

è™éŒ,,ç è™Ÿ	6276
ç«œ...<	NC094FJU00065030
åŠœ™ æŸæ	
ç'œ»è™ Ÿ	
å- æ å ç±	è¼'ä» åŸå,
ç³»æ%œå ç±	åŒ-å,ç³»
èˆŸç³»æ %œå ç ±	
å,è™Ÿ	493336290
ç"çœŸ Ÿ(ä,)	æ Źæ,, çŽ«
ç"çœŸ Ÿ(è±)	Lee Yi Mei
è«-æ- å ç± (ä,)	ä»ŸéŠ'é‡'å±-éŒ-å ^ç%œç,°ä,%œé‡ æ...<èf½é‡ æŽŸæ"œ€...ä¹'é»æç œç™¼å...%œç "çœŸ
è«-æ- å ç± (è±)	The Electroluminescence Study of Europium Complex as a Triplet Energy Acceptor
å...œ»- é;Œå	
æŒå°ž æ™æŽ^ (ä,)	å¼µéŽ@å¹³
æŒå°ž æ™æŽ^ (è±)	Chang chen pin
æ å...šå ...æ-é- <æ³⁄æ— ŸæœŸ	
æ å- å...æ- é- <æ³⁄æ— ŸæœŸ	
å...æ-	

†ä, é- «æ”¾ç † ç”±	
é»â- â...æ- †é€ ä°â œ«âœ-	
âœ«âœ- â...æ- †é- «æ”¾æ— ¥æœÿ.	
æ”æj^è ^{aa} æ~Z	
é»â- â...æ- †	
â- ,ä½ éjzâ çç©â£« ¥	
ççæ¥â- ,â¹â¹	94
â†°ç%â¹	
èªæ- †â¥	ä,æ-†
é— œé µâ— (â,)	éŠªé†:â±-éœ-â ^ç%© é»æjç™¹/â...%
é— œé µâ— (è±)	Electroluminescence Europium Complex
æ~è! (â,)	âœ:æœ%æ©ÿç™¹/â...%æ æ-™ä,i¼œç”±æ- ¼éŠª(Eu)éœ-â ^ç%©â...æœ%â¾ç¹çª,,ä,ª°- éŠ³çš,,æ”¾â°,æ³çâ³°ä, ”èç«é æœÿæœ%â¾^é«çš,,é† â- ç”ççZ†i¼œâ æ- æèç«èª ç,°æœfæ™ â¾â¥½çš,,ç’...â...%ç™¹/â...%æ æ- ™¹/¼œä½†æ™-âœ-æ-†ç »ä,- ç¼°ä¹ éŠª(Eu)éœ-â ^ç%©è£½â½œæ^ â...fâ»¶â¾œç™¹/â...%æ€§è³ª ç,é—œâ¹ç ”ç©¶i¼œâ æ- ææ^â€æ¹ç”ª°†éŠª(Eu)éœ-â ^ç%©i¼œâ°†â...¶è£½â½œæ^ é«â^†â- âž·OLEDâ...fâ»¶â¾œç ”ç©¶â...¶ç™¹/â...%æ€§è³ªâ€æœ:æœ-ç-†â†é ©—ä,â†ç, °â”âœ§éf·â^†i¼š(â,€)æ^â€é!-â...^æ”¹è®Šæ—è½%âj— â½^è½%œ€ÿâ»¥æZšâ^¶è- ,,è†œâZšâ°i¼œæ%¾â†°æœ€ä½³è½%œ€ÿæç ä»¶i¼œ(â°œ)æ”¹è®Šæ»é >œç%©éŠªé†:â±-éœ-â ^ç%©â¹æjç¹æ%¾â†°æœ€ä½³æ^»éœæjç¹æ°i

