Electronic Supporting Information

Room-temperature phosphorescence polymers with excitation-wavelength and delay-time emission dependencies

Linmin Zou,[a] Xiaojin Qin,[a] Huazhen Sun,[a] Shiqi Wang,[a] Wenwen Ding,[a] Yuanli Liu,[a] Chun Wei,[a]* Bingli Jiang,[b]* and Yongyang Gong[a]*

[a.] *Guangxi Key Laboratory of Optical and Electronic Materials and Devices, College of Materials Science and Engineering, Guilin University of Technology, Guilin 541004 China.*

[b.] *College of Pharmacy, Guilin Medical University, Guilin 541004, China.*

Table of Content

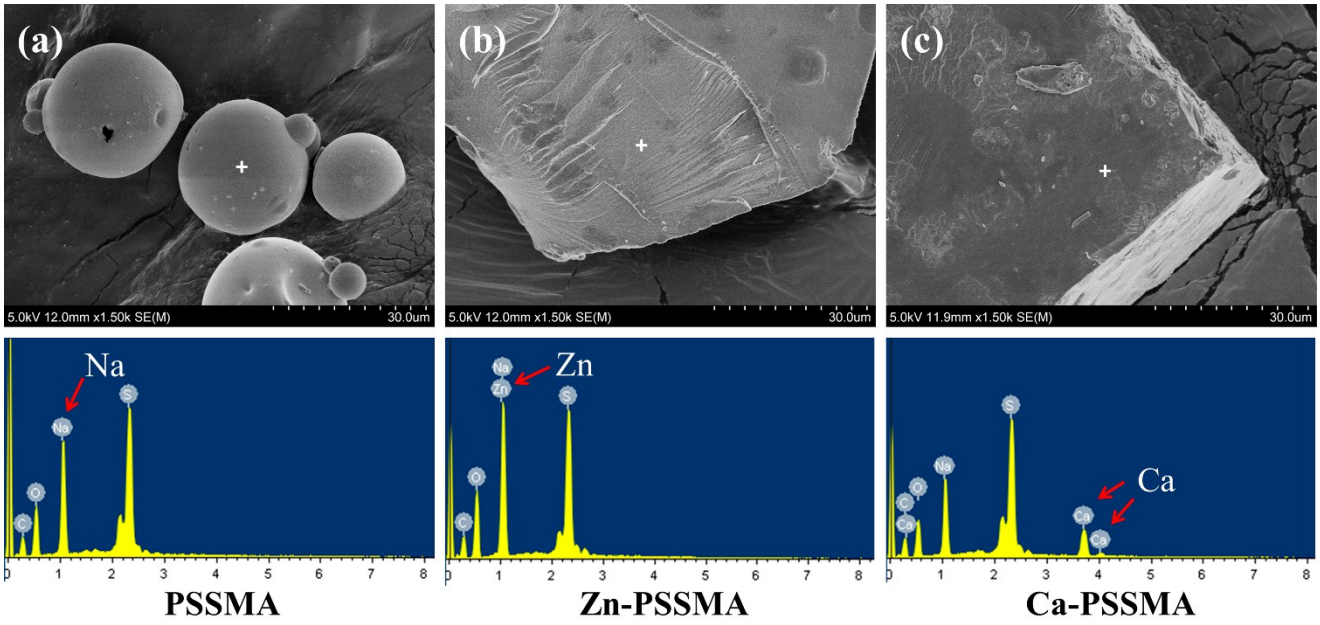

Fig.S1 The scanning electron microscope (SEM) photograph and Energy Dispersive X-ray (EDX) Spectra of PSSMA (a), Zn-PSSMA (b) and Ca-PSSMA (c) solid powders.

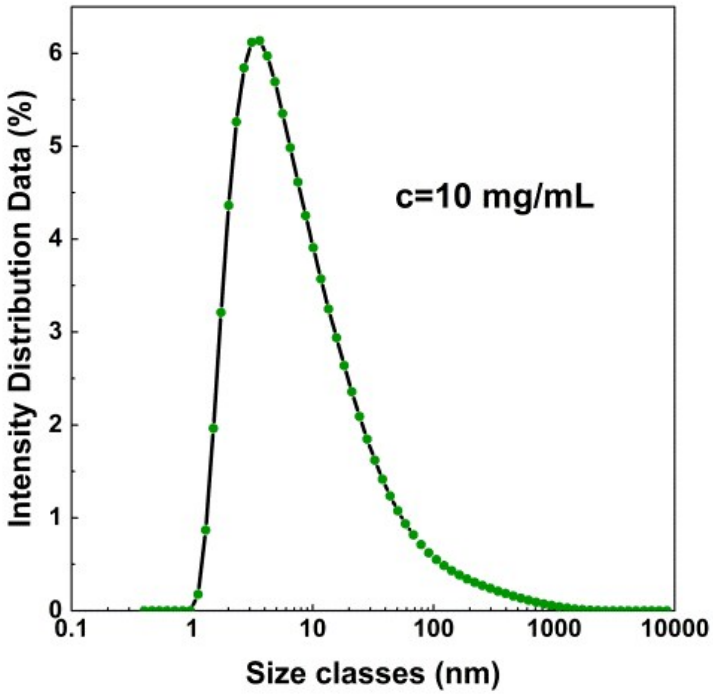

Fig.S2 Dynamic light scattering (DLS) measurement of PSSMA in water.

