Electronic Supplementary Material (ESI) for New Journal of Chemistry. This journal is © The Royal Society of Chemistry and the Centre National de la Recherche Scientifique 2018

One-step fabrication of boric-acid-functionalized lanthanide metal organic

frameworks as a ratiometric fluorescence sensor for selective recognition of

dopamine

Qiuzheng Du^a, Pu Wu^a, Pierre Dramou^a, Rong Chen^{*a}, Hua He^{*a b c}

a Department of Analytical Chemistry, China Pharmaceutical University, Nanjing 211198, China

b Key Laboratory of Biomedical Functional Materials, China Pharmaceutical University, Nanjing

211198, China

c Key Laboratory of Drug Quality Control and Pharmacovigilance, Ministry of Education, China

Pharmaceutical University, Nanjing 210009, China

Corresponding Authors

* To whom correspondence should be addressed: China Pharmaceutical University, 639 Longmian

Avenue, Nanjing 211198, Jiangsu Province, China. Tel.: +86 025 86185160; E-mail addresses:

jcb 321@163.com, dochehua@163.com (H. He) and rongchen724@163.com (R. Chen).



Figure S1 SEM images of the Eu-MOF synthesized under different reaction time. (A) 0.5 h,

(B) 1 h (C) 2 h, (D) 3 h, (E) 4 h and (F) 5 h.



Figure S2 Size distribution of Eu-MOF formed at (A) 0.5 h; (B) 1 h; (C) 2 h; (D) 3 h; (E) 4 h

and (F) 5 h.



Figure S3 Emission spectra of DBA and Eu^{3+} ions with different reaction times.



Figure S4 (A) The picture of Eu-MOF probe (left) and water (right) under bright field; (B)

The picture of Eu-MOF probe (left) and water (right) under 365 nm UV lamp.



Figure S5 (A) powder XRD patterns of Eu-MOF probe; (B) TGA of Eu-MOF probe.



Figure S6 The FT-IR spectra before and after the sensing of DA.



Figure S7 The absorbance spectra of Eu-MOF and the emission spectra of DBA.



Figure S8 The luminescence emission spectra and corresponding photos (inset) of Eu-MOF with and without DA at room temperature. The photos inset were taken under a 365 nm UV lamp excitation recorded with a digital camera.



Figure S9 SEM (A) and powder XRD patterns (B) of Eu-MOF after DA detection.