

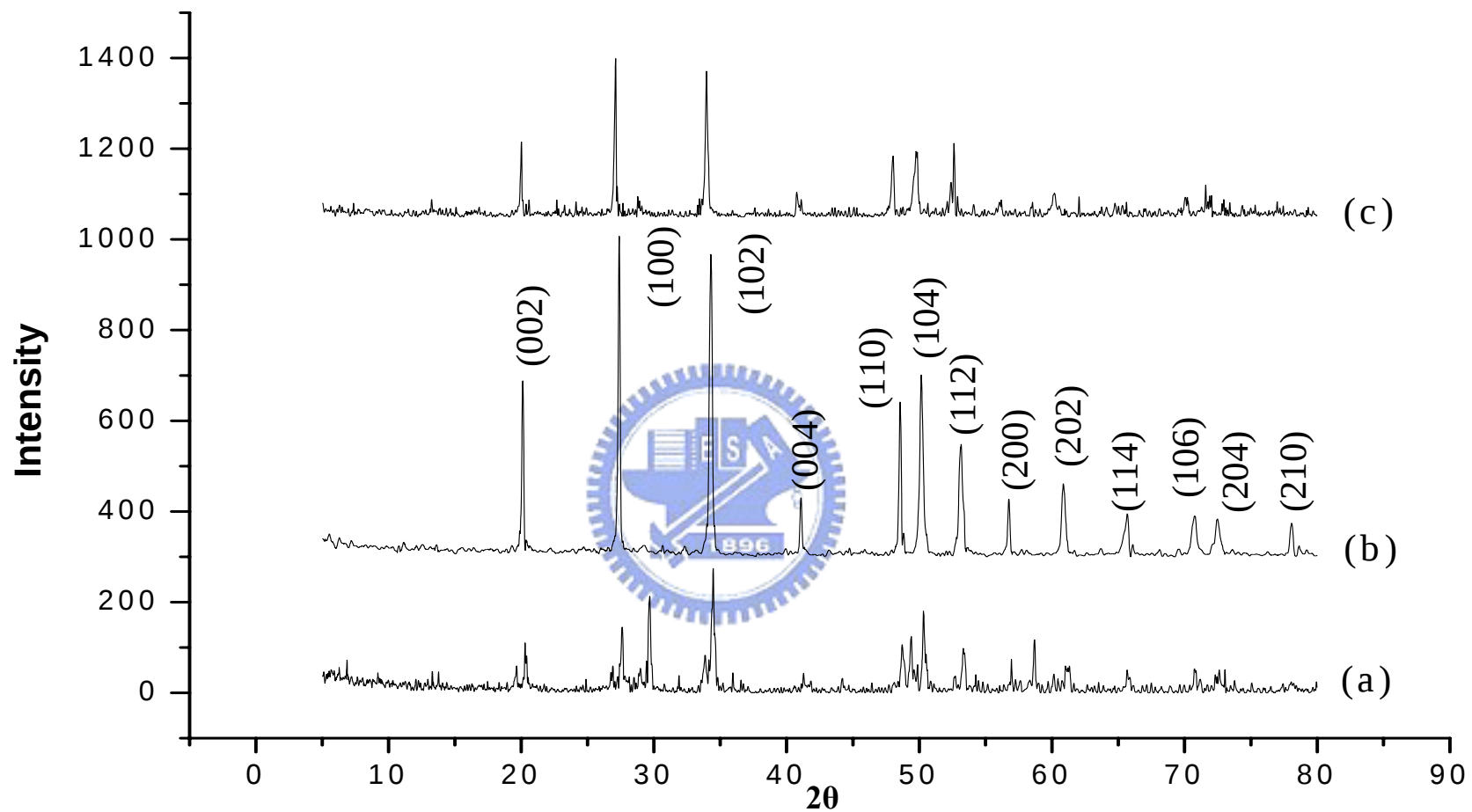
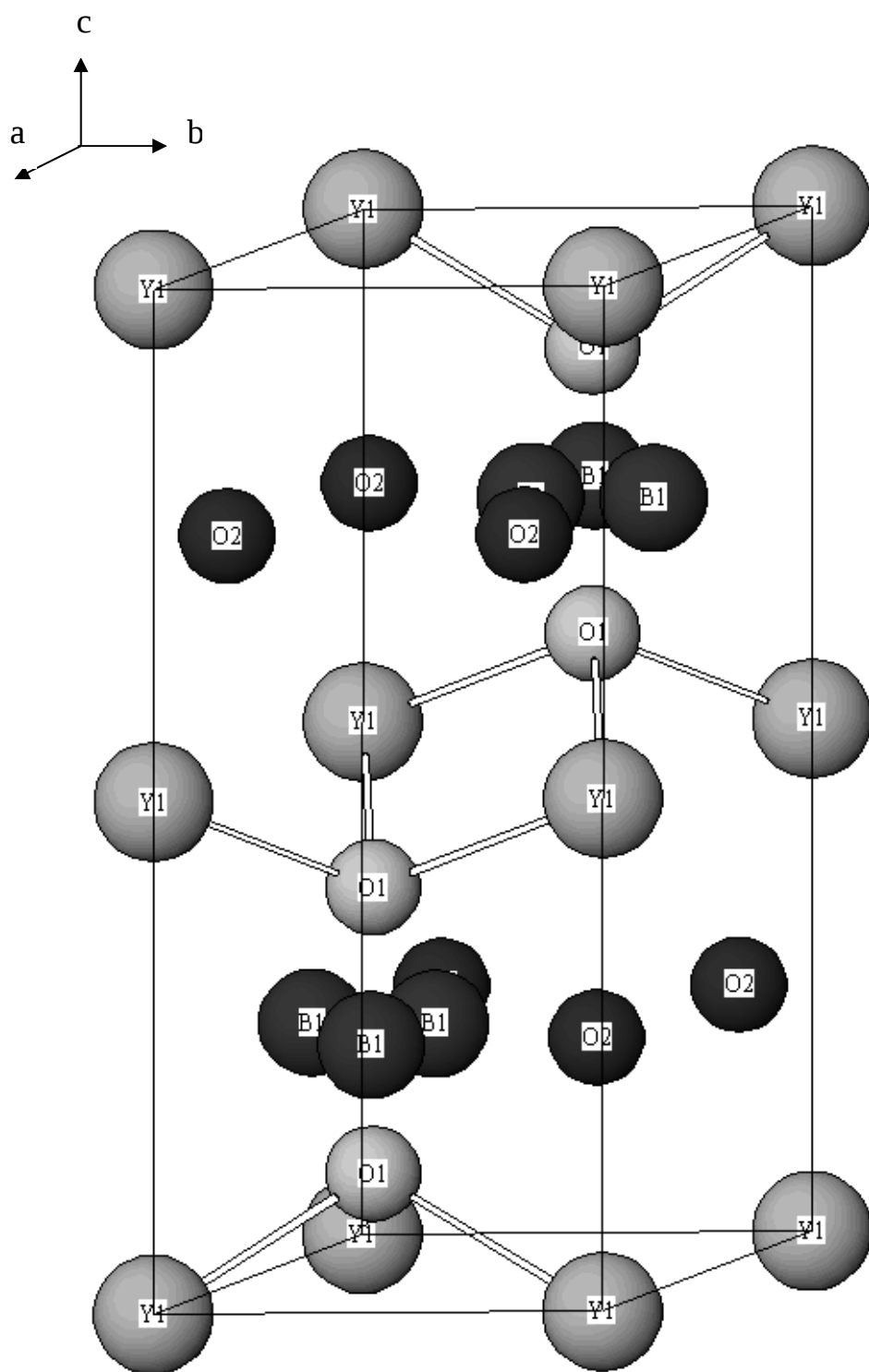


圖 25. 不同溫度下所合成 $(Y_{0.65}Gd_{0.35})BO_3$ 之 XRD 圖譜之比較(a) 900⁰C , 6 小時

(b) 1000⁰C , 6 小時(c) 1200⁰C , 6 小時



Y_1 : Y, Gd 原子

B_1 : B 原子振動

O_1, O_2 : O 原子

圖 26. $(Y_{0.65}Gd_{0.35})BO_3$ 之晶體結構圖(空間群 $P6_3/m$)