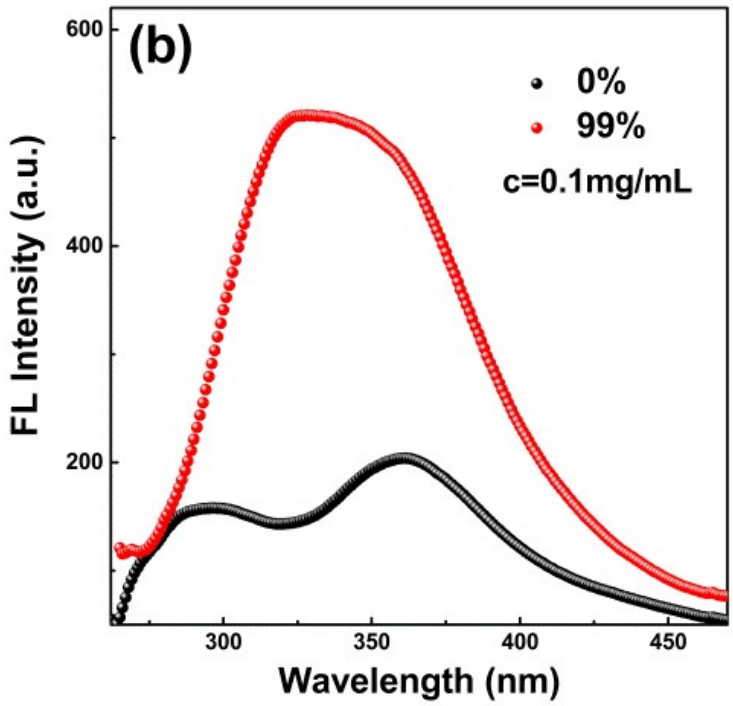

Fig.S3 The fluorescence spectra of PSSMA in water and 99% of concentration THF/water mixtures.

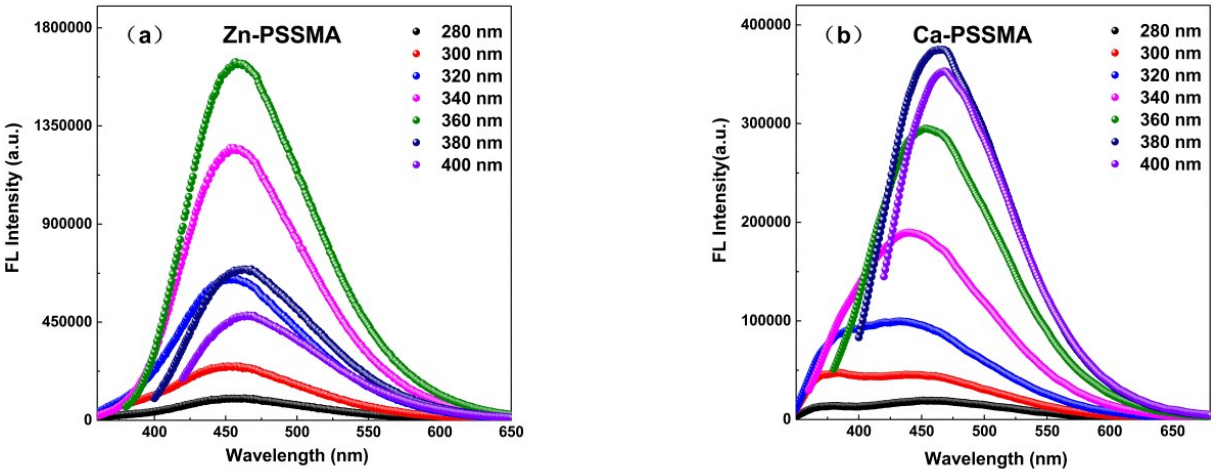

Fig.S4 The fluorescence emission spectra of Zn-PSSMA and Ca-PSSMA solid powders with different excitation wavelengths.

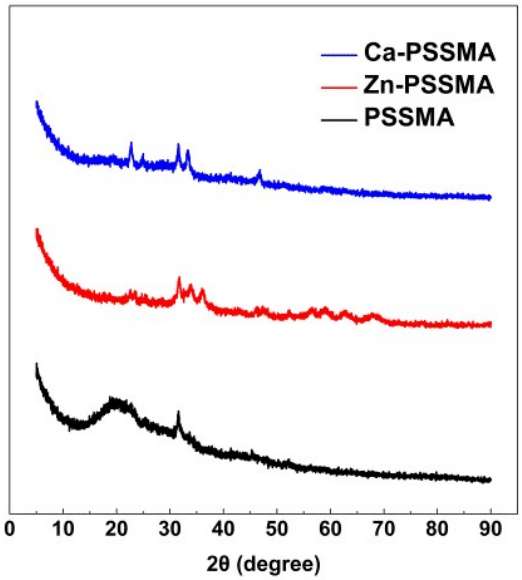

Fig.S5 The X-ray diffraction patterns of PSSMA, Zn-PSSMA and Ca-PSSMA solid powders.

