Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C.

Supporting Information

Flexible quantum dot-PVA composites for white LEDs

Arzu Coşgun,[1,2] Renli Fu,[1*] Weina Jiang,[1] Jianhai Li,[2] Jizhong Song,[2] Xiufeng Song,[2] and Haibo Zeng[2*]

[1]*State Key Laboratory of Mechanics and Control of Mechanical Structures & College of Materials Science and Technology, Nanjing University of Aeronautics and Astronautics, Nanjing 210016, China*

[2]*Institute of Optoelectronics & Nanomaterials (IONS), College of Materials Science and Engineering, Nanjing University of Science and Technology, Nanjing 210094, China*

**Corresponding Emails:* zeng.haibo.nano@gmail.com (H. Z.); rlfu@nuaa.edu.cn (R. F.)

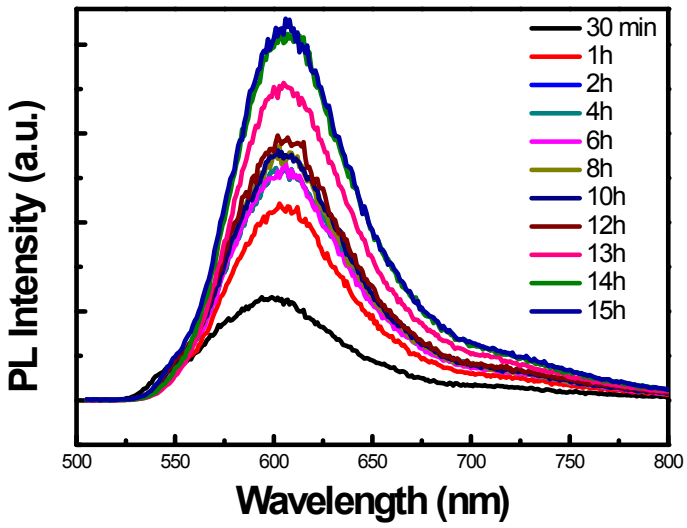

Figure S1. Temporal evolution of the PL spectra of ZnSe:Mn@MPA nanocrystals

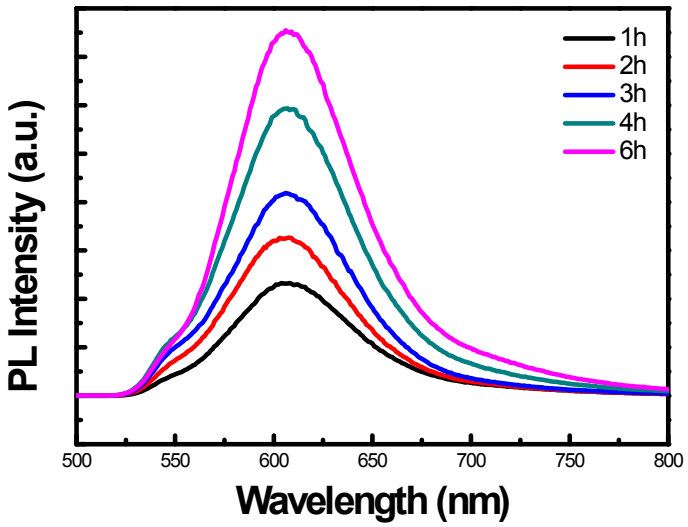

Figure S2. Temporal evolution of the PL spectra during the overcoating of ZnSe:Mn QDs with the ZnS shell.

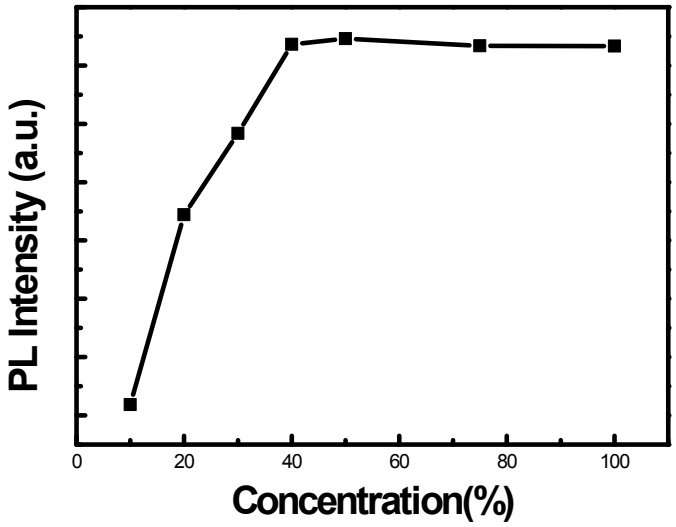

Figure S3. PL Intenstiy of ZnSe:Mn/ZnSQDs/PVA according different concentration ratio.

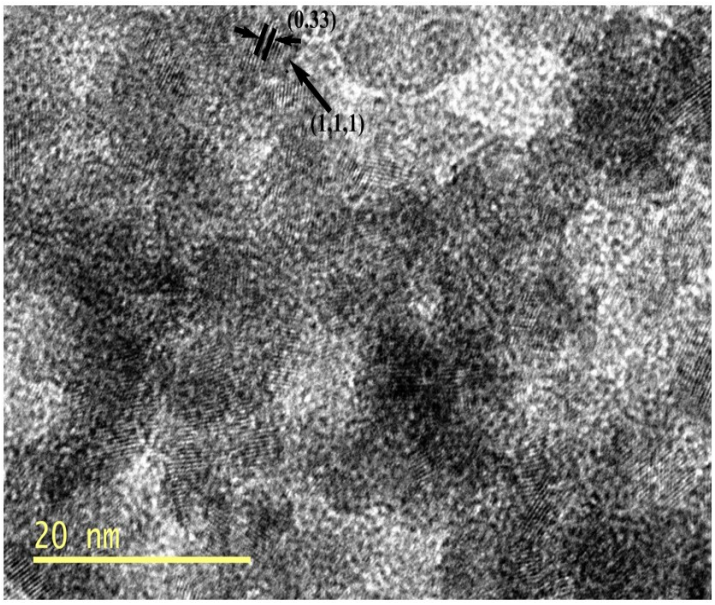

Figure S4.TEM images of the ZnSe:Mn core NCs.