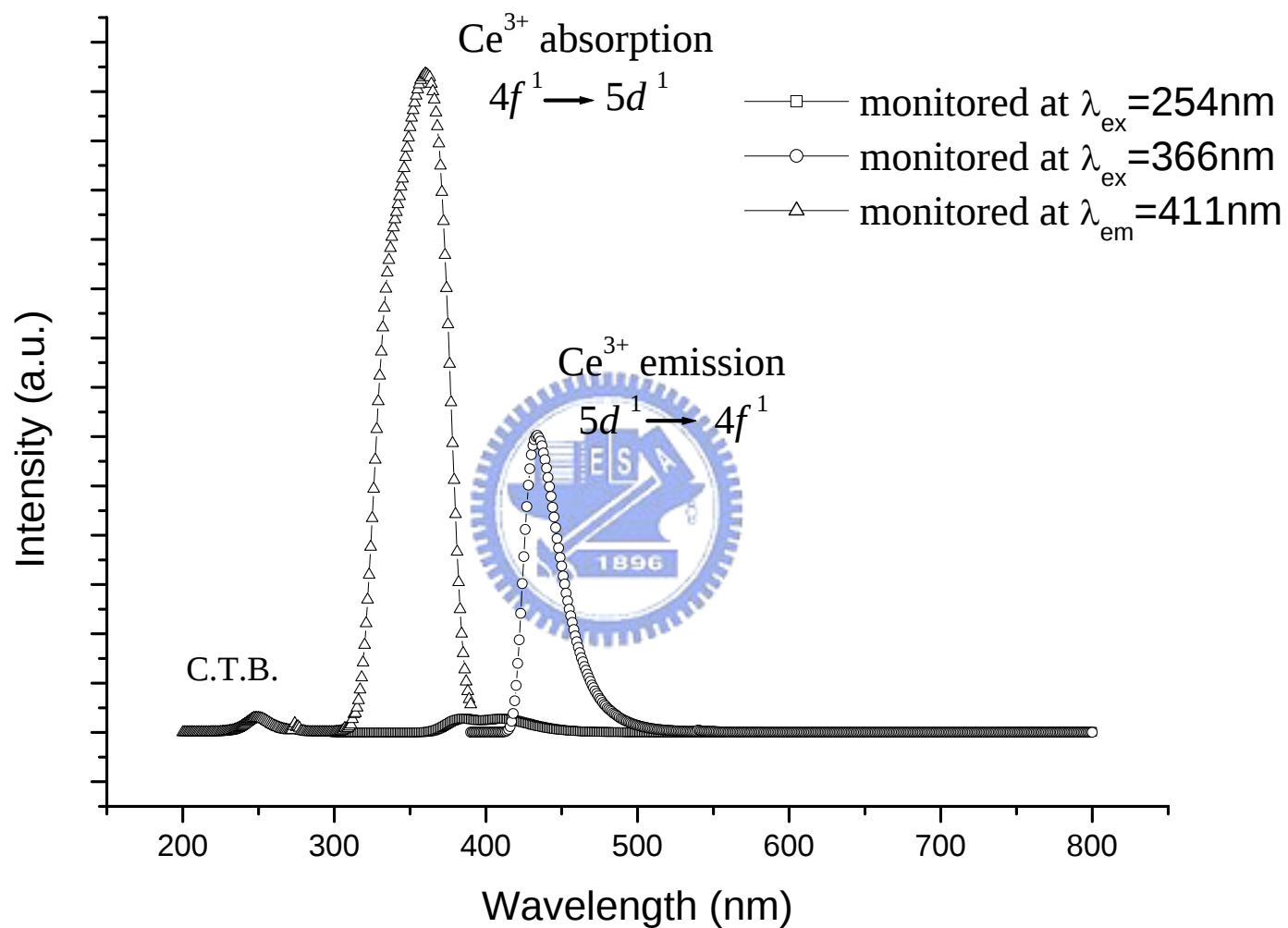


圖 27. $(Y_{0.65}Gd_{0.35})BO_3:1\%Ce^{3+}$ 光致發光與激發光譜

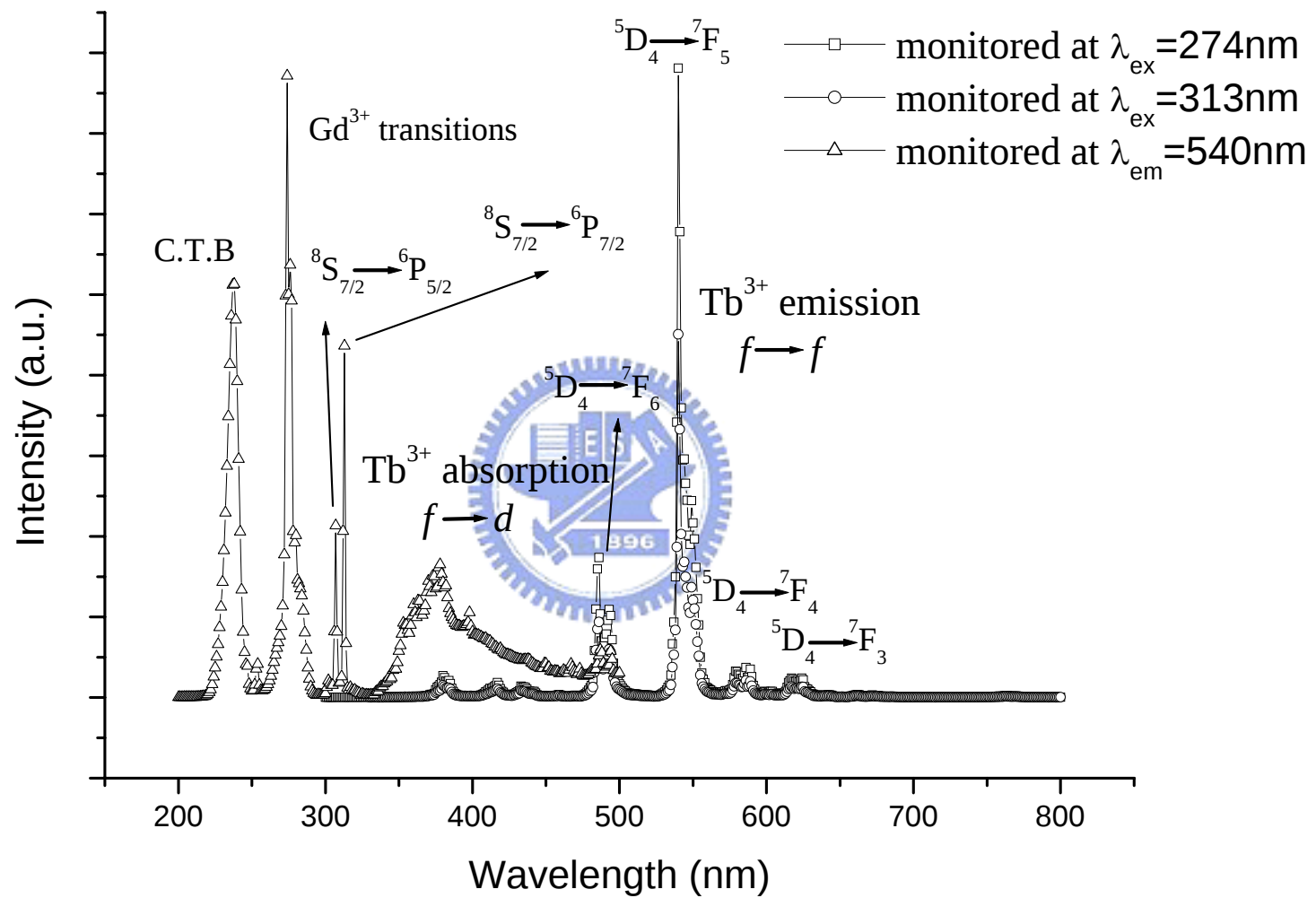


圖 28. $(Y_{0.65}Gd_{0.35})BO_3:1\%Tb^{3+}$ 光致發光與激發光譜

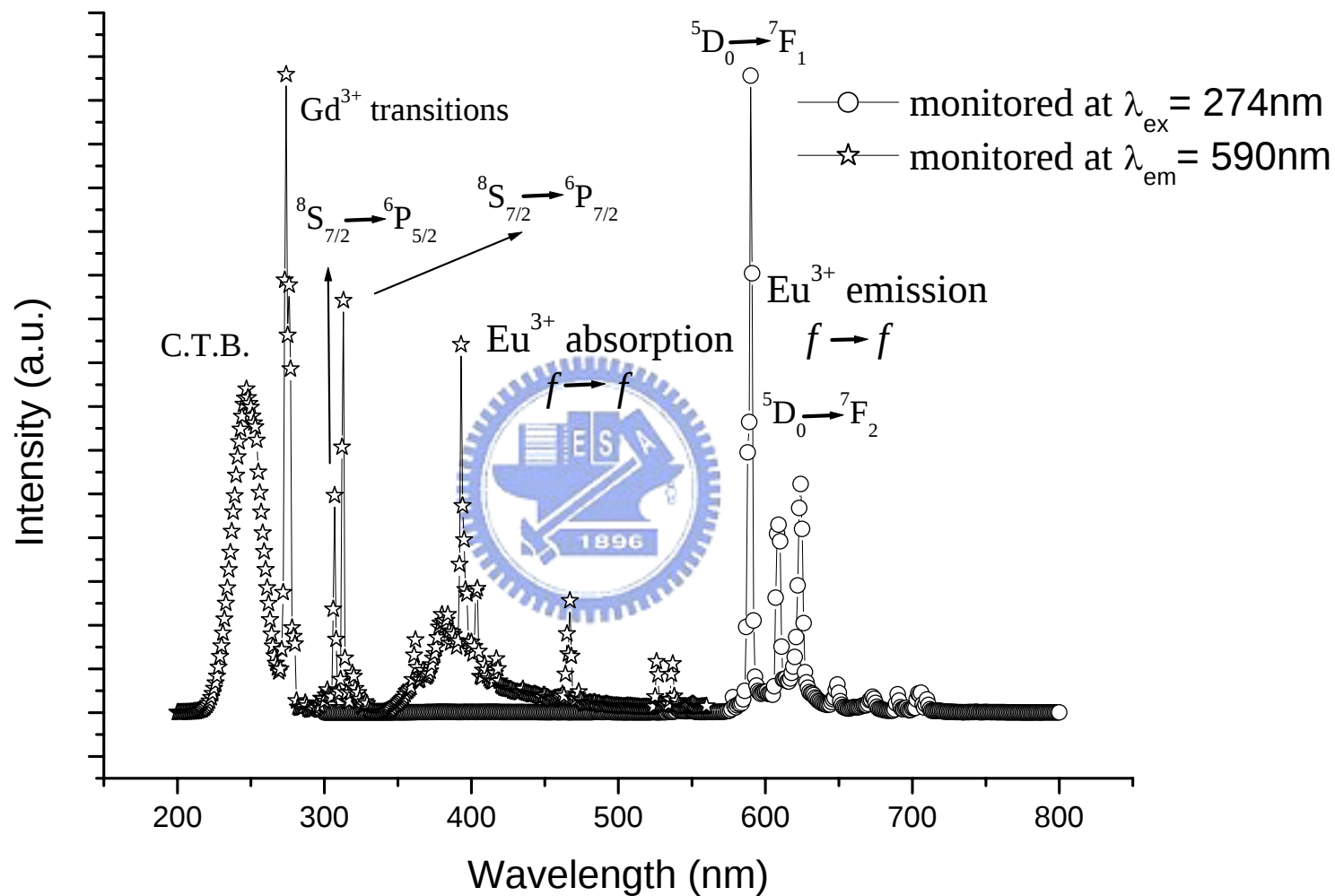


圖 29. $(Y_{0.65}Gd_{0.35})BO_3:1\%Eu^{3+}$ 光致發光與激發光譜

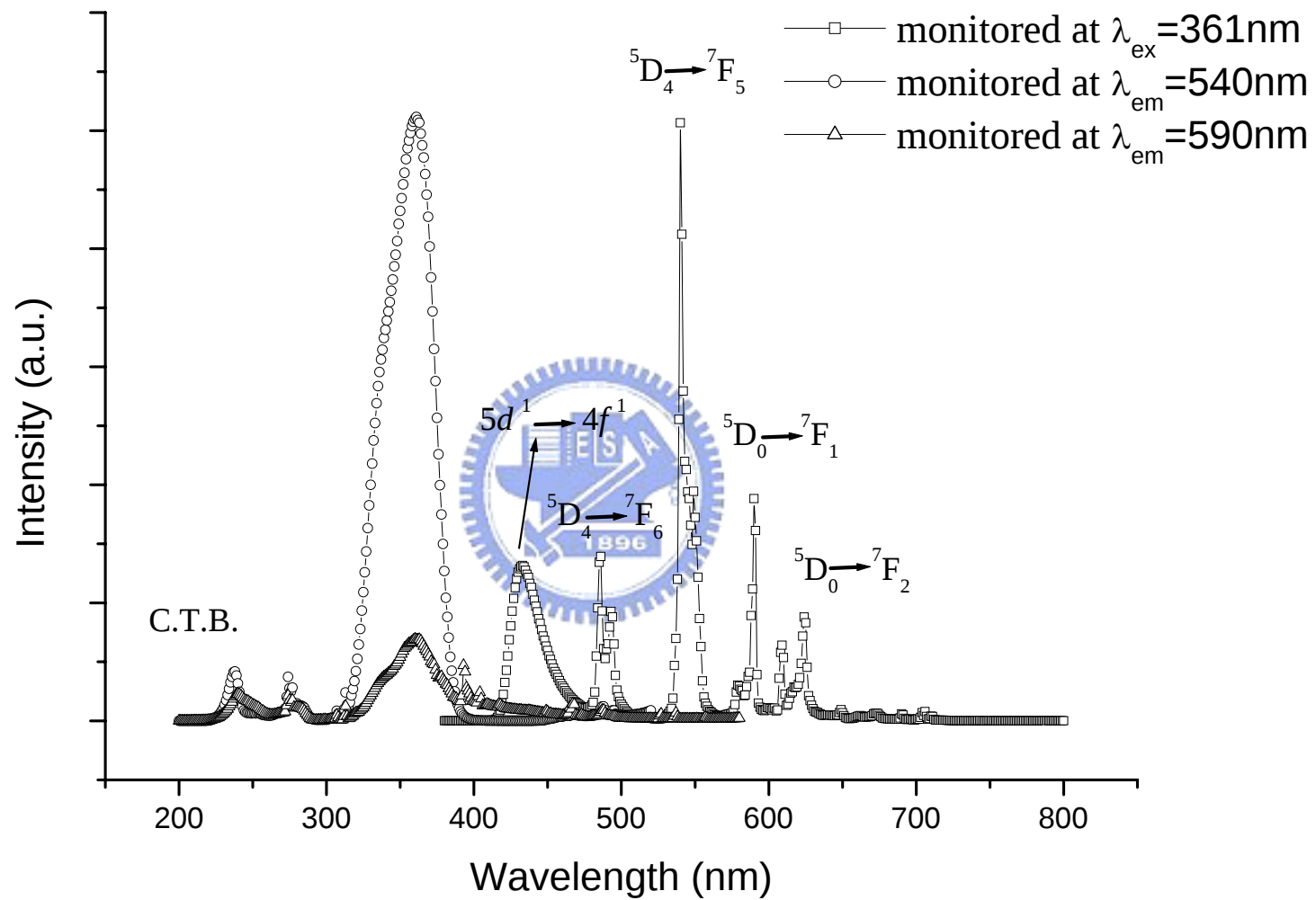


圖 30. $(Y_{0.65}Gd_{0.35})BO_3:0.5\%Ce^{3+}, 5\%Tb^{3+}, 1\%Eu^{3+}$ 螢光體螢光與激發光譜

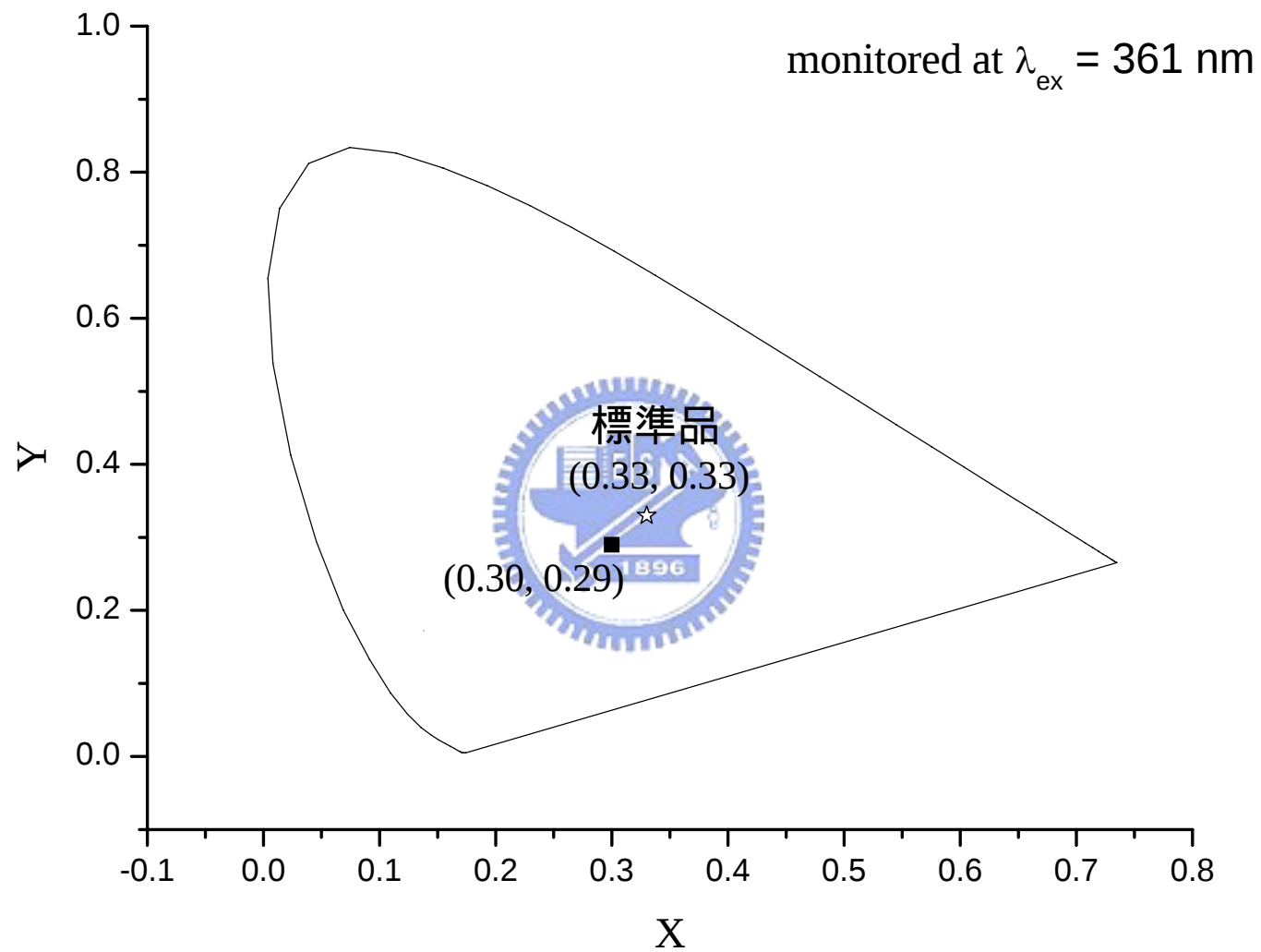


圖 31. $(\text{Y}_{0.65}\text{Gd}_{0.35})\text{BO}_3:0.5\%\text{Ce}^{3+}, 5\%\text{Tb}^{3+}, 1\%\text{Eu}^{3+}$ 之色度座標

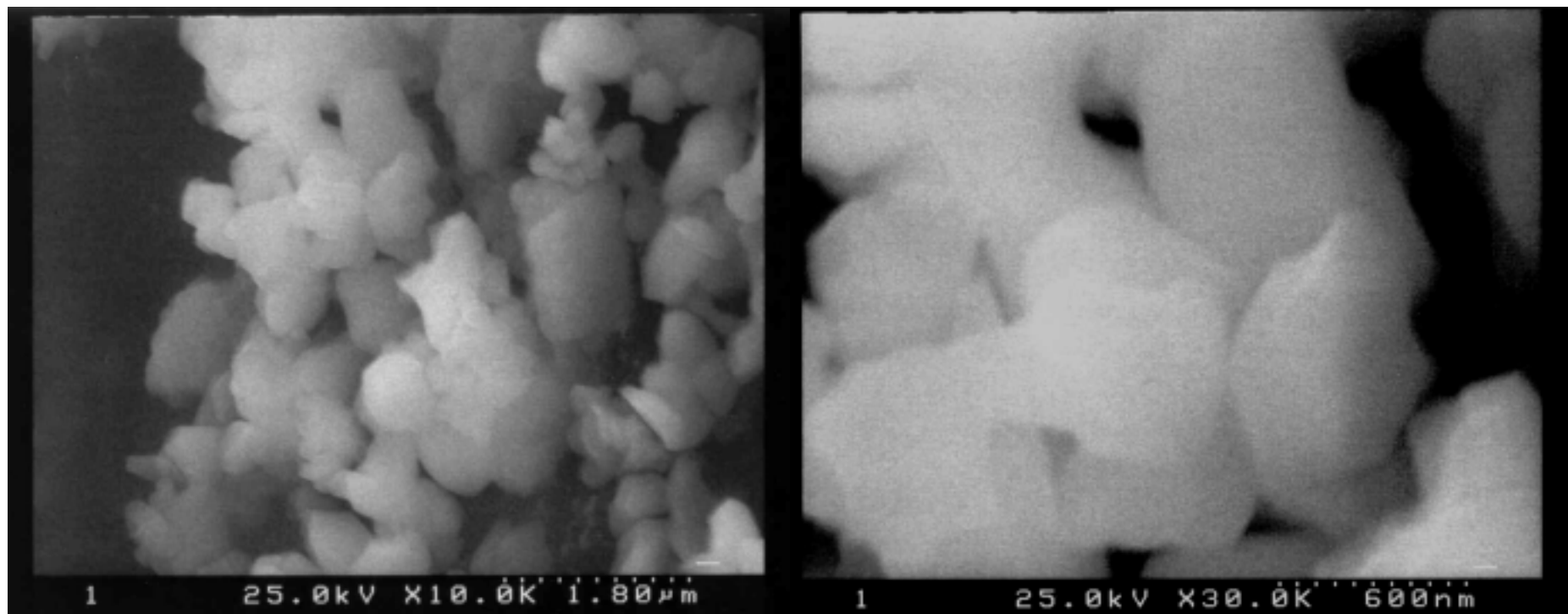


圖 32. $(Y_{0.65}Gd_{0.35})BO_3:0.5\%Ce^{3+}, 5\%Tb^{3+}, 1\%Eu^{3+}$ 螢光體之 SEM 影像

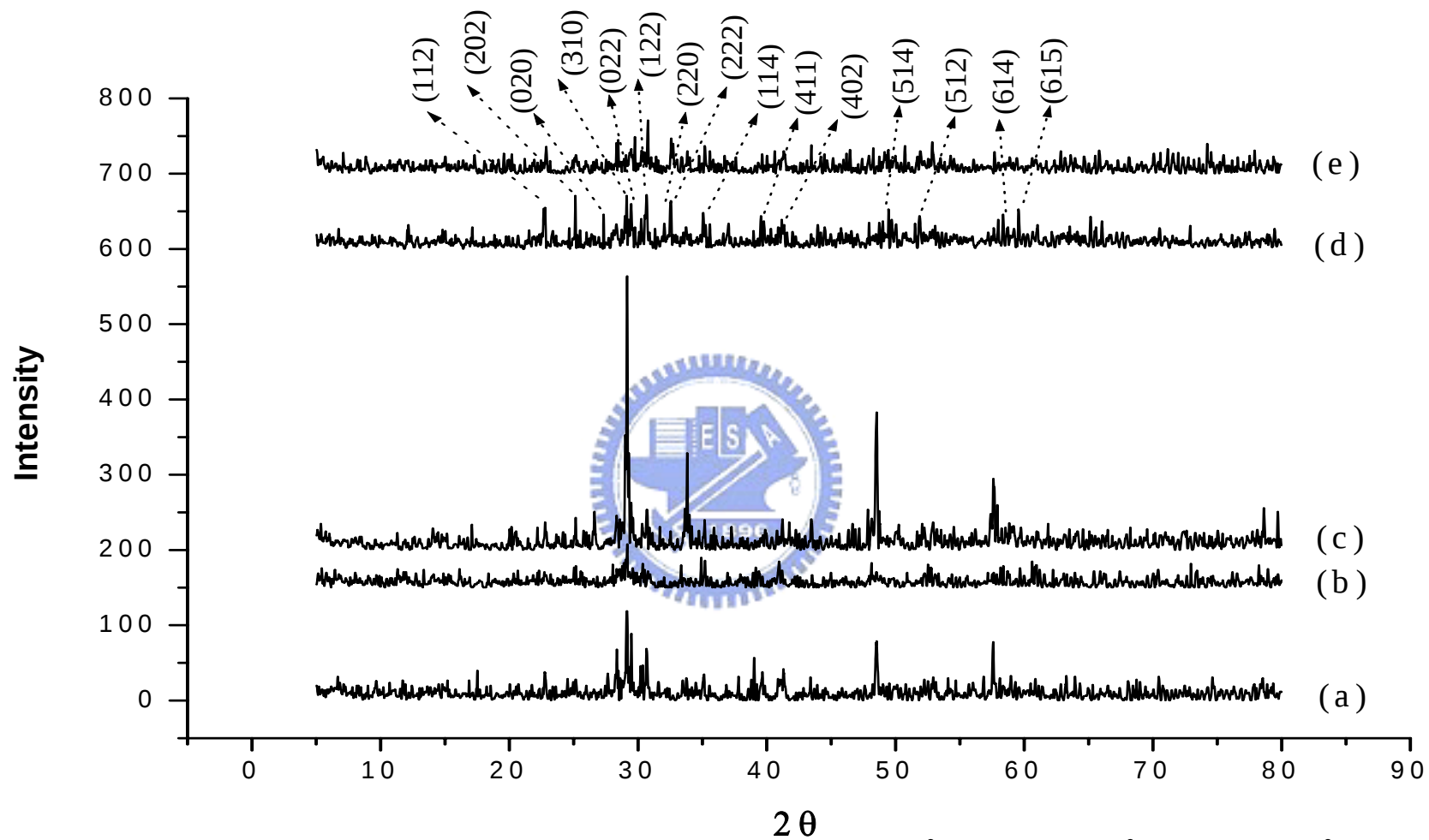


圖 33. 不同製程條件下所合成 Y_2SiO_5 XRD 圖譜之比較：(a) 1300°C , 8hr (b) 1400°C , 8hr (c) 1200°C , 8hr
(d) 1300°C , 10hr (5wt% B_2O_3 助熔劑)與(e) 1400°C , 10hr (5wt% B_2O_3 助熔劑)