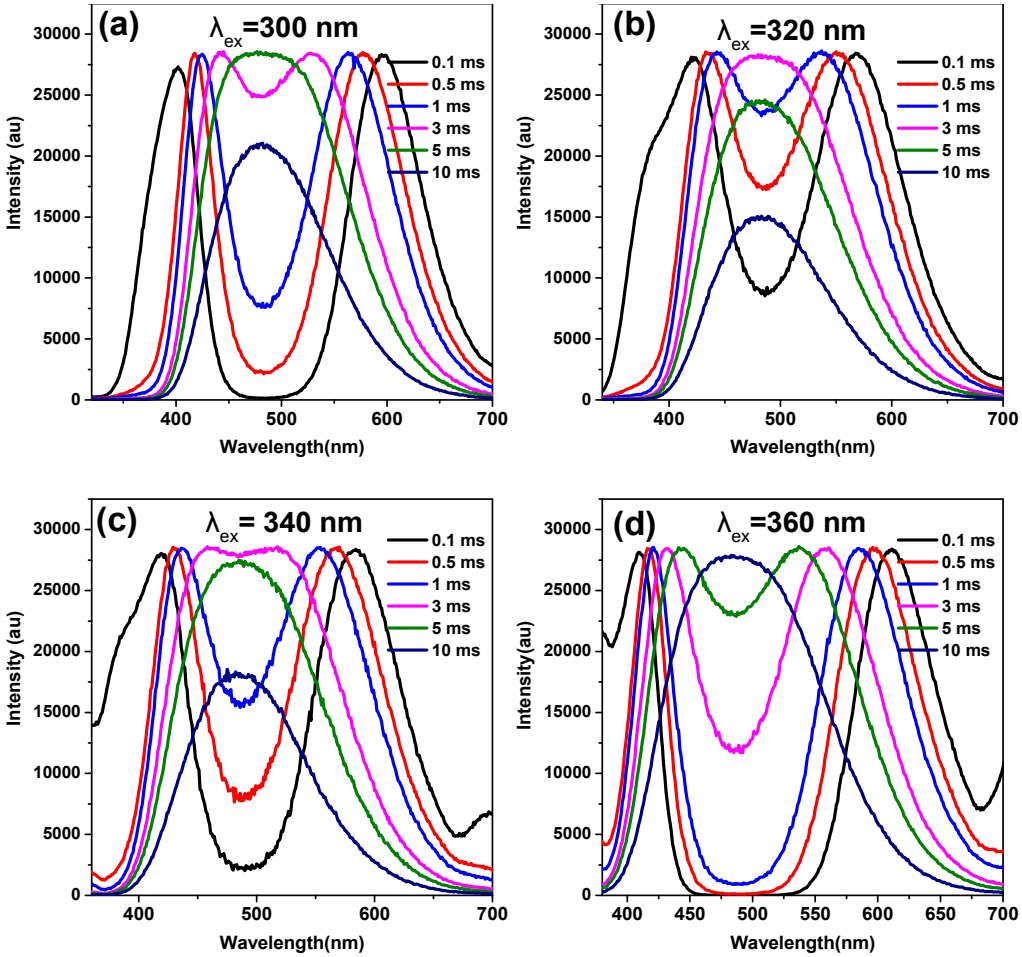

Fig.S6 The time-resolved photoluminescence spectra with different delay time of PSSMA solid powders at different excitation wavelengths.

Table S1. The CIE chromatic coordinates at different excitation wavelengths

Ex/ nm	PSSMA		Zn-PSSMA		Ca-PSSMA	
	CIE_x	CIE_y	CIE_x	CIE_y	CIE_x	CIE_y
280	0.34	0.40	0.25	0.33	0.28	0.35
290	0.39	0.41	0.27	0.35	0.34	0.38
300	0.32	0.38	0.24	0.32	0.29	0.36
310	0.26	0.34	0.22	0.31	0.25	0.33
320	0.24	0.33	0.22	0.31	0.24	0.32
330	0.25	0.33	0.21	0.31	0.24	0.33
340	0.27	0.35	0.22	0.31	0.26	0.34
350	0.32	0.37	0.22	0.32	0.30	0.35
360	0.43	0.41	0.25	0.33	0.41	0.38

Ex= excitation wavelenght

Table S2. The CIE chromatic coordinates at different delay time

t_d/ ms	PSSMA		Zn-PSSMA		Ca-PSSMA	
	CIE_x	CIE_y	CIE_x	CIE_y	CIE_x	CIE_y
0.1	0.39	0.39	0.31	0.36	0.33	0.36
0.5	0.34	0.38	0.27	0.35	0.30	0.35
1	0.31	0.36	0.24	0.33	0.27	0.34
3	0.23	0.32	0.22	0.31	0.24	0.33
5	0.21	0.31	0.21	0.30	0.22	0.32
10	0.39	0.39	-	-	0.21	0.31

t_d= delay time