Supplementary data

Ce-Doped Graphitic Carbon Nitride Derived from Metal Organic Frameworks as a Visible Light-Responsive Photocatalyst for H₂ Production

Liangjing Zhang ¹, Zhengyuan Jin ², Shaolong Huang ², Yiyue Zhang ², Mei Zhang ³ and Yu-Jia Zeng ^{2,*}, Shuangchen Ruan ^{1,*}

- ¹ Center for Advanced Material Diagnostic Technology, Shenzhen Technology University, Shenzhen 518118, China; zhangliangjing@sztu.edu.cn (L.Z.)
- ² Shenzhen Key Laboratory of Laser Engineering, College of Physics and Optoelectronic Engineering, Shenzhen University, Shenzhen 518060, China; zhengyuan@szu.edu.cn (Z.J.); nkhsl3313@163.com (S.H.); yiyuezhang92@163.com (Y.Z.)
- ³ School of Materials Science and Engineering, Beijing Institute of Fashion Technology, Beijing 100029, China. zhangmei7115@163.com (M.Z.)
- * Correspondence: yjzeng@szu.edu.cn (Y.J.Z); scruan@szu.edu.cn (S.R.); Tel.: +86-0755-26532316 (Y.J.Z); +86-0755-26532350 (S.R.)

Contents

Figures

Figure S1. XRD patterns of Ti-M, Zr-M, Ce-M and Er-M.

Figure S2. PL spectra for xCe-MOF. (x = 0.010, 0.015, 0.030 and 0.090).

Figure S3. SEM images for (a) Ti-C₃N₄, (b) Zr-C₃N₄, (c) Ce-C₃N₄ and (d) Er-C₃N₄.

Figure S4. High-magnification SEM images of (a) CA-CN and (b)NHC-CN.

Figure S5 Plots of $(\alpha h \upsilon)^2$ vs. photon energy (h υ) of CA-CN, HF-CN and NHC-CN.



Figure S1. XRD patterns of Ti-M, Zr-M, Ce-M and Er-M.



Figure S2. PL spectra for xCe-MOF. (x = 0.010, 0.015, 0.030 and 0.090).



Figure S3. SEM images for (a) Ti-C₃N₄, (b) Zr-C₃N₄, (c) Ce-C₃N₄ and (d) Er-C₃N₄.



Figure S4 High-magnification SEM images of (a) CA-CN and (b)NHC-CN.



Figure S5. Plots of $(\alpha h \upsilon)^2$ vs. photon energy (h υ) of CA-CN, HF-CN and NHC-CN.