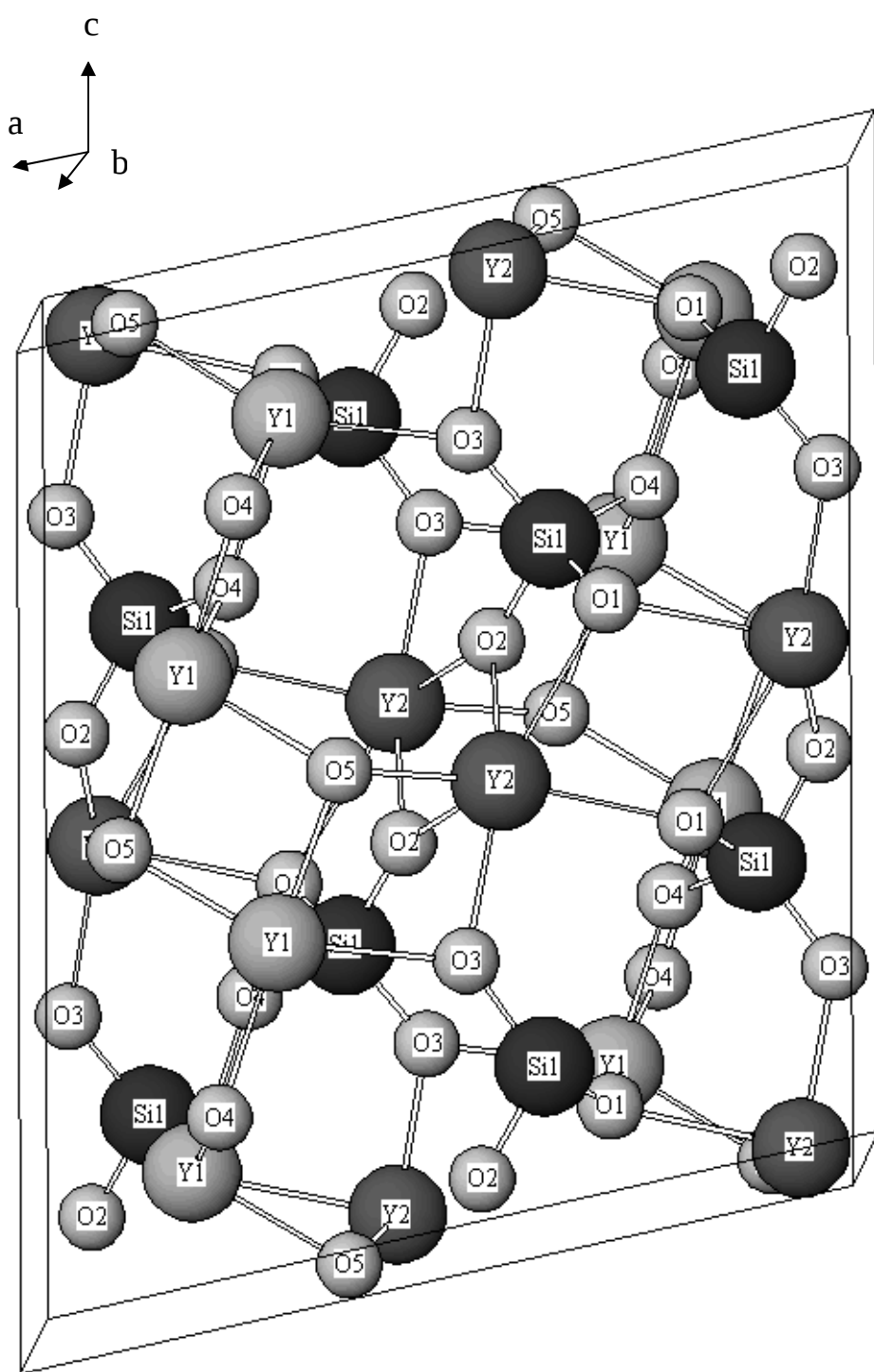


圖 34. Y_2SiO_5 之立體結構圖

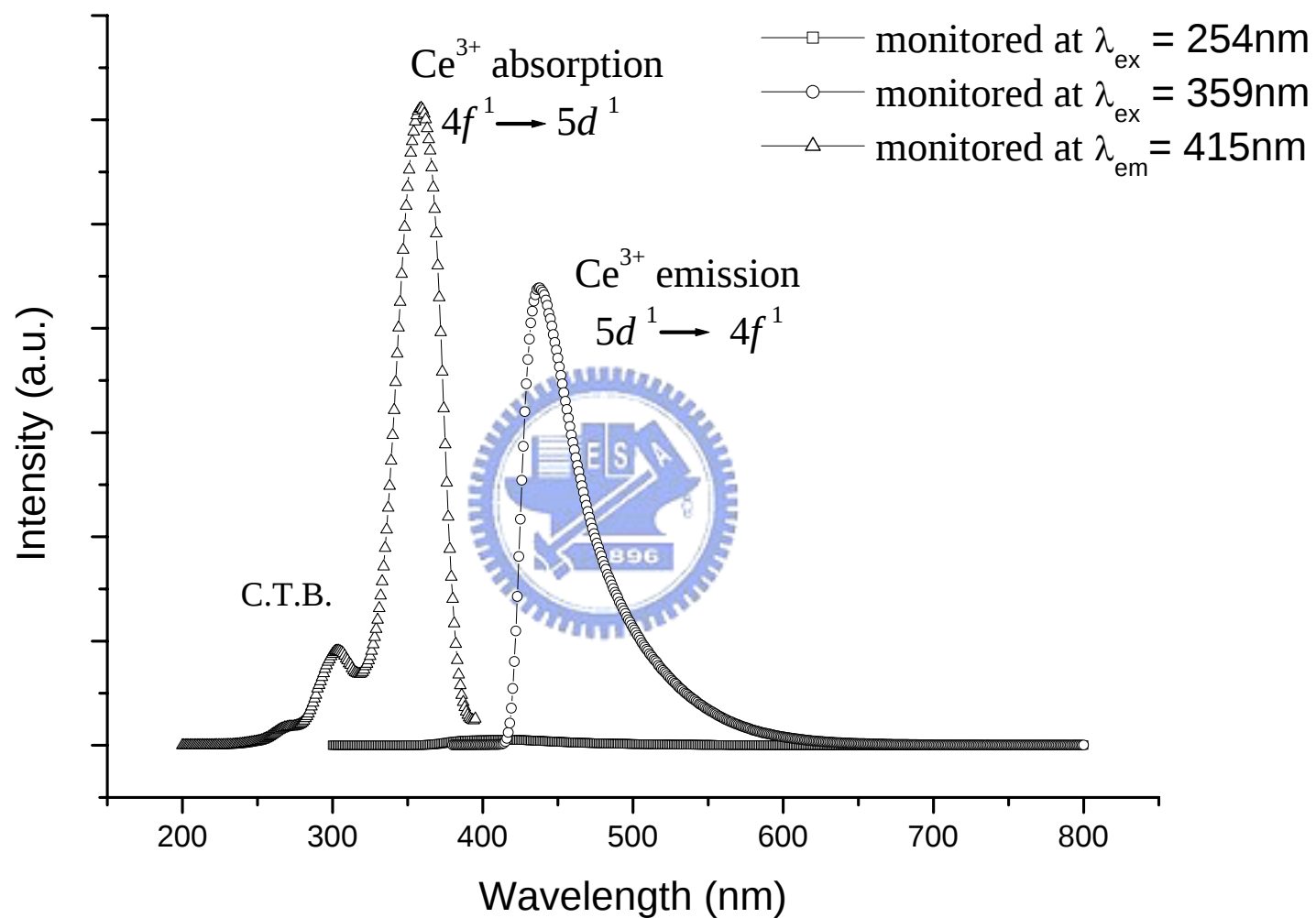


圖 35. $\text{Y}_2\text{SiO}_5:1\%\text{Ce}^{3+}$ 螢光體光致發光與激發光譜

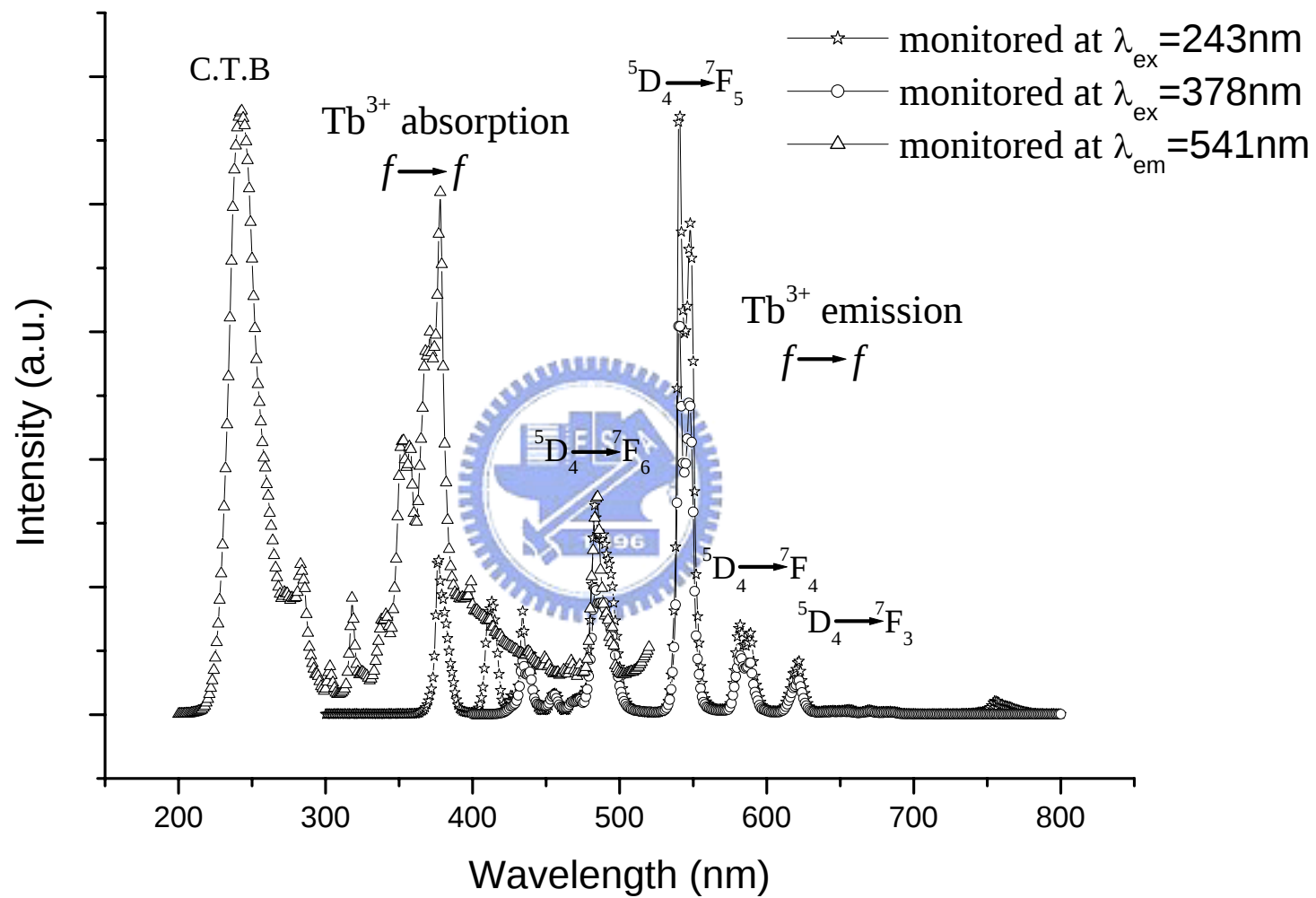


圖 36. $\text{Y}_2\text{SiO}_5:1\%\text{Tb}^{3+}$ 螢光體光致發光與激發光譜

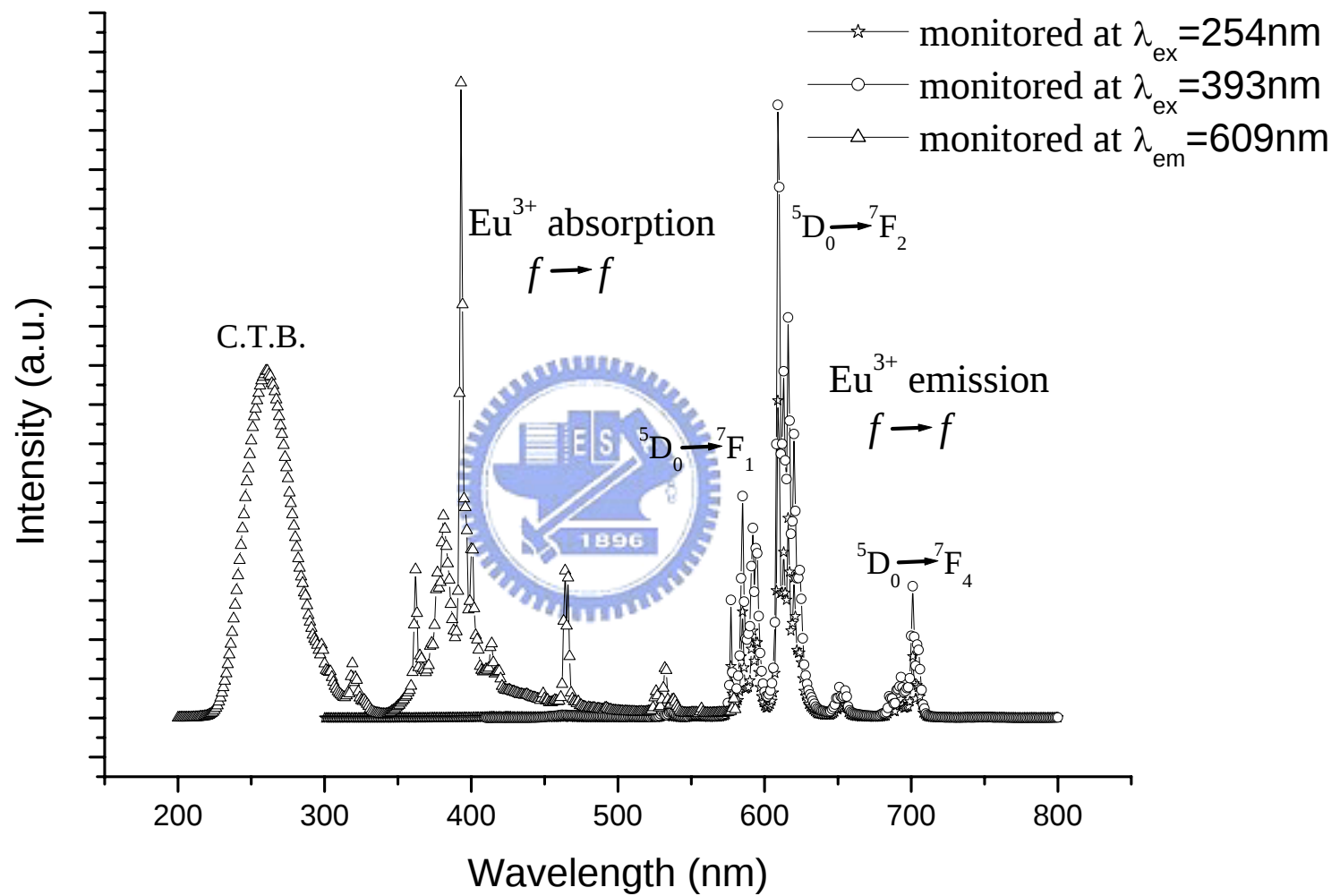


圖 37. $\text{Y}_2\text{SiO}_5:1\%\text{Eu}^{3+}$ 螢光體光致發光與激發光譜

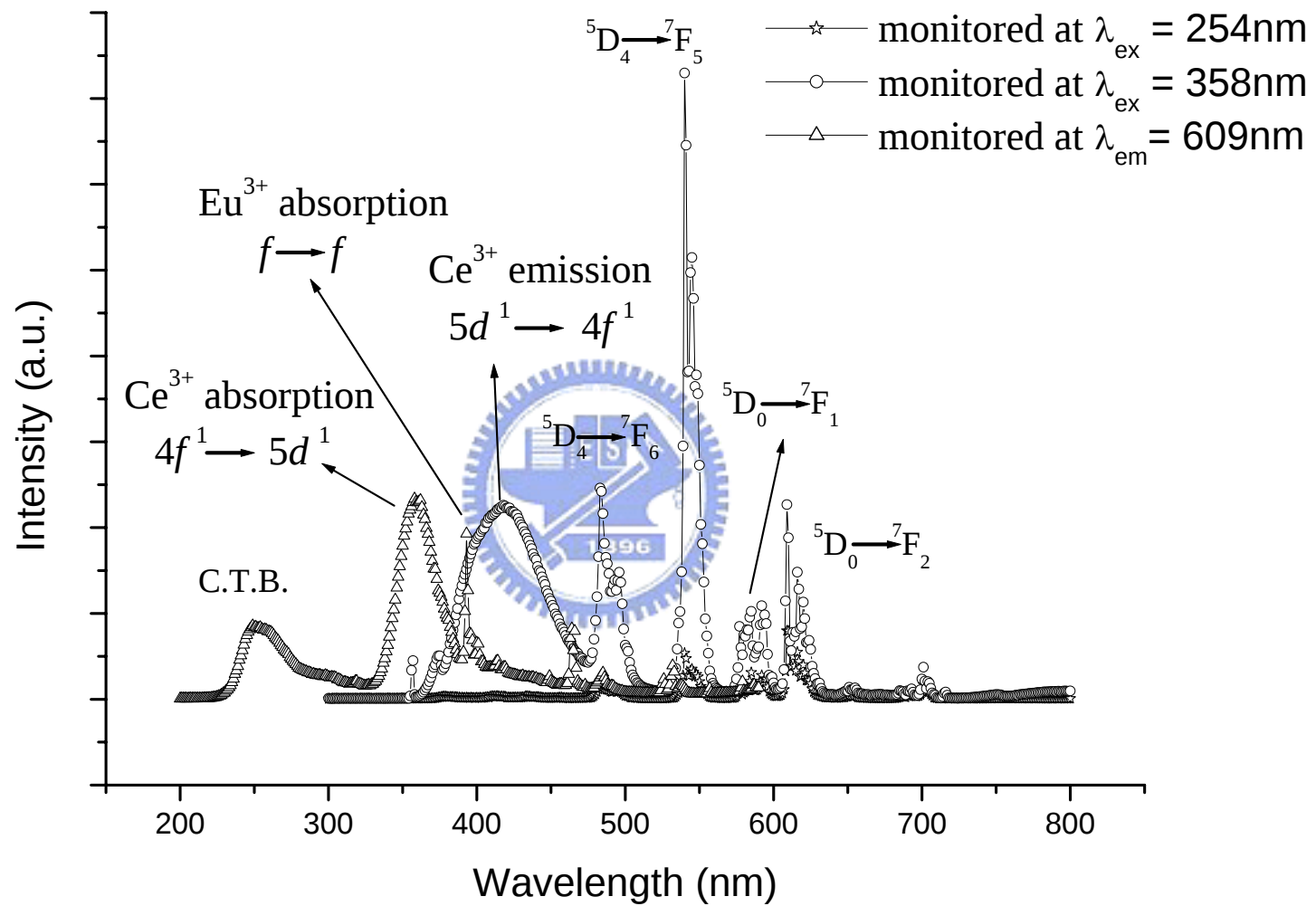