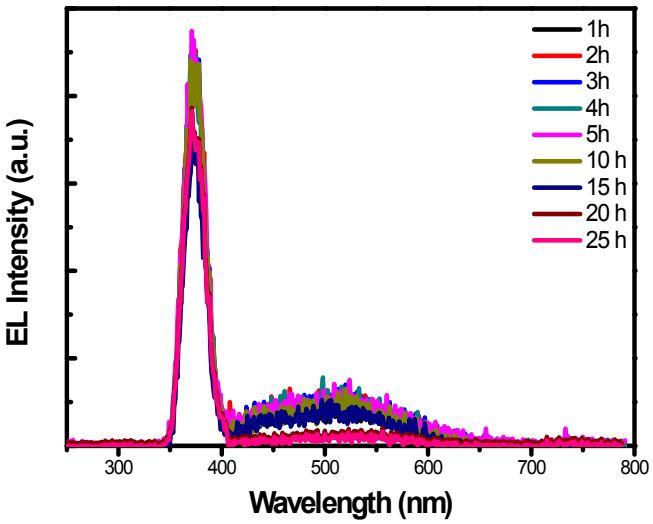

Figure S5. Temporal evolution of EL spectra of QDs-PVA composite without silica coating.

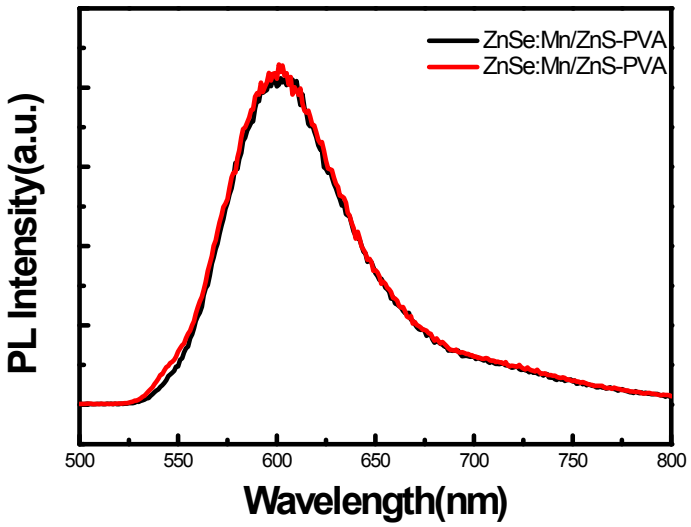

Figure S6. PL spectra of fresh synthesized ZnSe:Mn/ZnS-PVA (red) and after the 9 month later sample (black).

Name of the Article	QuantumYield (QY) value
A. Aboulaich, L. Balan, J. Ghanbaja, G. Medjahdi, C. Merlin, R. Schneider, *Chem. Mater*., 2011, **23**, 3706 – 3713.	12%.
Wang C, Gao X, Ma Q, Xu X, *J. Mater. Chem*., 2009, **19**, 7016.	2,4%
P. Shao, Q. Zhang, Y. Li, H. Wang, *J. Mater. Chem*. 2011, **21**, 151.	4.8%,
F. Zheng, W. Ping , Z. Xinhua, Y. Yong-Ji, *Nanotechnology,* 2010, **21,** 305604.	30-35%
X. Tongtong, W. Song, W. Xiaojun, L. Jiaqing, C. Jiyao, L. Huili, P. Likun, S. Zhuo, *Chem. Commun***.**, 2013, **49**, 9045-9047.	21.86%
M. Geszke, M. Murias, L. Balan, G. Medjahdi, J. Korczynski, M. Moritz, J. Lulek, R.Schneider, *Acta Biomaterialia*., 2011, **7**, 1327–1338.	22%
R. Ban, J. Li, J. Cao, P. Zhang, J. Zhang, J. Zhu, *Anal. Methods*, 2013, **5**, 5929.	27.4%
B. Luong, E. Hyeong, S. Yoon, J. Choiand, N. Kim, *RSC Adv*., 2013, **3**, 23395.	27.6%
J. Zheng, X. Yuan, M. Ikezawa, P. Jing, X. Liu, Z. Zheng, X. Kong, J. Zhao, Y.Masumoto, *J. Phys. Chem.C.,* 2009, **113**, 16969–16974.	35%
J. Ke, X. Li, Q. Zhao, Y. Hou, J. Chen*, Water. Sci. Rep*., 2014, **4**, 5624;	25%
D. Zhu, X. Jiang, C. Zhao, X. Sun, J. Zhang, J. Zhu ,*Chem. Commun*., 2010, **46**, 5226–5228.	25%
H. Zhang , X. Gao, S. Liu , X. Su, *J. Nanopart. Res*., 2013, **15**, 1749.	4.8 %
B. Dong, L. Cao,G. Su, W. Liu , *J. Phys. Chem. C*, 2012, **116**, 12258 – 12264.	24.0%
A. Aboulaich, M. Geszke, L. Balan, J. Ghanbaja, G.Medjahdi, R. Schneider, *Inorg. Chem..,* 2010**, 49***,*10940.	9%

Table 1. Quantum yield (QY) values of Mn:ZnSe d-dots prepared in aqueous media.