying Guo^a, Chi Wang^a, Huihui Cui^a, Miao Wang^{a,b,*}, Tongming

Sun^{a,b,*} and Yanfeng Tang^{a,b,*}

^a School of Chemistry and Chemical Engineering, Nantong University, Nantong 226019, PRChina.

^b Nantong Key Lab of Intelligent and New Energy Materials, Nantong 226019, P. R. China.

*Corresponding author. E-mail: hi_wangmiao@163.com; stm7314@ntu.edu.cn; tangyf@ntu.edu.cn

Table S1 Summary of the reaction conditions and morphologies of the products.

pH	Temperature/Time	XRD	Morphology
11	120°C /1h	Cd(OH) ₂	nanoplates
11	120°C /3h	Cd(OH) ₂ +CdOHF	nanoplates+nets
11	120°C /6h	Cd(OH) ₂ +CdOHF	nanoplates+nets-stacked
11	120°C /9h	Cd(OH) ₂ +CdOHF	nanoplates+nets-stacked
11	120°C /12h	CdOHF	nets-stacked
11	120°C /24h	CdOHF	nets-stacked
4	120°C /12h	---	---
8	120°C /12h	---	---
9	120°C /12h	CdOHF	nanorods
10	120°C /12h	CdOHF	nets
12.5	120°C /12h	Cd(OH) ₂ +CdOHF	nanoplates+nets-stacked
13	120°C /12h	Cd(OH) ₂	nanoplates

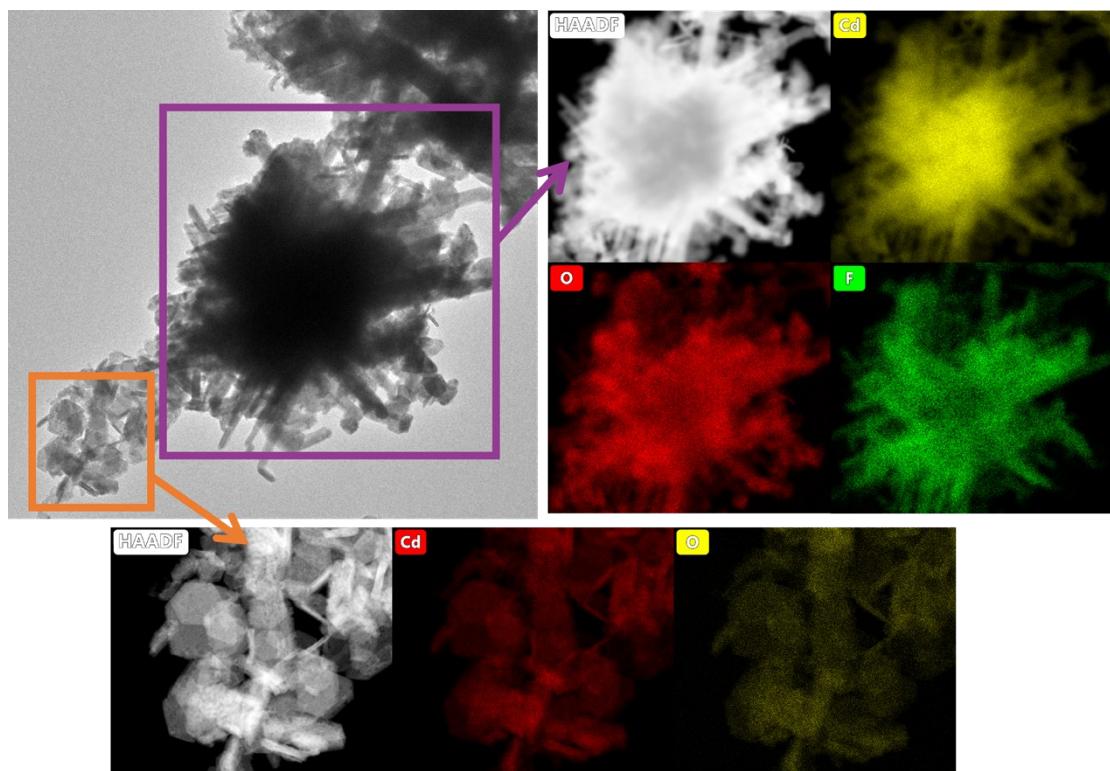


Fig. S1 TEM elemental mapping images of the mixture of Cd(OH)₂ nanoplates and nets-stacked hierarchical CdOHF obtained from 6 h.

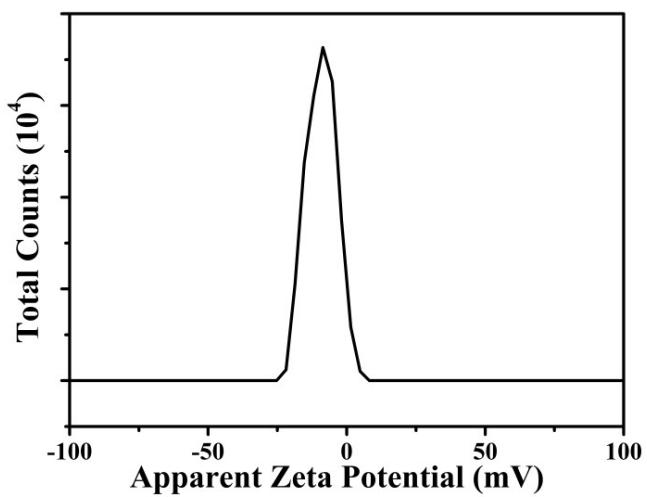


Fig. S2 Zeta potential of the nets-stacked hierarchical CdOHF in water.