圖 38. $\text{Y}_2\text{SiO}_5:1\%\text{Ce}^{3+}, 5.5\%\text{Tb}^{3+}, 1.5\%\text{Eu}^{3+}$ 螢光體螢光與激發光譜

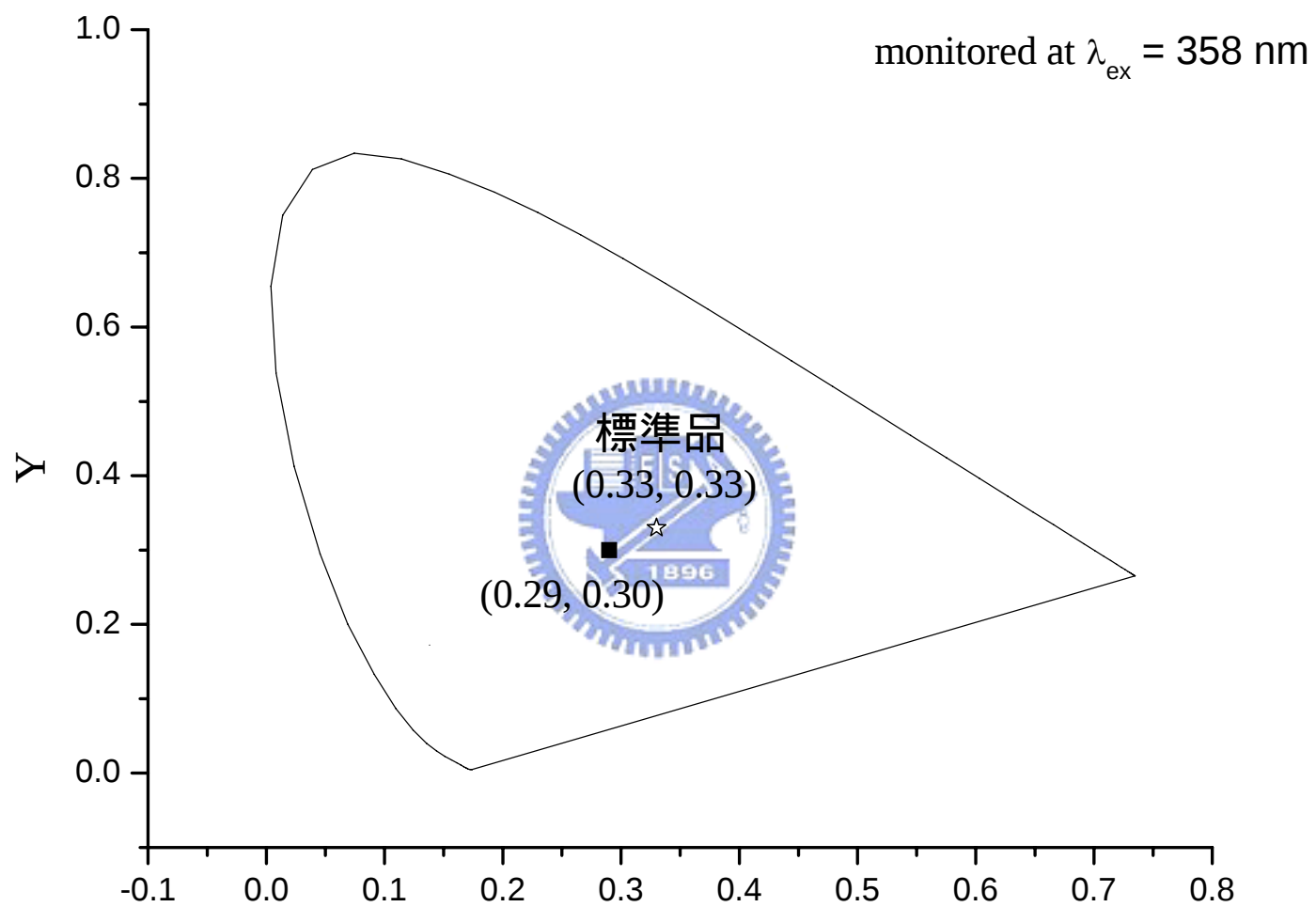


圖 39. $\text{Y}_2\text{SiO}_5:1\%\text{Ce}^{3+}, 5.5\%\text{Tb}^{3+}, 1.5\%\text{Eu}^{3+}$ 之色度座標

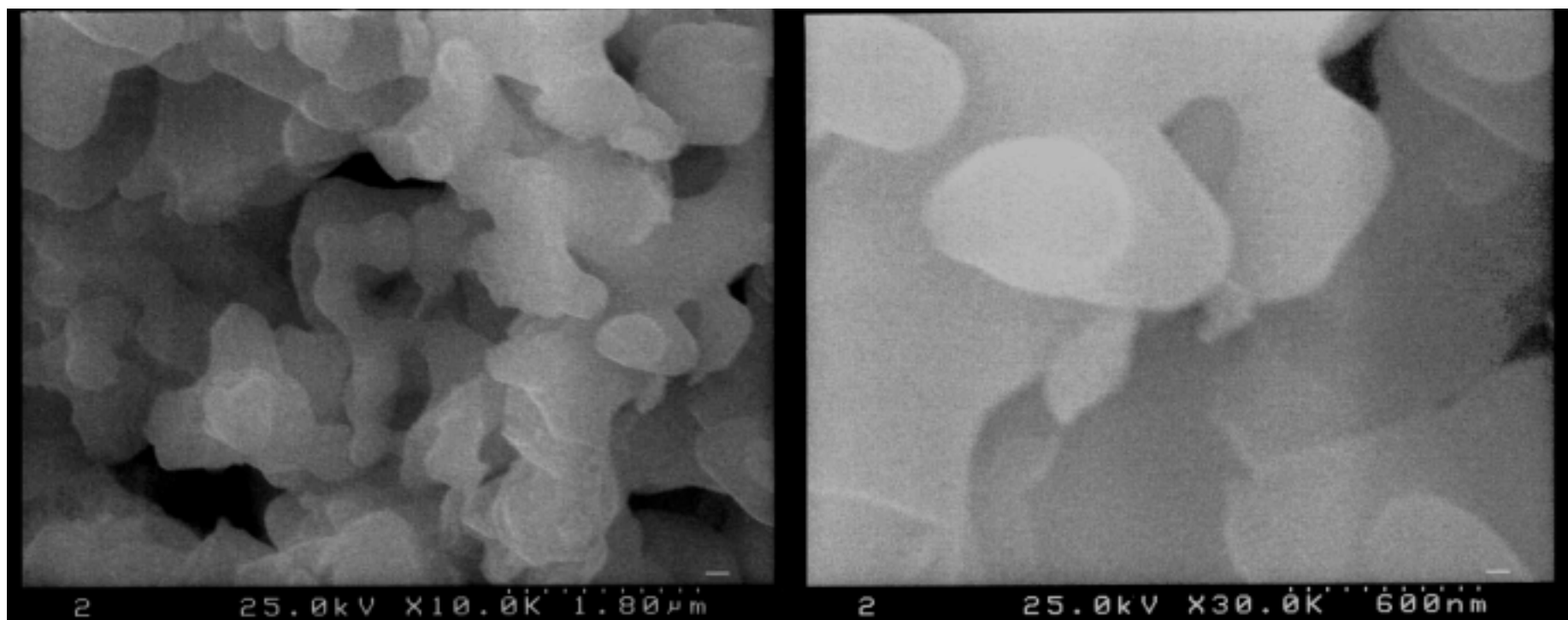


圖 40. $\text{Y}_2\text{SiO}_5:1\%\text{Ce}^{3+}, 5.5\%\text{Tb}^{3+}, 1.5\%\text{Eu}^{3+}$ 螢光體之 SEM 影像

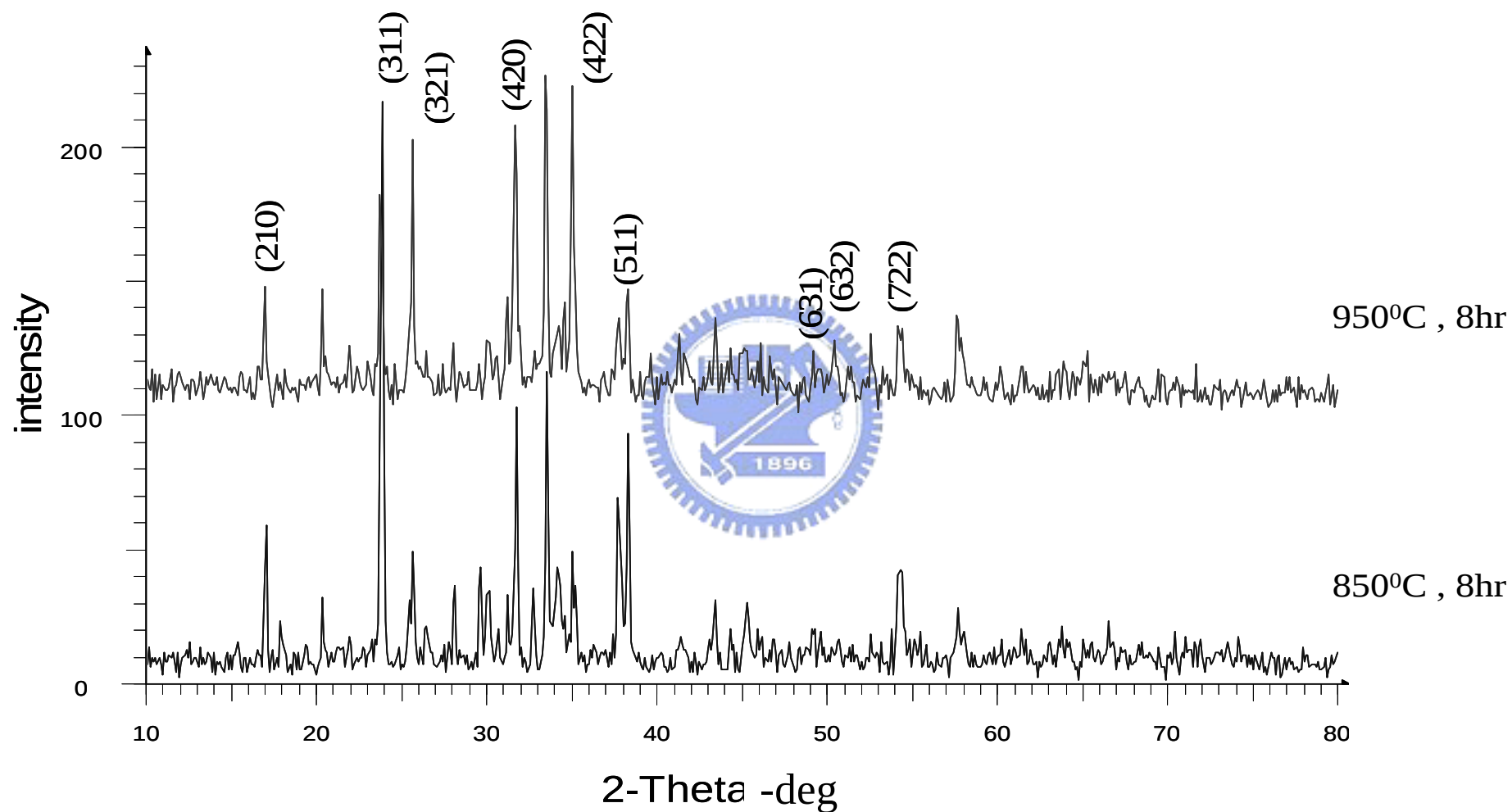


圖 41. 不同條件下於密閉石英管中所製得 $(\text{Sr}_{0.5}\text{Ba}_{0.5})\text{Al}_2\text{S}_4$ 產物 XRD 圖之比較

