

[Supporting Information]

Synthesis and Luminescence Properties of Core-Shell-Shell Composites: $\text{SiO}_2@\text{PMDA-Si-Tb}@\text{SiO}_2$ and $\text{SiO}_2@\text{PMDA-Si-Tb-phen}@\text{SiO}_2$

Lina Feng¹, Wenxian Li^{1,*}, Jinrong Bao¹, Yushan Zheng², Yilian Li¹, Yangyang Ma¹,
Kuisuo Yang¹, Yan Qiao¹ and Anping Wu¹

1 Inner Mongolia Key Laboratory of Chemistry and Physics of Rare Earth Materials, School of Chemistry
and Chemical Engineering, Inner Mongolia University, Hohhot 010021, China; nmgfln@163.com (L.F.)

2 Inner Mongolia Autonomous Region Food Inspection Test Center, Hohhot, China

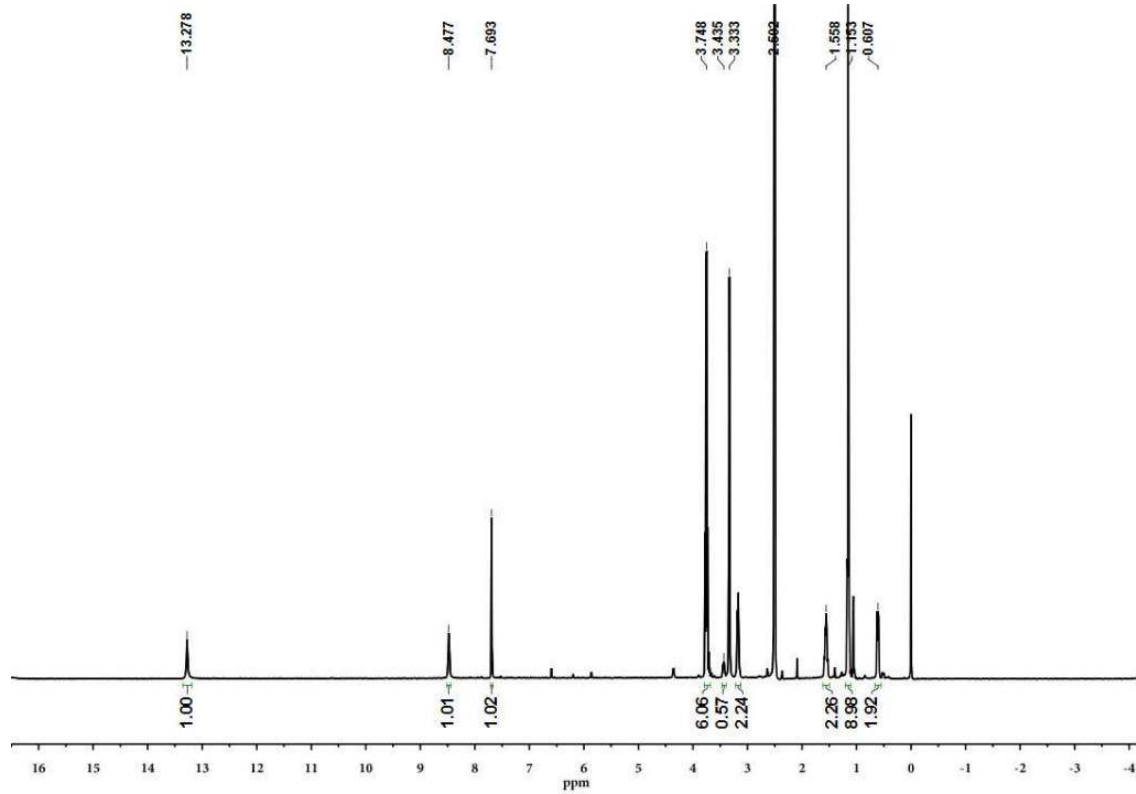


Figure S1. The ^1H NMR of PMDA-Si.