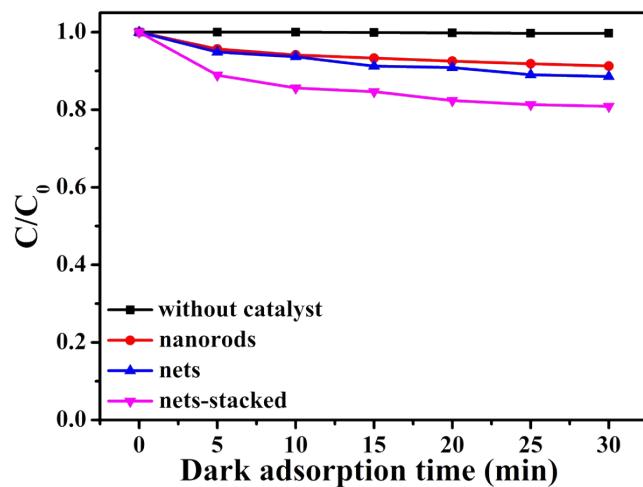


Fig. S3 The dark adsorption behaviors of different morphological samples.

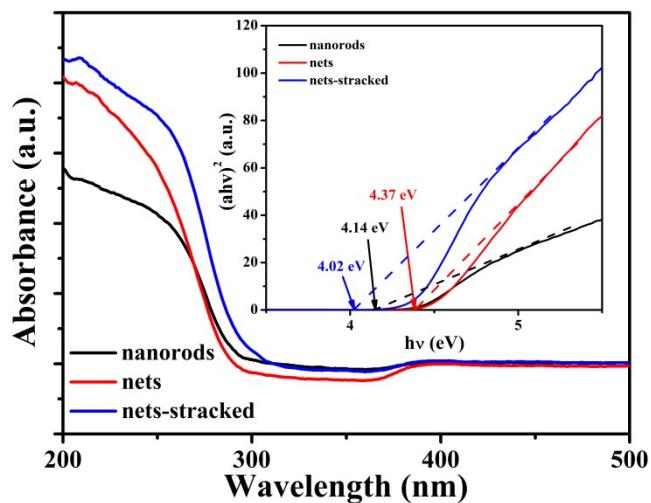


Fig. S4 DRS of CdOHF with different morphologies.

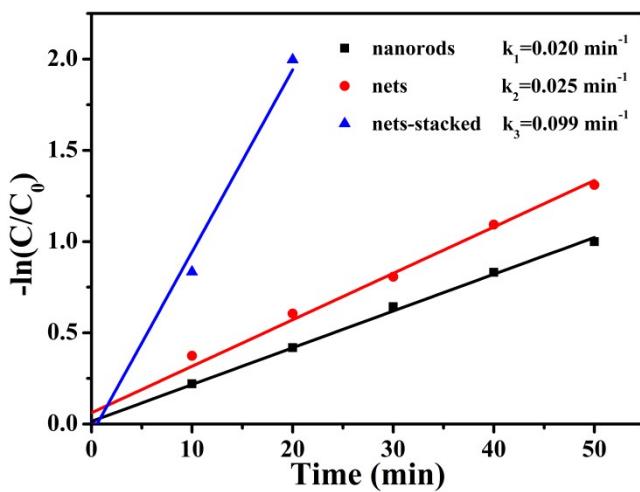


Fig. S5 Pseudo-first order degradation kinetics of CdOHF with different morphologies.

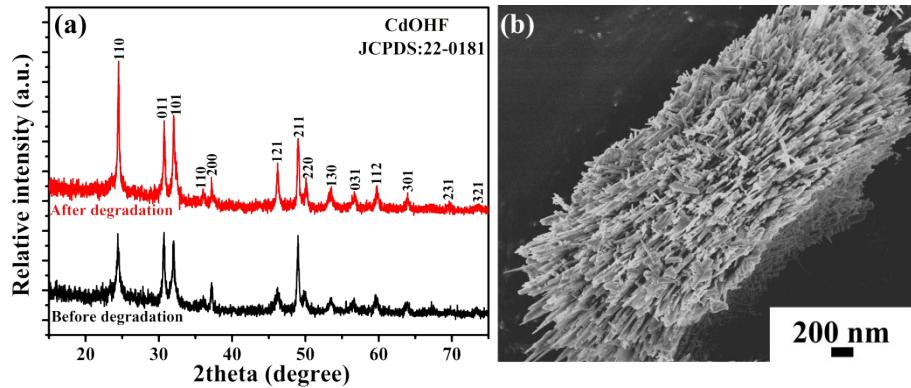


Fig. S6 (a) XRD and (b) SEM of nets-stacked hierarchical CdOHF after degradation.