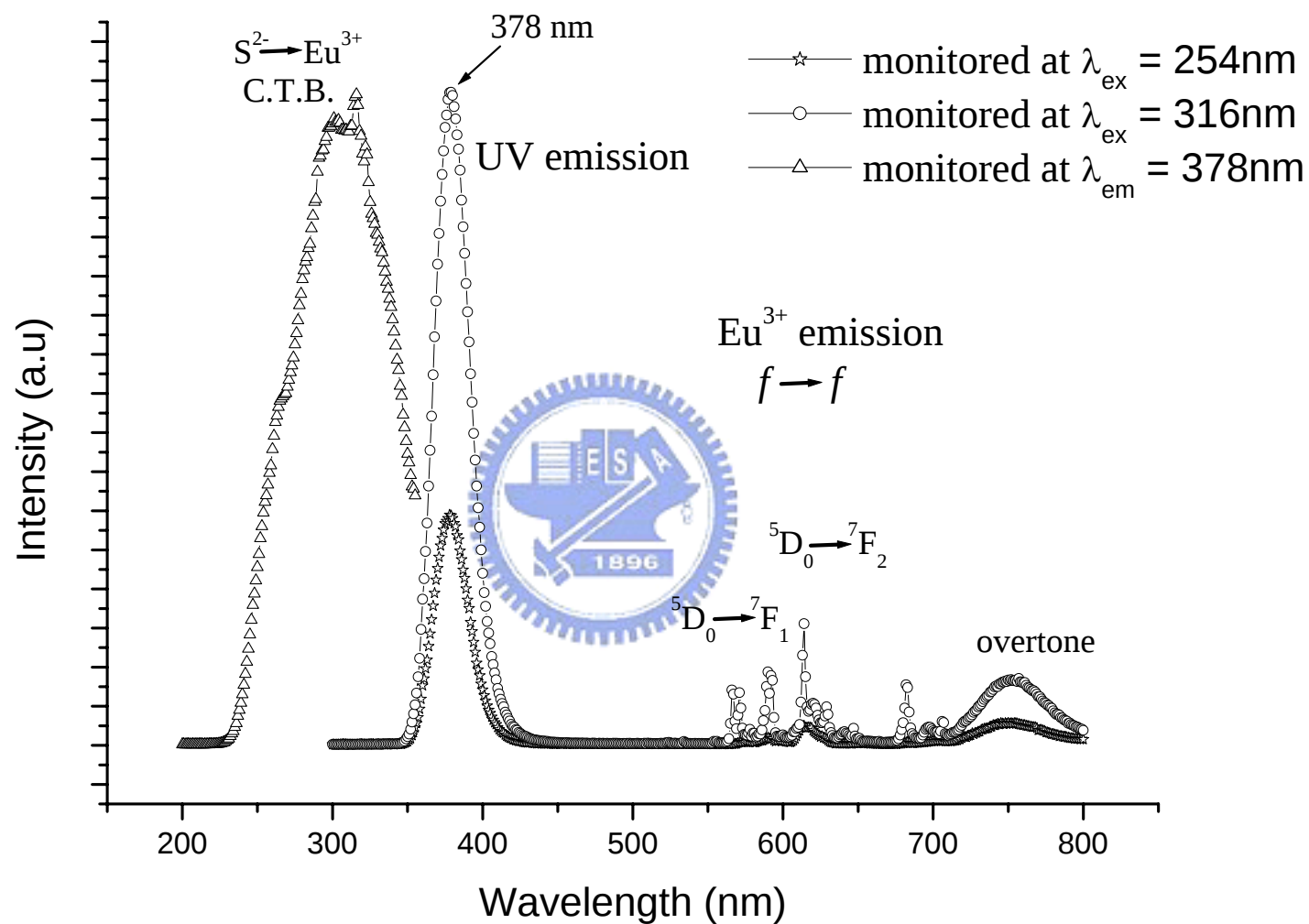


圖 42. $(\text{Sr}_{0.5}\text{Ba}_{0.5})\text{Al}_2\text{S}_4:1\%\text{Eu}^{3+}$ 光致發光與激發光譜

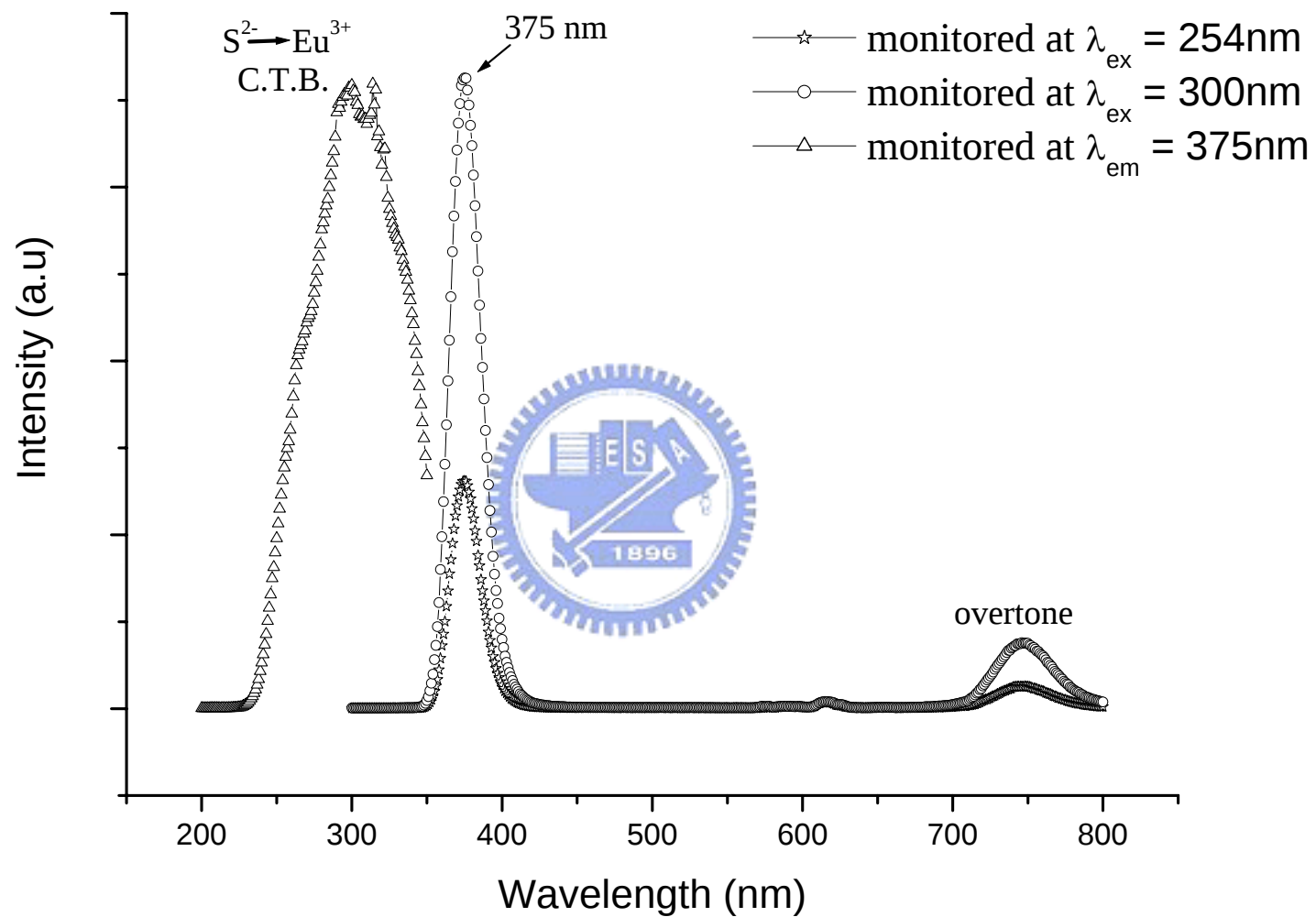


圖 43. $\text{BaAl}_2\text{S}_4:1\%\text{Eu}^{3+}$ 光致發光與激發光譜

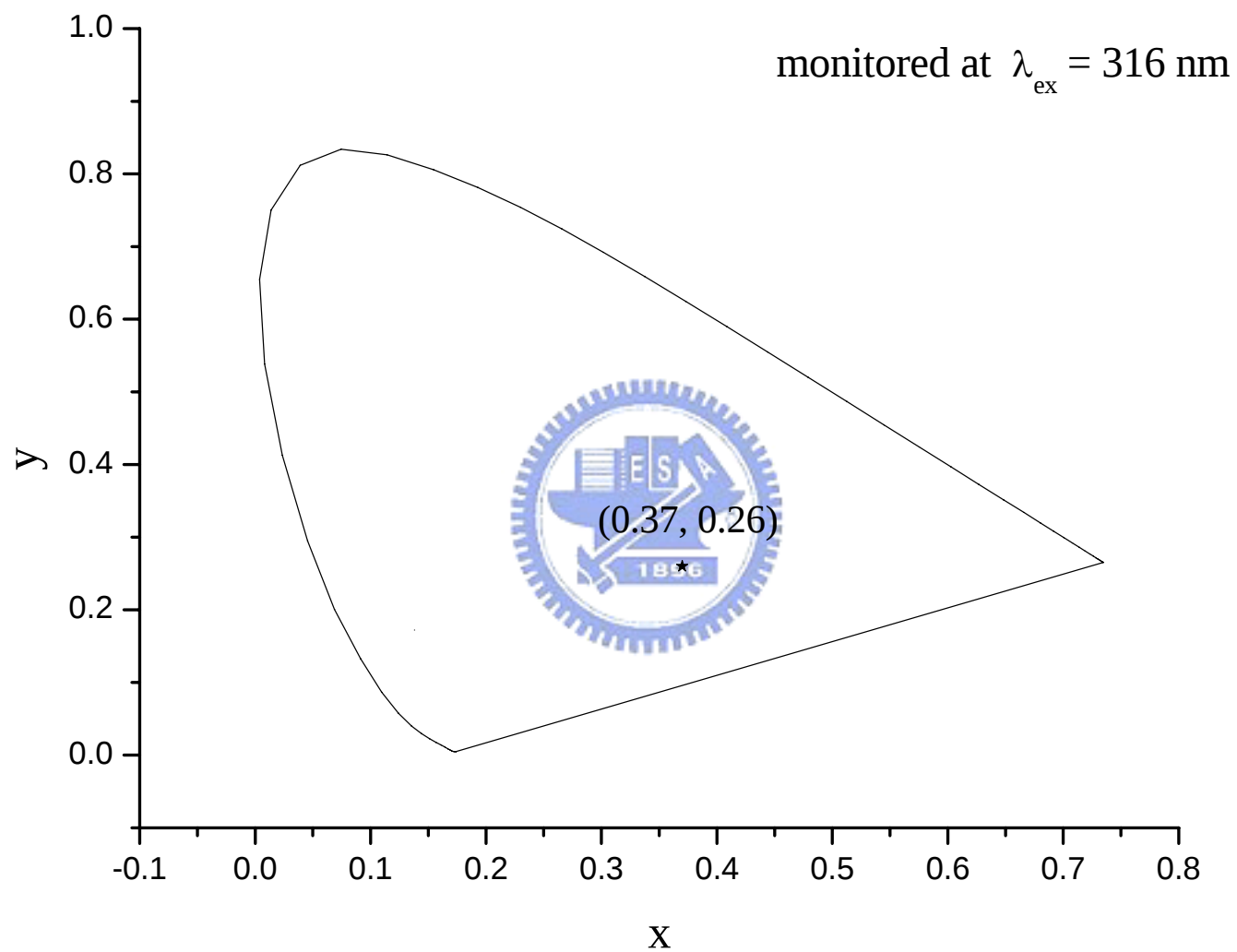


圖 44. $(\text{Sr}_{0.5}\text{Ba}_{0.5})\text{Al}_2\text{S}_4:1\%\text{Eu}^{3+}$ 之色度座標