	<p>1/4CE(ä, %ä)ä1<æ"1è@Šé>>â ä, 3è1/4, æ æ-TMæ_ifâ^o!æ%¾â^oæœ€äl/2³é>>â- ä, 3è1/4, æ æ- TMæ_ifâ^oi1/4CEç"±ä»¥ä, Šä, %ç"®â fæ•, çš,, è^aæ•^oä šä^oæœ€äl/2³ä<éŠ^aé^o† â±-éCE- ä ^ç%œ©PLEDâ...fä»¶â€, (â>)æZÿä, <ä¾4†i1/4CEæ^â€-â— è© ä1/2ç"™â...©ç"®ä, »çTM1/4â...%œé<"i1/4CEæ"1è@Šä...©ç"®ä, »çTM1/4â...%œ é<"çš,, æ••â ^æ-"ä¾4<ä šä^o†PLEDâ...fä»¶i1/4CEé^o† æ, -â...¶çTM1/4â...%œæ €§è^{3a}i1/4CEä⁻ é©—çTM1/4ç ¾i1/4CEä1/2ç"™éTMä, »çTM1/4â...%œé<"ç>, è1/4fæ- 1/4ä1/2ç"™â- ®ä, »çTM1/4â...%œé<"i1/4CEä»¥ä1/2ç"™éTMä, »çTM1/4â...%œé<"çš,, ä...fä»¶æ€§è ^{3a}è1/4fä1/2³i1/4CEä⁻ ä»¥æ ä †â...fä»¶â<çTM1/4â...%œæ€§è^{3a}ä€, (ä")æZÿ '—è—%ç"™±è©²éŠ^aé^o†^oâ±-Eu(dbm)3phenæ'>é>œç%œ©âœ"æ"¶(in Chloroform)ä, <çš,, çTM1/4â...%œæ€§è^{3a}ä¾4†æZçè"Zèf1/2é^o† è1/2%œçš>>çš,, é— œäç, é€²ä, €æ'ä'CEPLEDâ...fä»¶çš,, çTM1/4â...%œæ€§è^{3a}ä šæ-"è1/4fä€,</p>
æ"è! (è<±)	<p>Europium complexes are promising candidates for organic electro-luminescent (EL) material due to their sharp emission band. We have demonstrated red-light electrophosphorescent organic light-emitting diodes (PHOLEDs) doped with a Europium complex. The devices consisted of a monolayer structure of ITO / PVK: Eu(dbm)3(phen):PBD / LiF/Al. Firstly, we studied how the spin speed of spin coating affects the thickness of the emitting layer . We found the optimal dopant concentration for the Eu(dbm)3(phen) is 2.6%. Secondly, we employed a blend host in a PHOLEDs, which comprises poly (n-vinylcarbazole) PVK and small-molecule 4,4 -N,Nâ€™ - dicarbazole- biphenyl CBP, and the maximum red light emission of the PHOLEDs was measured at 612 nm. In addition, the external quantum efficiency and the power efficiency of the PHOLEDs are 0.01% and 0.0027 lm/W, respectively.</p>
è<-æ-†ç®æ-;	<p>ç>®éCE,, æ"è! I è<±æ-†æ"è! â...; ç>®éCE,, i âœ-ç>®éCE,, iii è;ç>®éCE,, vi ç-ä, €ç< ç.'è<- 1 ç-ä, €ç- € æœ%œœ©Ýé>>æç€çTM1/4â...%œçš,, æ²çé © 1 ç-ä^oCEç- € çTM1/4â...%œâZÿç †è^o†âÿœœ-â...fä»¶çµ æ§< 4 ç-ä, %œç- € èžçâ...%œè^o†ççf.â...%œ 8 ç-ä>>ç- € ä, »é<"â®çé<"èf1/2?â, 3é ž 9 ç-ä^oç- € â ,,ç"®çTM1/4â...%œæ æ-TMçš,, æ€§è^{3a}ä>>ç¹ 11 ç-ä...ç- € é'- ç³>é^o†^oâ±-éCE- âCE-â ^ç%œ©çš,, æ^o†%œç"™ 15 ç-ä^oCEç< â⁻ é©—é^o†â† 18 ç-ä, €ç- € è-¥â“ é^o†â† 18 ç-ä^oCEç- € â,, €âTMé^o†â† 20 ç-ä, %œç- € â⁻ é©—æ¥é©Ý 21 3.1 OLED èf1/2ç<â1<â†éçž 21 3.2 é<â†â† âž<OLED â1<èf1/2ç<â-®â...f 22 ç-ä, %œç< çµ æžœè^o†è"Zè<- 27 ç-ä, €ç- € â⁻ é©—ç^o;â>> 27 ç-ä^oCEç- € æ"1è@ŠçTM1/4â...%œâ±æâj—â1/2è1/2%œ€Ý 28 ç-ä, %œç- € æ"1è@ŠçTM1/4â...%œâ±ææ'>é>œç%œ©æçfâ^o! 33 ç-ä>>ç- € æ"1è@Šé>>â ä, 3è1/4, æ æ-TMæçfâ^o! 39 ç-ä^oç- € éTMä, »çTM1/4â...%œé<"â1<çTM1/4â...%œâ...fä»¶ç"ç©¶ 43 ç-ä...ç- € Eu(dbm)3Phen?é>œæ-1/4ä, »çTM1/4â...%œé<"â, - âœ"æ"¶â²ä, <â1<çTM1/4â...%œæ€§è^{3a}ç "ç©¶ 50 6.1 Eu(dbm)3Phen?é>œæ- 1/4ä, »çTM1/4â...%œé<"PVKä, âœ"æ"¶â²ä, <â1<çTM1/4â...%œæ€§è^{3a}ç "ç©¶ 50 6.2 Eu(dbm)3Phen?é>œæ-1/4ä, »çTM1/4â...%œé<"CBPä, - âœ"æ"¶â²ä, <â1<çTM1/4â...%œæ€§è^{3a}ç "ç©¶ 57 ç-ä>>ç< çµ è<- 64 ç-ä^oç< â fè€fæ-†ç >> 66</p>
â fè€fæ-†ç >>	<p>1. (a) Pope, M.; Kallmann, H. P.; Magnante, P. J. Chem. Phys. 1963, 38, 2042. (b) Helfrich, W.; Schneider, W. G. Phys. Rev. Lett. 1965, 14, 229. (c) Williams, D. F.; Schadt, M. Proc. IEEE. 1970, 58, 476. 2. Tang, C. W.;</p>