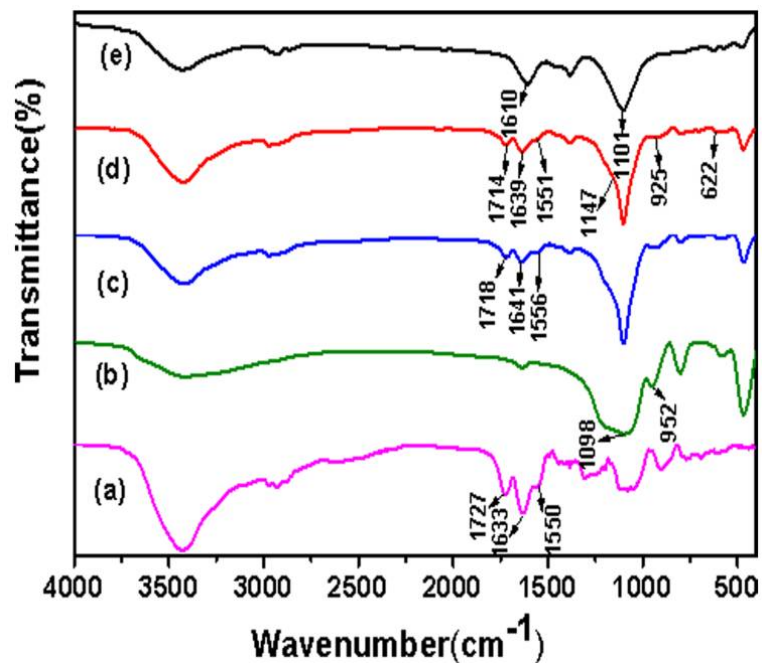


Figure S2. FT-IR spectra of PMDA-Si (a), SiO_2 (b), SiO_2 @PMDA-Si (c), SiO_2 @PMDA-Si-Tb (d), and SiO_2 @PMDA-Si-Tb@ SiO_2 (e).

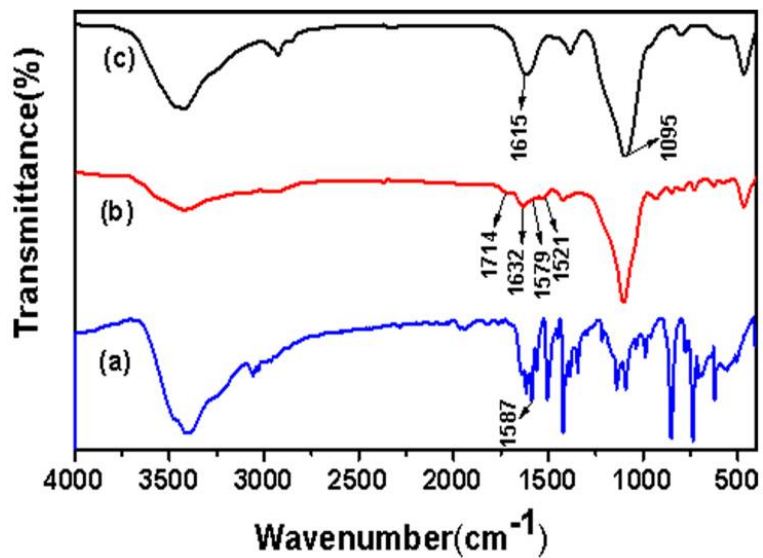


Figure S3. FT-IR spectra of phen (a), SiO₂@PMDA-Si-Tb-phen (b), and SiO₂@PMDA-Si-Tb-phen@SiO₂ (c).

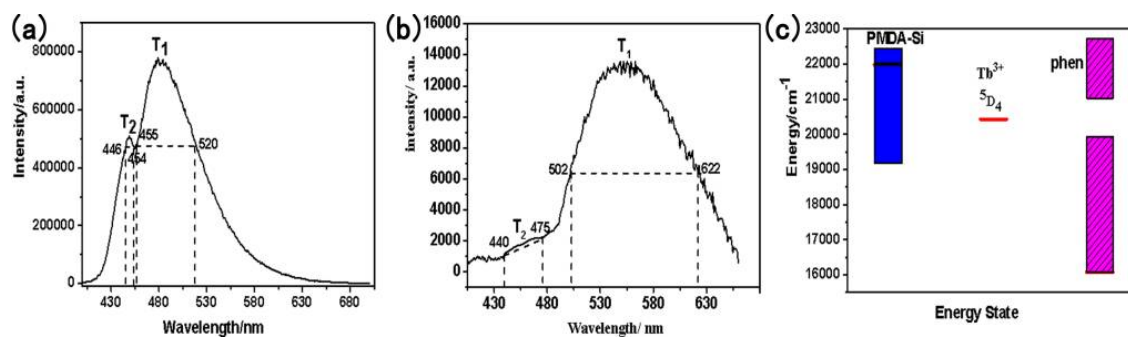


Figure S4. Phosphorescence spectra of PMDA-Si (a) and phen (b), Triplet state of PMDA-Si, phen and the excited state of Tb(III) (c).