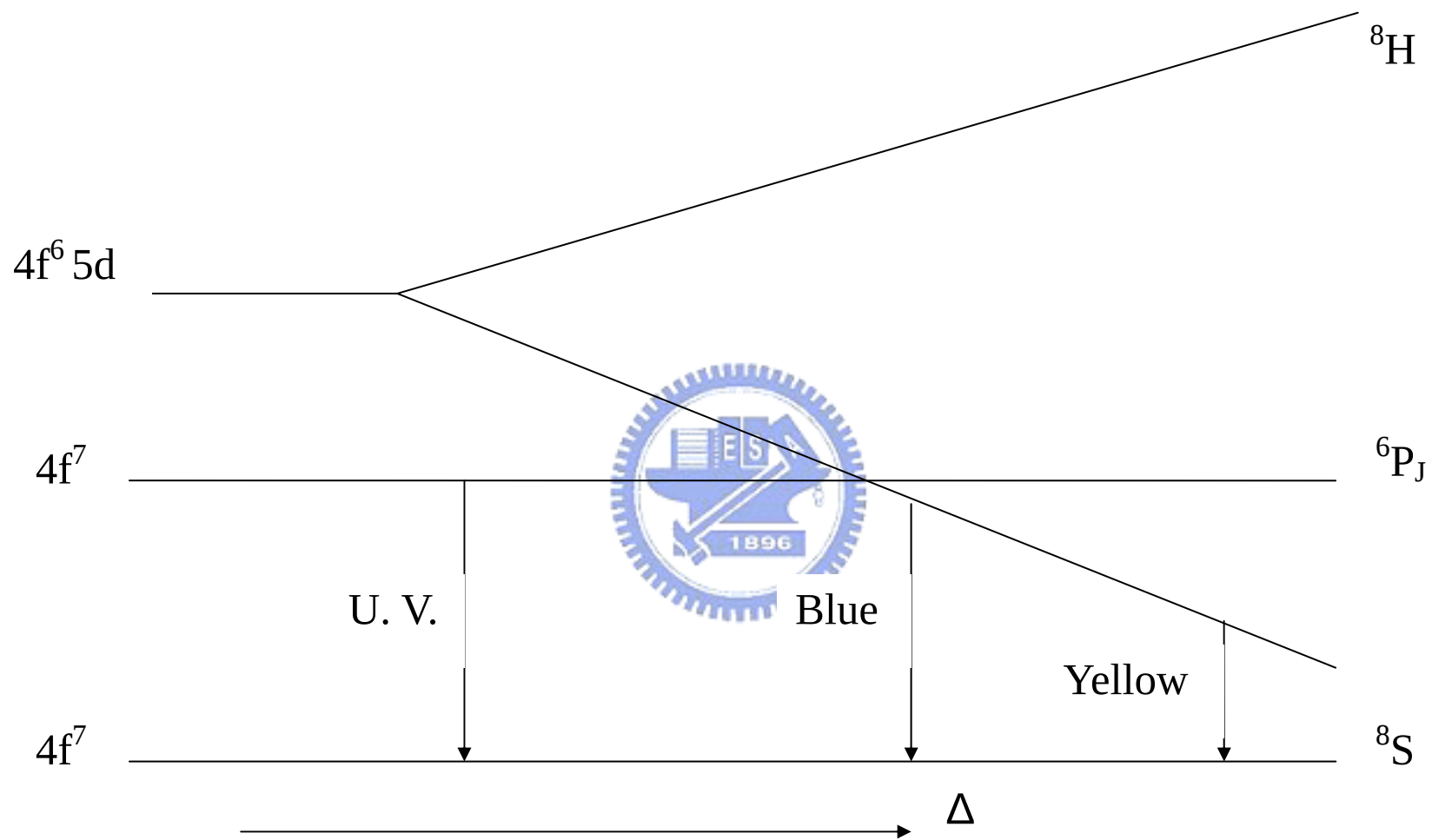


圖 45. 不同結晶場強度對 Eu^{2+} 離子 $4f^7$ 與 $4f^6 5d$ 能階分裂示意圖

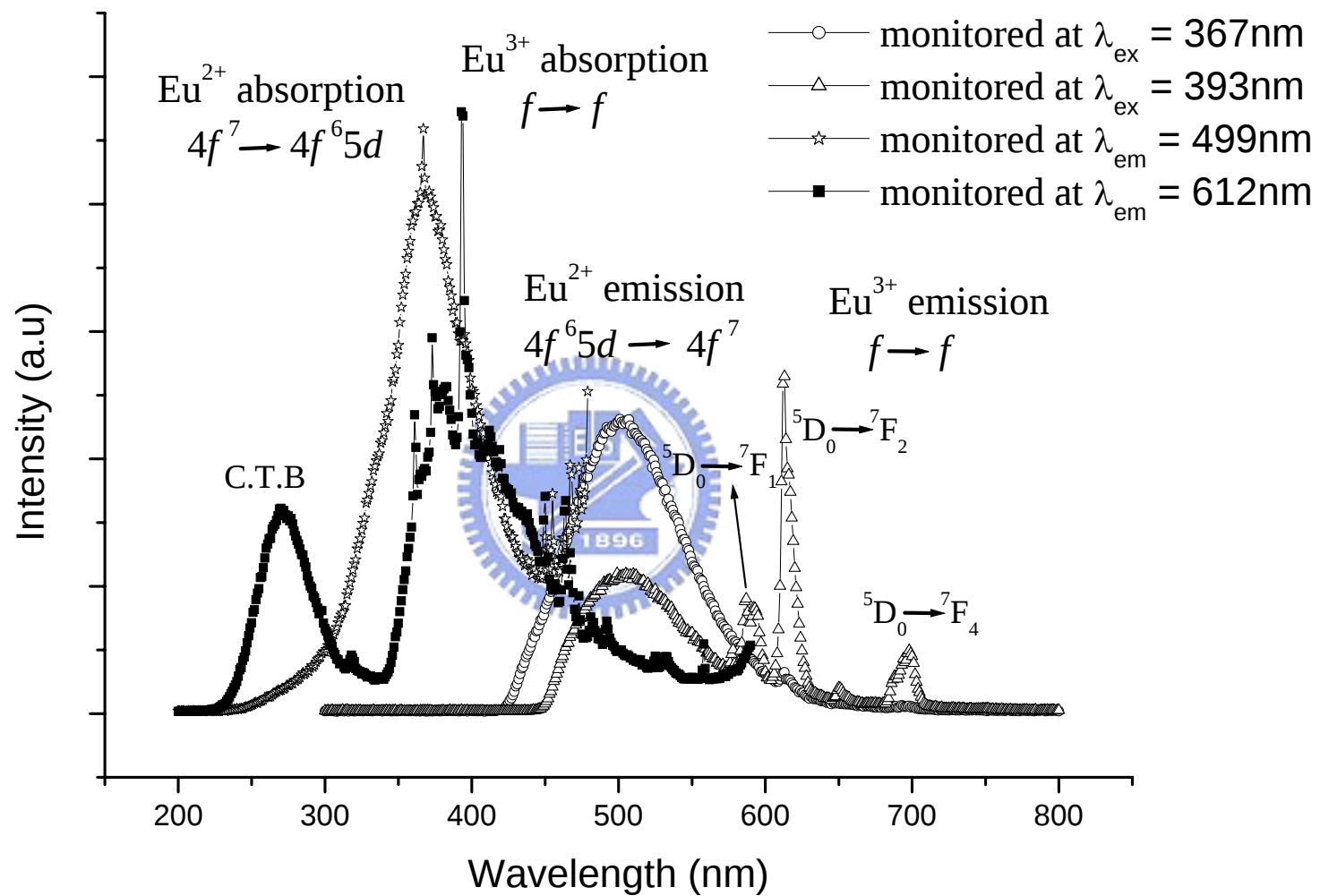


圖 46. 於 1100⁰C 燒結($\text{Sr}_{0.5}\text{Ba}_{0.5}$) Al_2S_4 + 1% Eu_2O_3 (石墨還原)光致發光與激發光譜

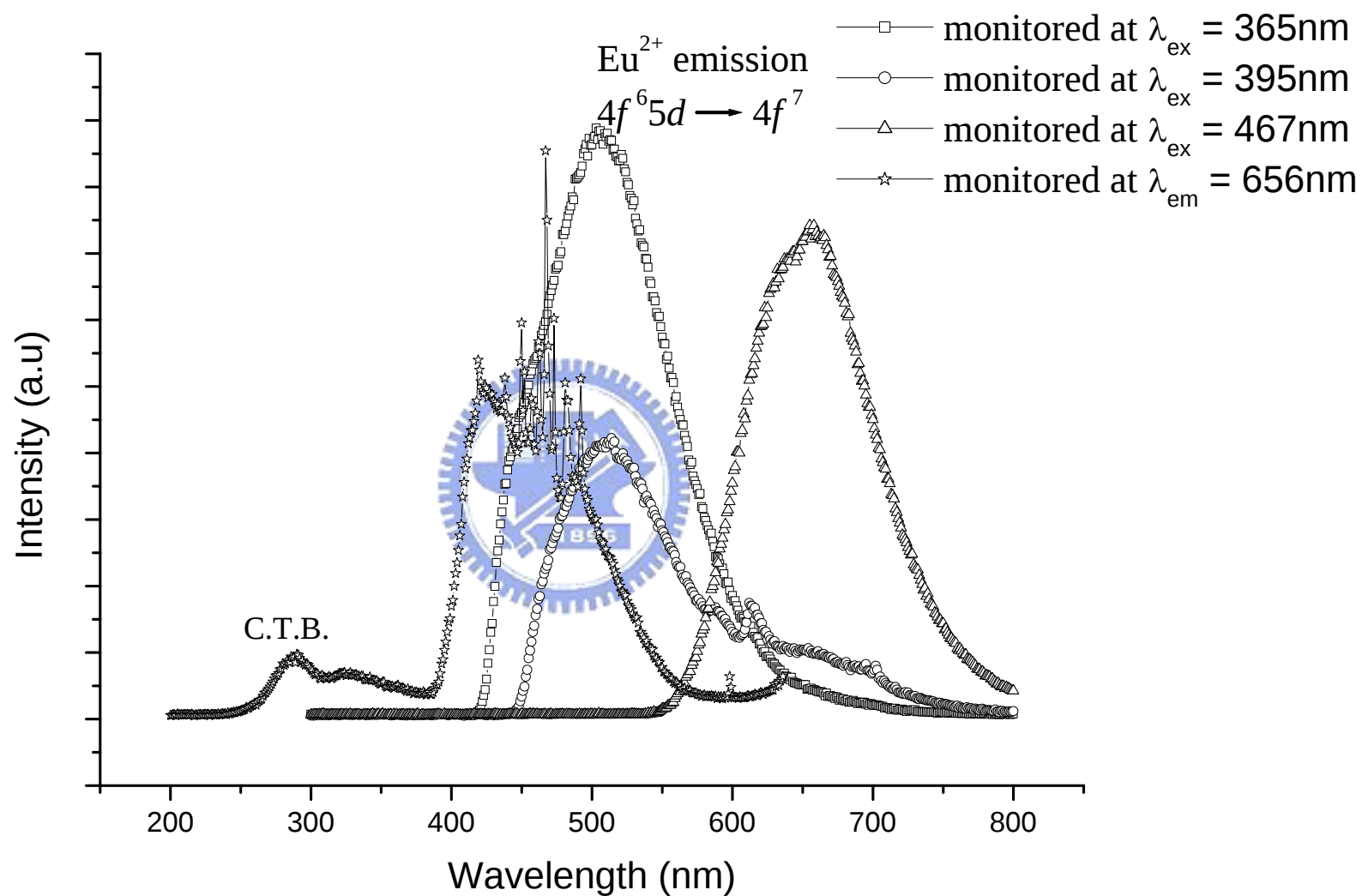


圖 47. 以不同波長激發(Sr_{0.5}Ba_{0.5})Al₂S₄:1%Eu²⁺所得螢光與激發光譜之比較圖

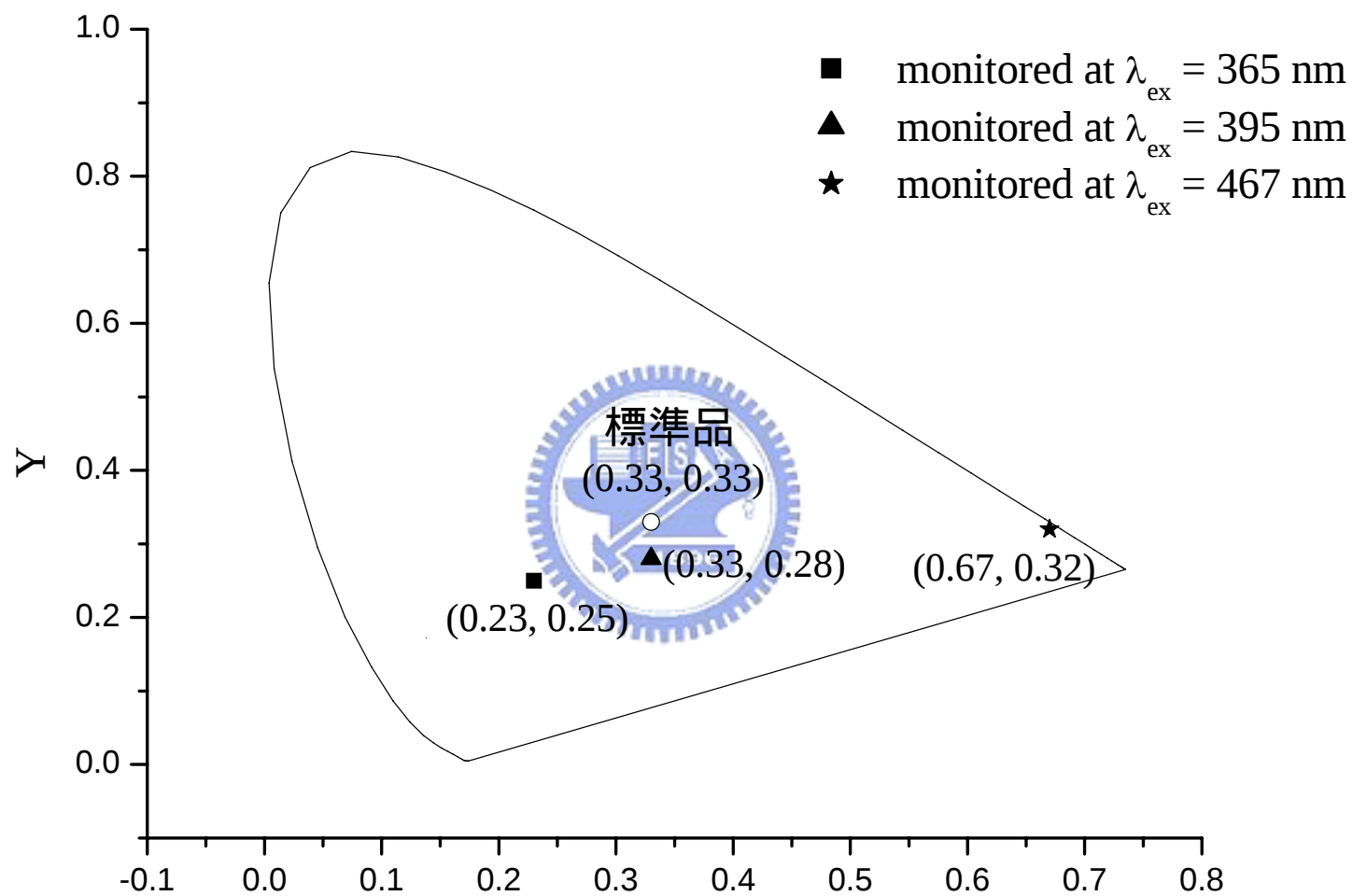


圖 48. 以三種波長激發 $(\text{Sr}_{0.5}\text{Ba}_{0.5})\text{Al}_2\text{S}_4:\text{Eu}^{2+}$ 所測得之色度座標

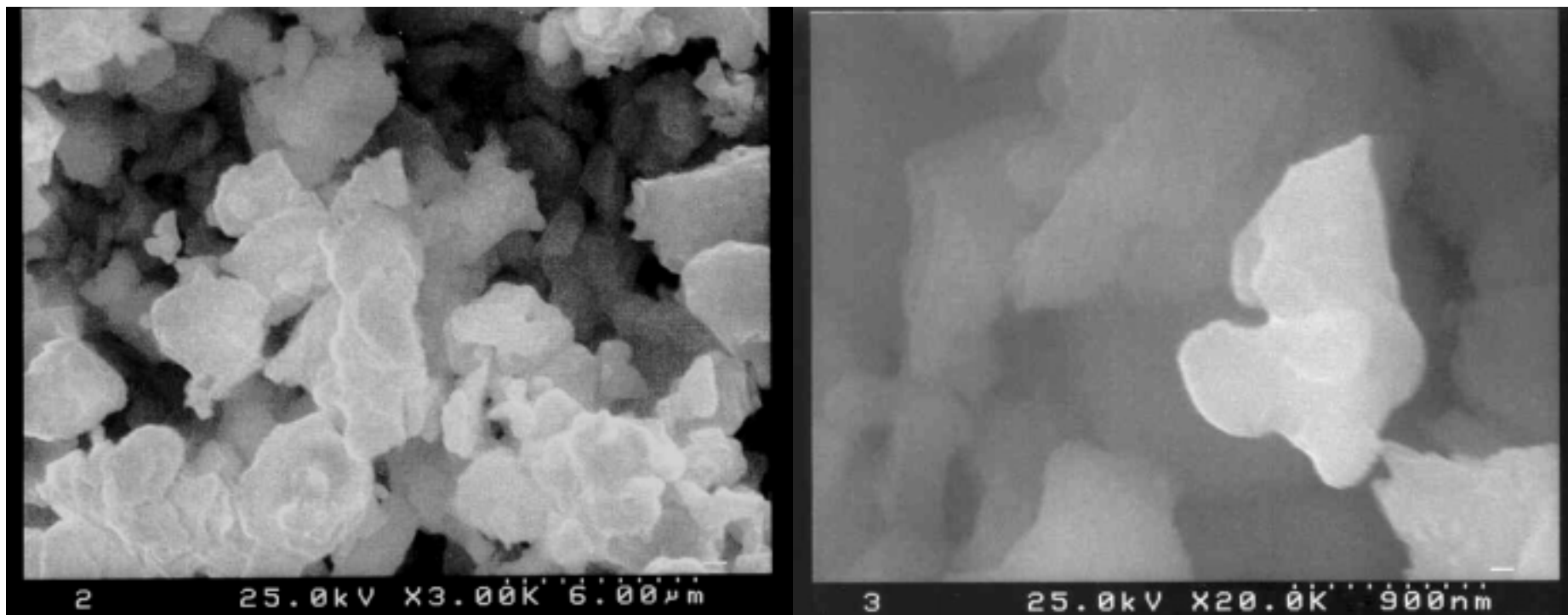


圖 49. $(\text{Sr}_{0.5}\text{Ba}_{0.5})\text{Al}_2\text{S}_4:\text{Eu}^{2+}$ 螢光體之 SEM 影像