VanSlyke, S. A. Appl. Phys. Lett. 1987, 51, 913. 3. Tang, C. W.; VanSlyke, S. A.; Chen, C. H. J. Appl. Phys. 1989, 65, 3610. 4. Burroughes, J. H.; Bradley, D. C.; Brown, A. R.; Marks, R. N.; Mackay, K. D.; Friend, R.H.; Burn, P. L.; Holmes, A. B. Nature 1990, 347, 539. 5. 1994, 32, 174. 6. Baldo, M. A.; O'Brien, D. F.; You, Y.; Shoustikov, A.; Sibley, S.; Thompson, M. E.; Forrest, S. R. Nature, 1998, 395, 151. 7. Thompson, M. E.; Shoustikov, A.; You, Y.; Sibley, S.; Baldo, M.; Koslov, V.; Burrows, E. P.; Forrest, S. R. MRS Abstract, G2.4, Spring Meeting, 1998. 8. O'Brien, D. F.; Baldo, M. A.; Thompson, M. E.; Forrest, S. R. Appl. Phys. Lett., 1999, 74, 442. 9. Shirota, Y.; Kuwabara, Y.; Inaba, H.; Wakimoto, T.; Nakada, H.; Yonemoto, Y.; Kawami, S.; Imai, K.; Appl. Phys. Lett., 1994, 65, 807. 10. Matsumura, M.; Akai, T. Jpn. J. Appl. Phys. 1996, 35, 5357. 11. Burrows, P. E.; Shen, Z.; Bulovic, V.; McCarty, D. M.; Forrest, S. R.; Cronin, J. A.; Thompson, M. E. J. Appl. Phys. 1996, 79(10), 7991. 12. Hamada, Y.; Sano, M.; Fujita, T.; Nishio, Y.; Shibata, K. Jpn. J. Appl. Phys. 1993, 32(4A), L514. 13. Kido, J.; Iizumi, Y. Chem. Lett. 1997, 963. 14. Y. Hamada, IEEE Transactions on electron device, 1997, 44, 1208. 15. Liang, C. J.; Wong, T. C.; Hung, L. S.; Lee, S. T.; Hong, Z. R.; Li, W.L. J. Phys. D: Appl. Phys. 2001, 34, L61-L64. 16. Kido, J.; Nagai, K.; Okamoto, Y.; Skotheim, T.; Chem. Lett. 1991, 1267. 17. Alpha, B.; Lehn, J. M.; Mathis, G.; Angew. Chem. Int. Ed. Engl. 1987, 26, 266. 18. Sabbatini, N.; Guardigli, M.; Corrd. Chem. Rev., 1993, 123, 201. 19. Liang, C. J.; Zhao, D.; Hong, Z. R.; Zhao, D. X.; Liu, X.Y.; Li, W. L.; Peng, J. B.; Yu, J. Q.; Lee, C. S.; Lee, S. T.; Appl Phys. Lett. 2000, 76, 67. 20. B.Schulz, B. Stiller, T. Zetzsche, G. Knochenhauer, R. Dietel, L. Brehmer, Chem. Mater., 7, 1041(1995) 21. H. Kanai, S. Ichinosawa, Y. Sato, Synth. Met., 91, 195 (1997). 22. D. M. Pai, J. F. Yanus, and M. Stolka* Xerox Webster Research Center, Webster, New York 14580 (Received: January 19, 1984) 23. K. M. Vaeth and C. W. Tang: J. Appl. Phys. 92 (2002) 3447. 24. X. Gong, J. C. Ostrowski, G. C. Bazan, D. Moses and A. J. Heeger: Appl. Phys. Lett. 81 (2002) 3711. 25. F.-C. Chen, Y. Yang, M. E. Thompson and J. Kido: Appl. Phys. Lett. 80 (2002) 2308. 26. S.-C. Chang, G. He, F.-C. Chen, T.-F. Guo and Y. Yang: Appl. Phys. Lett. 79 (2001) 2088. 27. Y. Kawamura, S. Yanagida and S. R. Forrest: J. Appl. Phys. 92 (2002) 87. 28. M.-J. Yang and T. Tsutsui: Jpn. J. Appl. Phys. 39 (2000) L828.

è«-æ- ‡é æ•,	68
é™,,è”»	
â...æ- ‡é»žé- ±æ¬;æ•,	
è‡æ- ™â»°ç½ ®æ™,é- “	
è½%œ”	

æ— ¥æœÿ	
å...æ- ‡æ”å- ~å - è~éœ,,	
ç•å<è~é œ,,	M admin Y2008.M7.D3 23:18 61.59.161.35