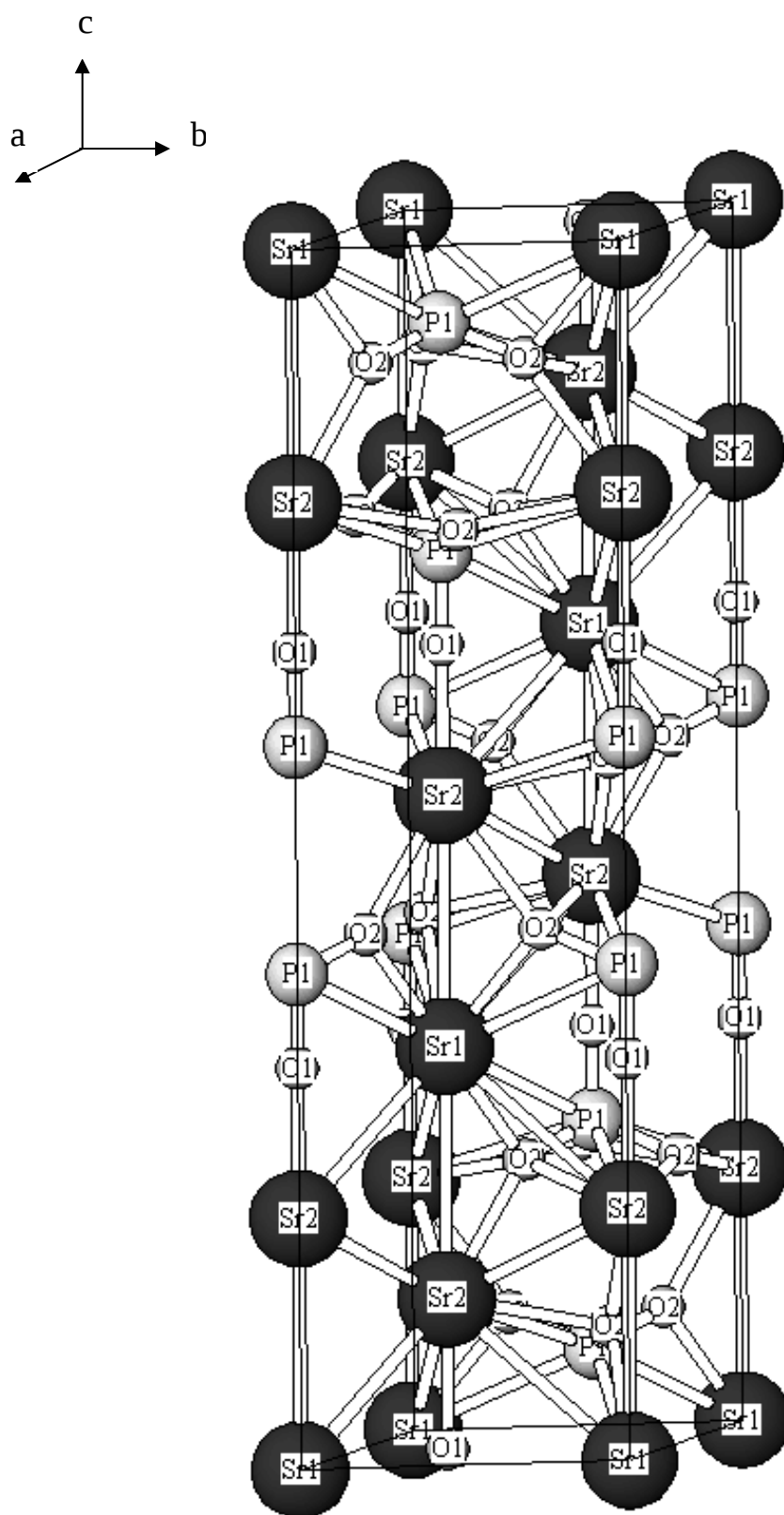


圖 50. $\text{Sr}_3(\text{PO}_4)_2$ 之晶體結構圖

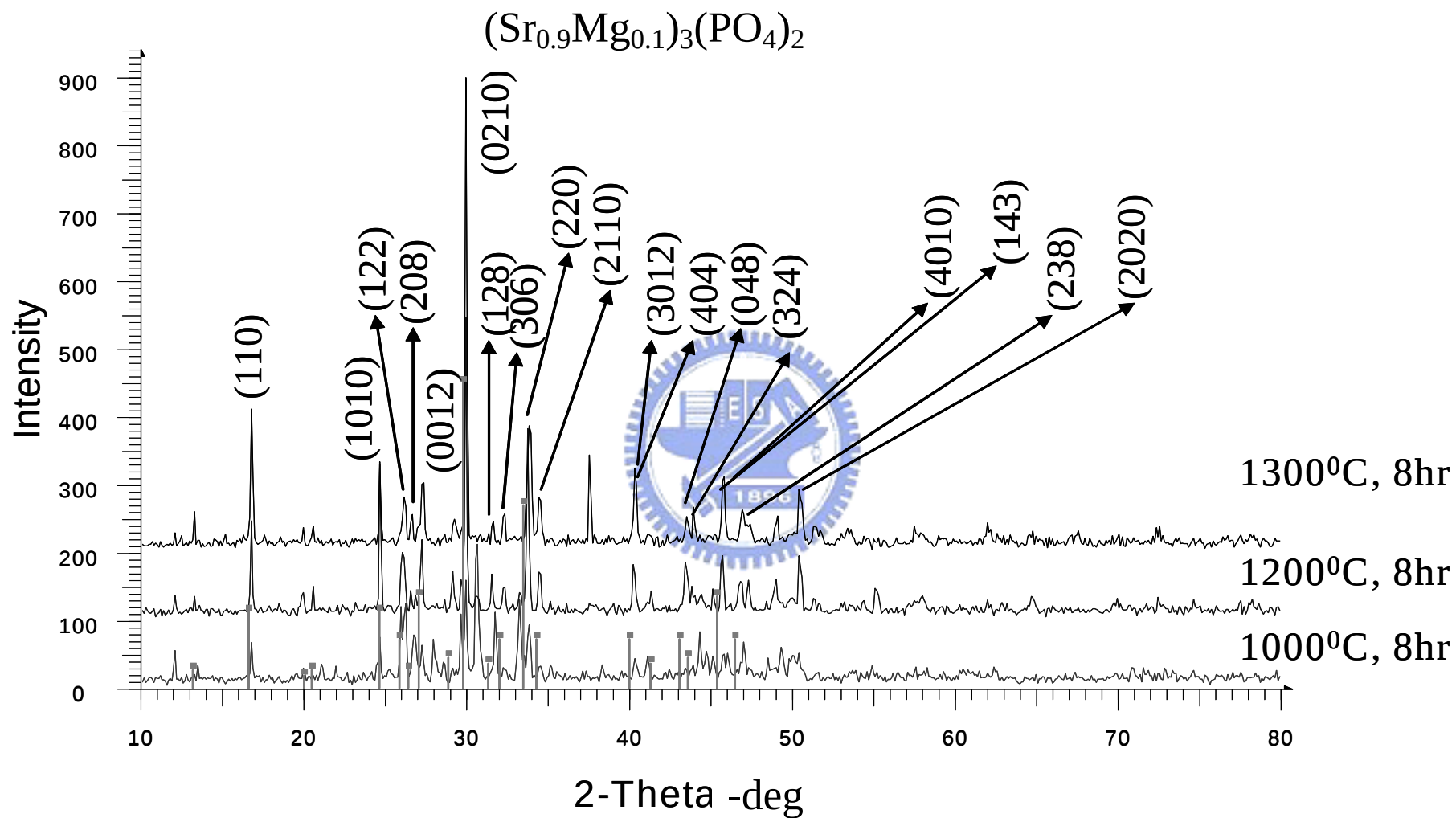


圖 51. 不同溫度所合成 $(\text{Sr}_{0.9}\text{Mg}_{0.1})_3(\text{PO}_4)_2$ 產物 XRD 圖之比較

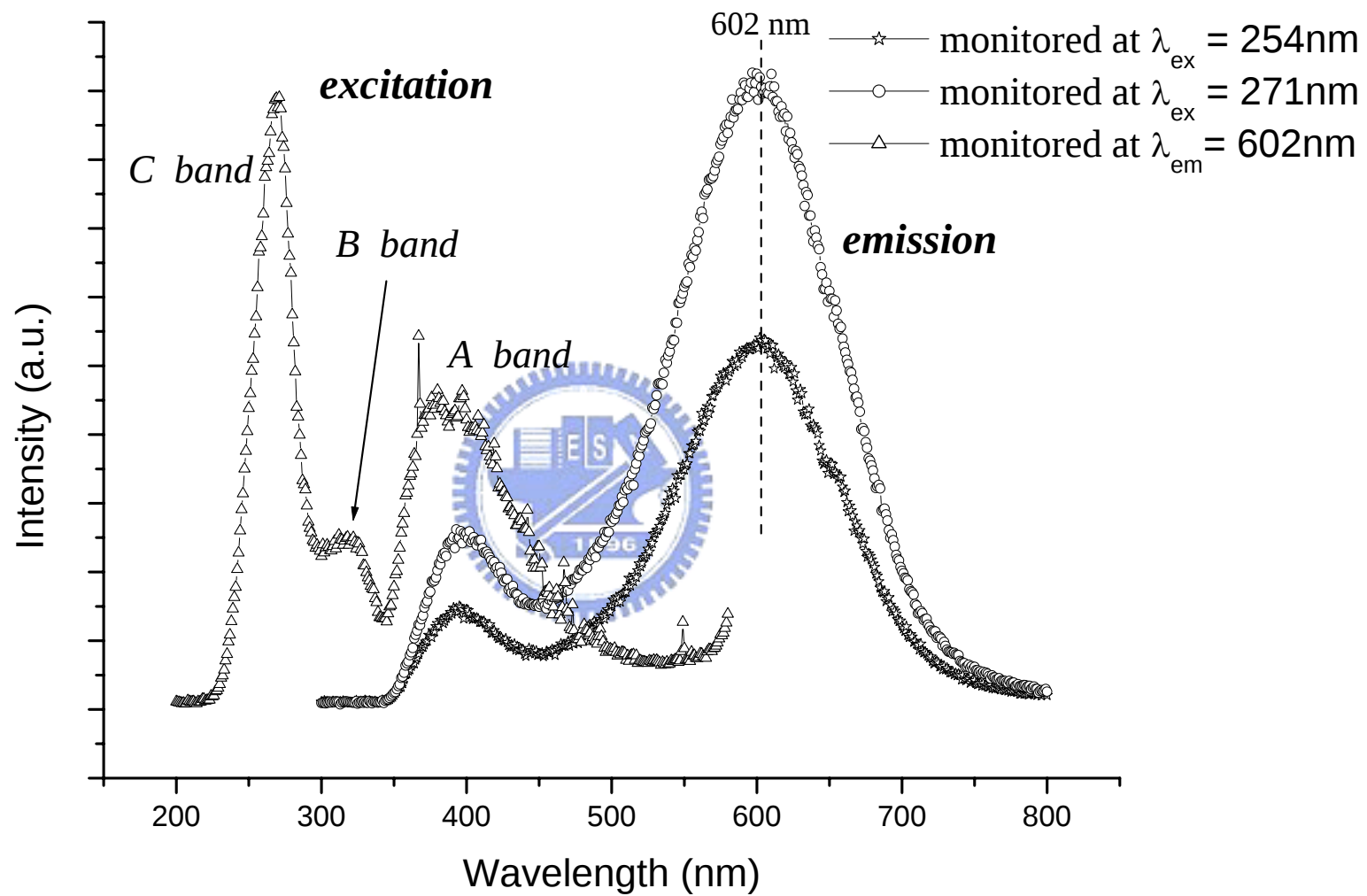


圖 52. $(\text{Sr}_{0.9}\text{Mg}_{0.1})_3(\text{PO}_4)_2:1\%\text{Sn}^{2+}$ 光致發光與激發光譜

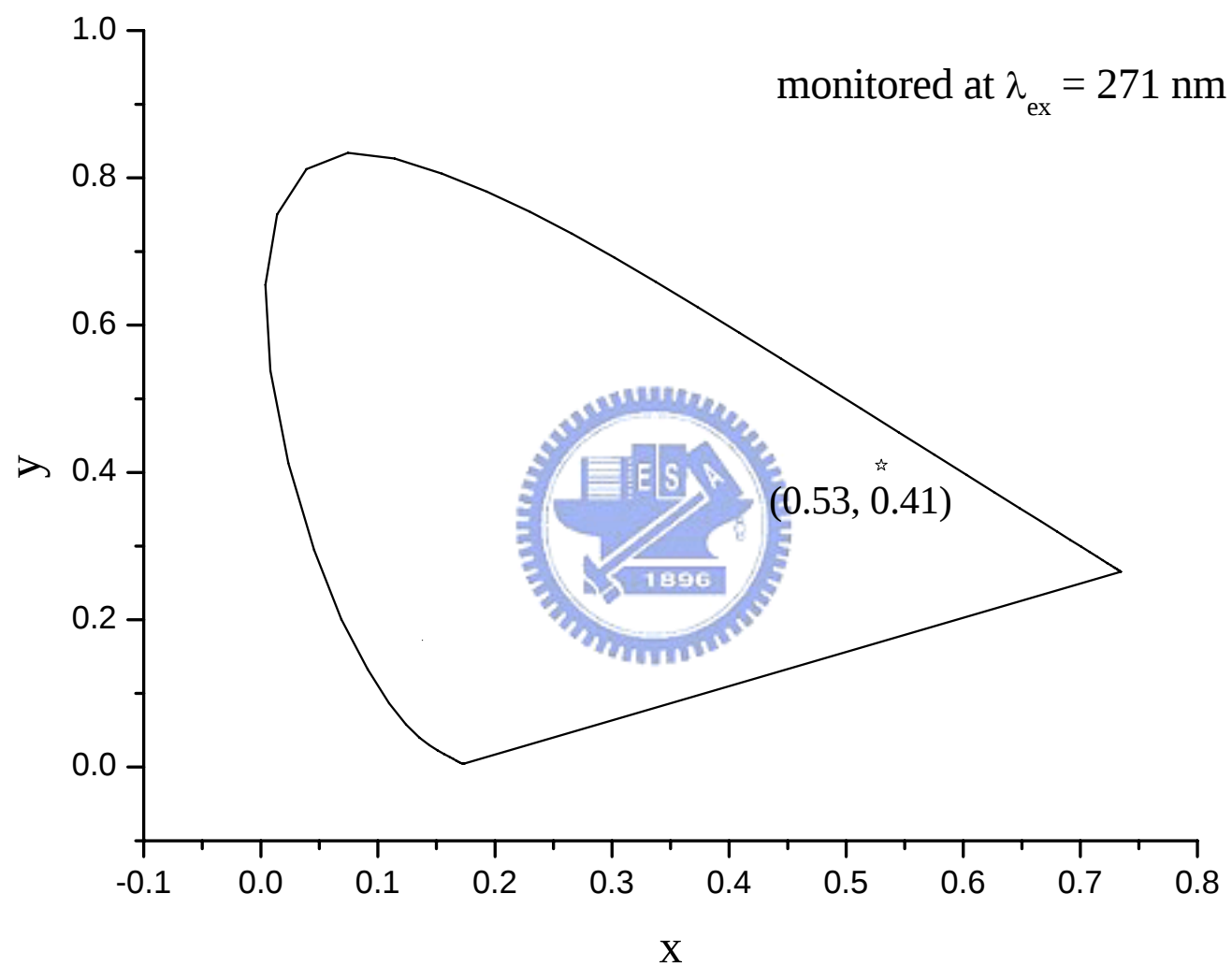


圖 53. $(\text{Sr}_{0.9}\text{Mg}_{0.1})_3(\text{PO}_4)_2:1\%\text{Sn}^{2+}$ 之色度座標

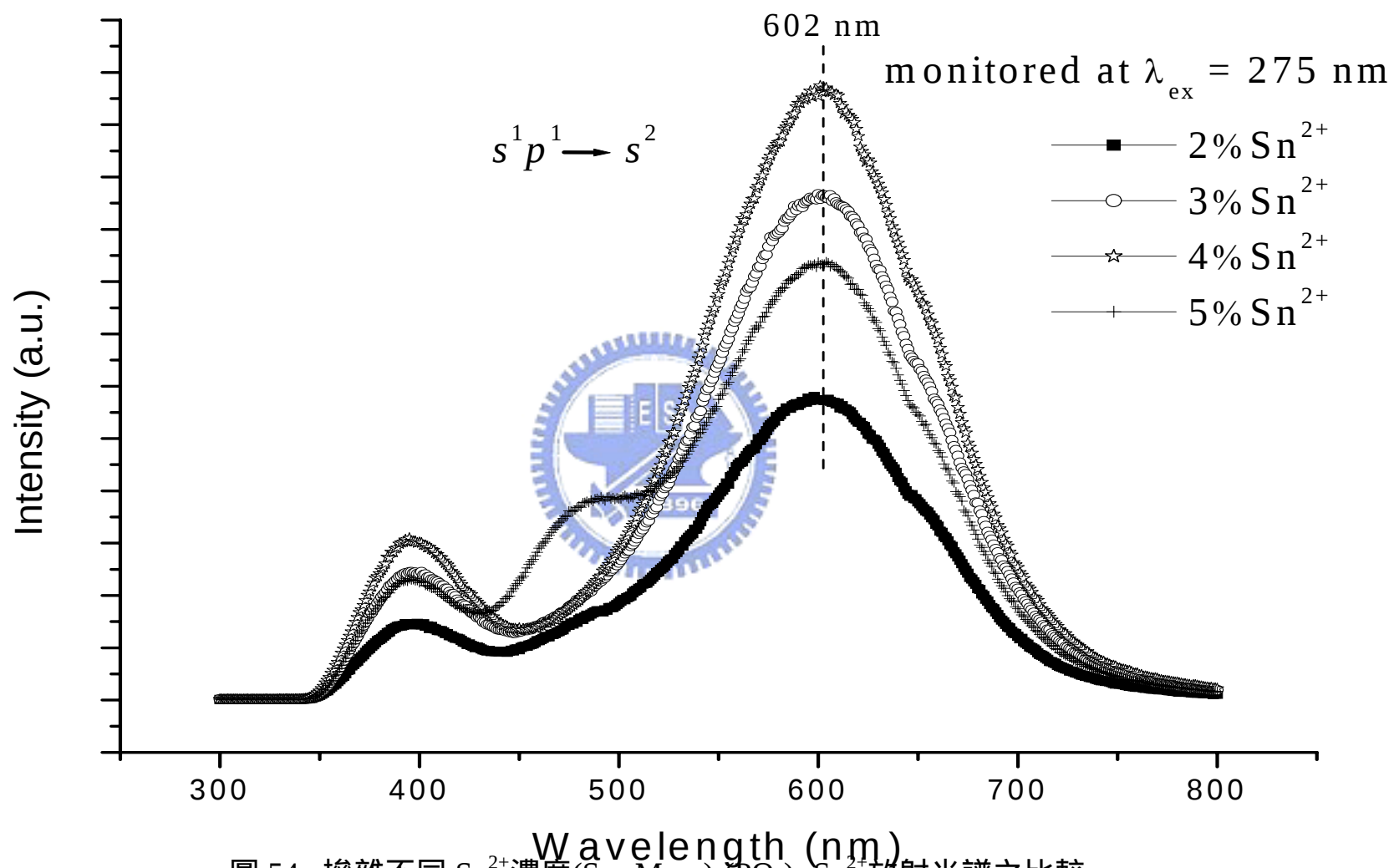


圖 54. 摻雜不同 Sn^{2+} 濃度 $(\text{Sr}_{0.9}\text{Mg}_{0.1})_3(\text{PO}_4)_2:\text{Sn}^{2+}$ 放射光譜之比較

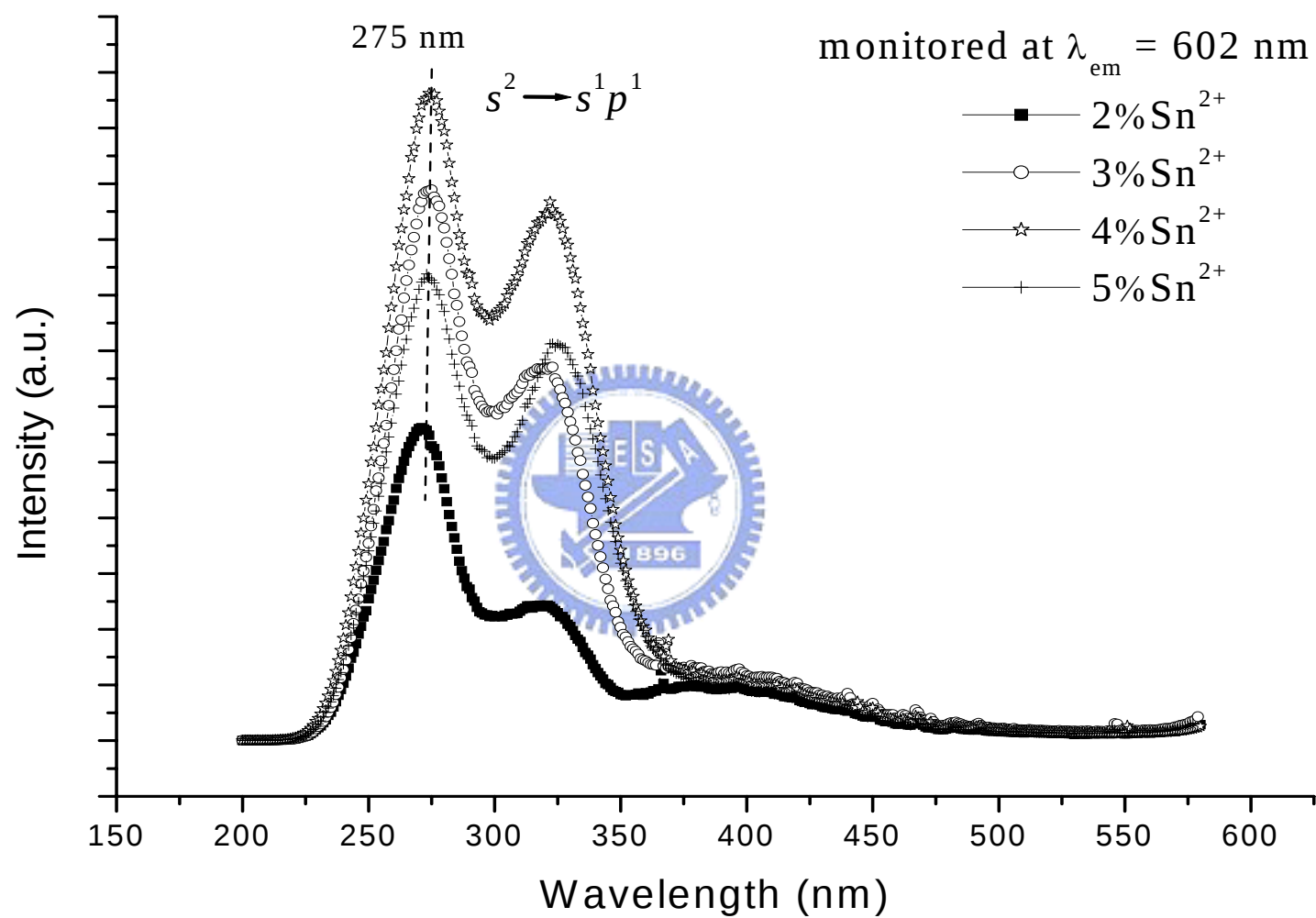


圖 55. 摻雜不同 Sn^{2+} 濃度 $(\text{Sr}_{0.9}\text{Mg}_{0.1})_3(\text{PO}_4)_2:\text{Sn}^{2+}$ 激發光譜之比較

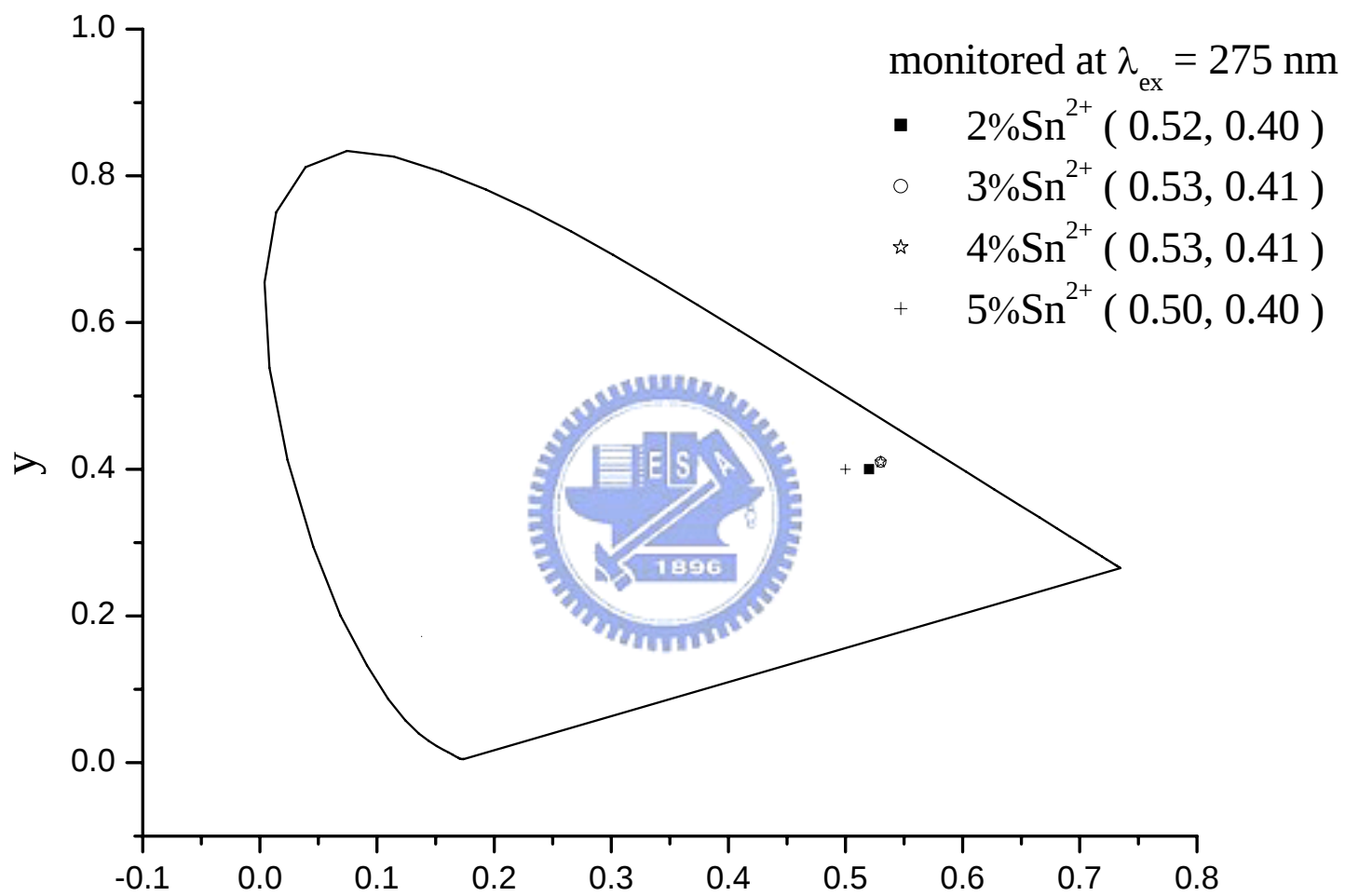


圖 56. 摻雜不同濃度 Sn²⁺ 之 (Sr_{0.9}Mg_{0.1})₃(PO₄)₂:Sn²⁺ 所測得色度座標之比較

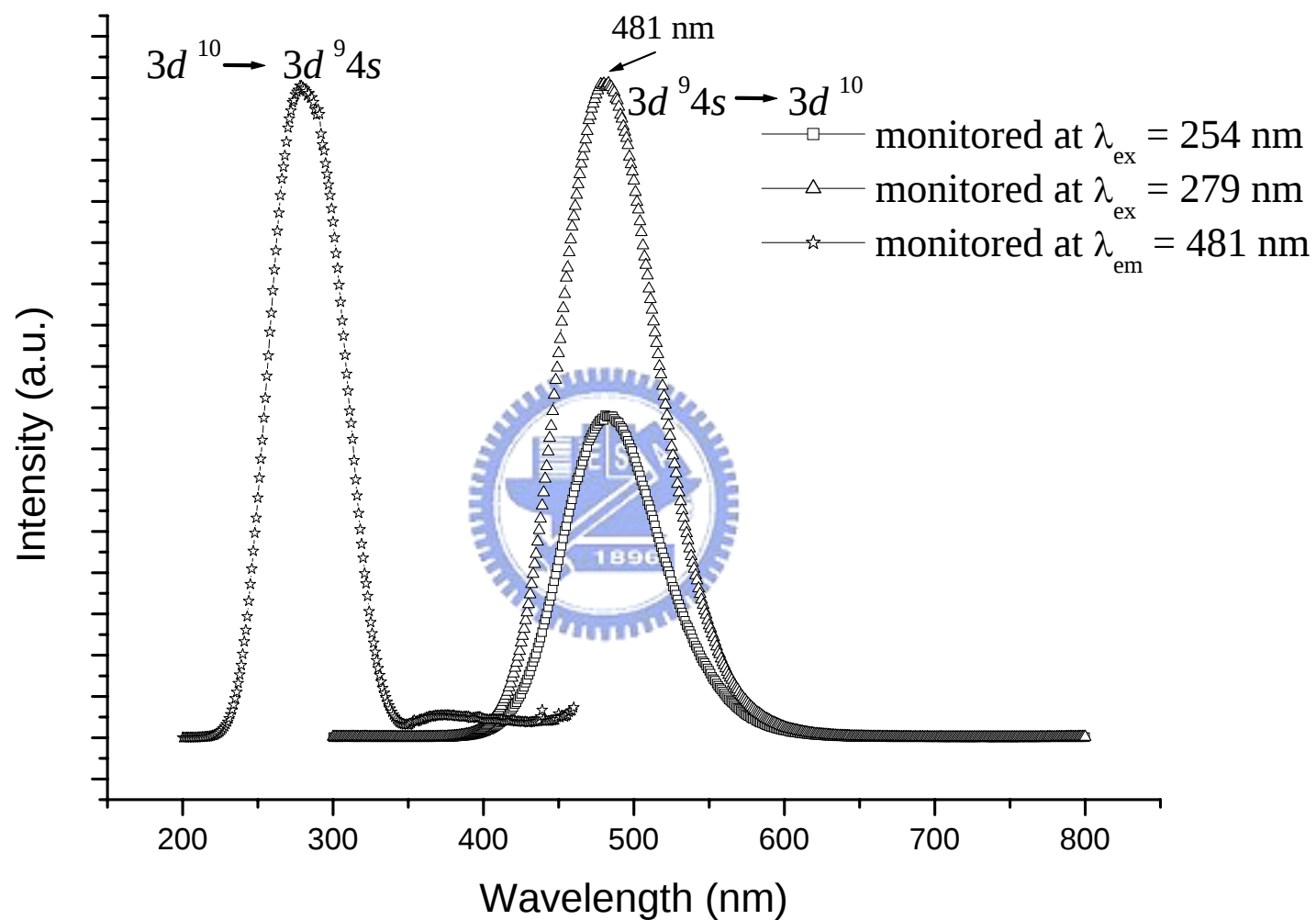


圖 57. 不同波長激發 $(\text{Sr}_{0.9}\text{Mg}_{0.1})_3(\text{PO}_4)_2:1\%\text{Cu}^+$ 光致發光與激發光譜之比較

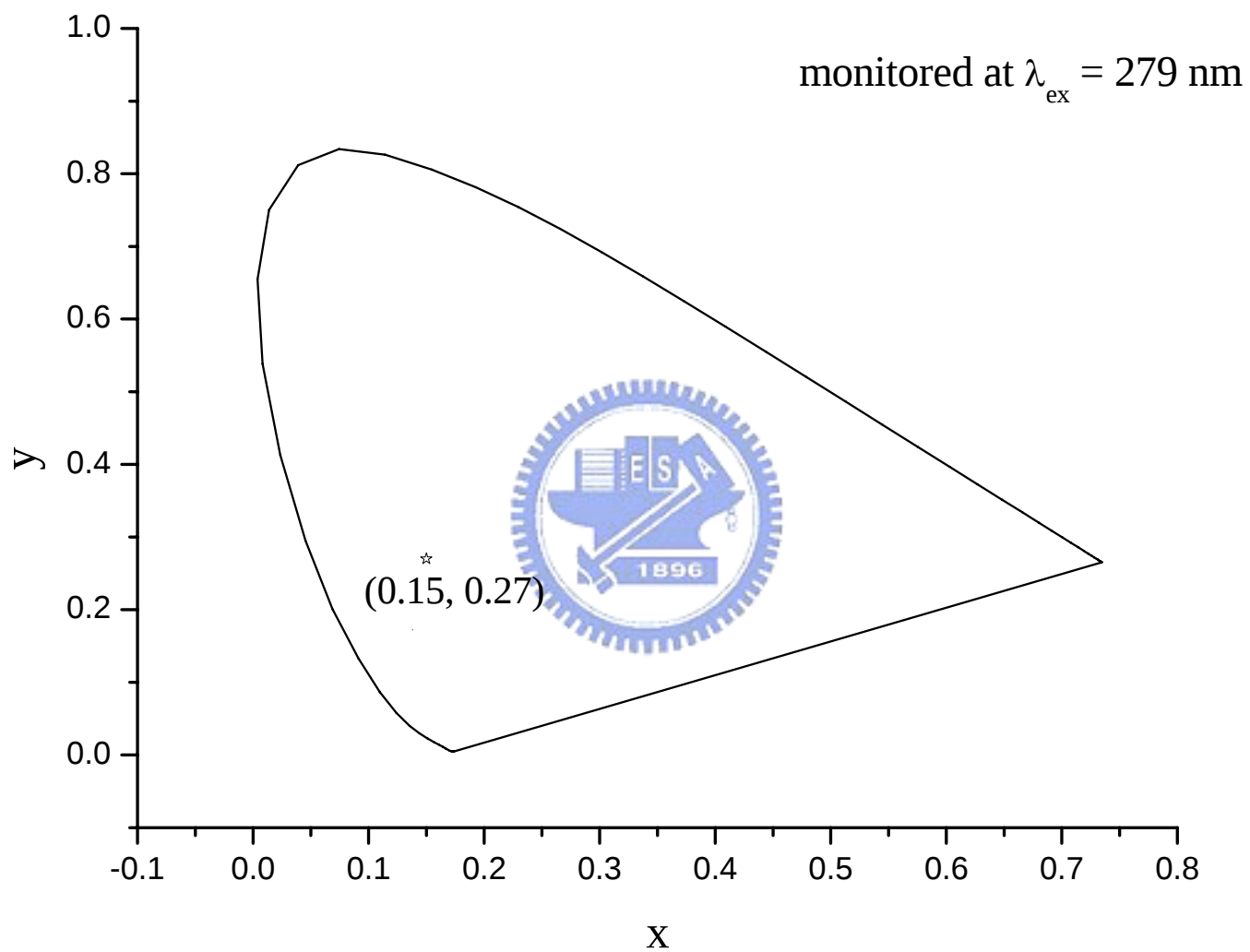


圖 58. $(\text{Sr}_{0.9}\text{Mg}_{0.1})_3(\text{PO}_4)_2:1\%\text{Cu}^+$ 螢光體之色度座標

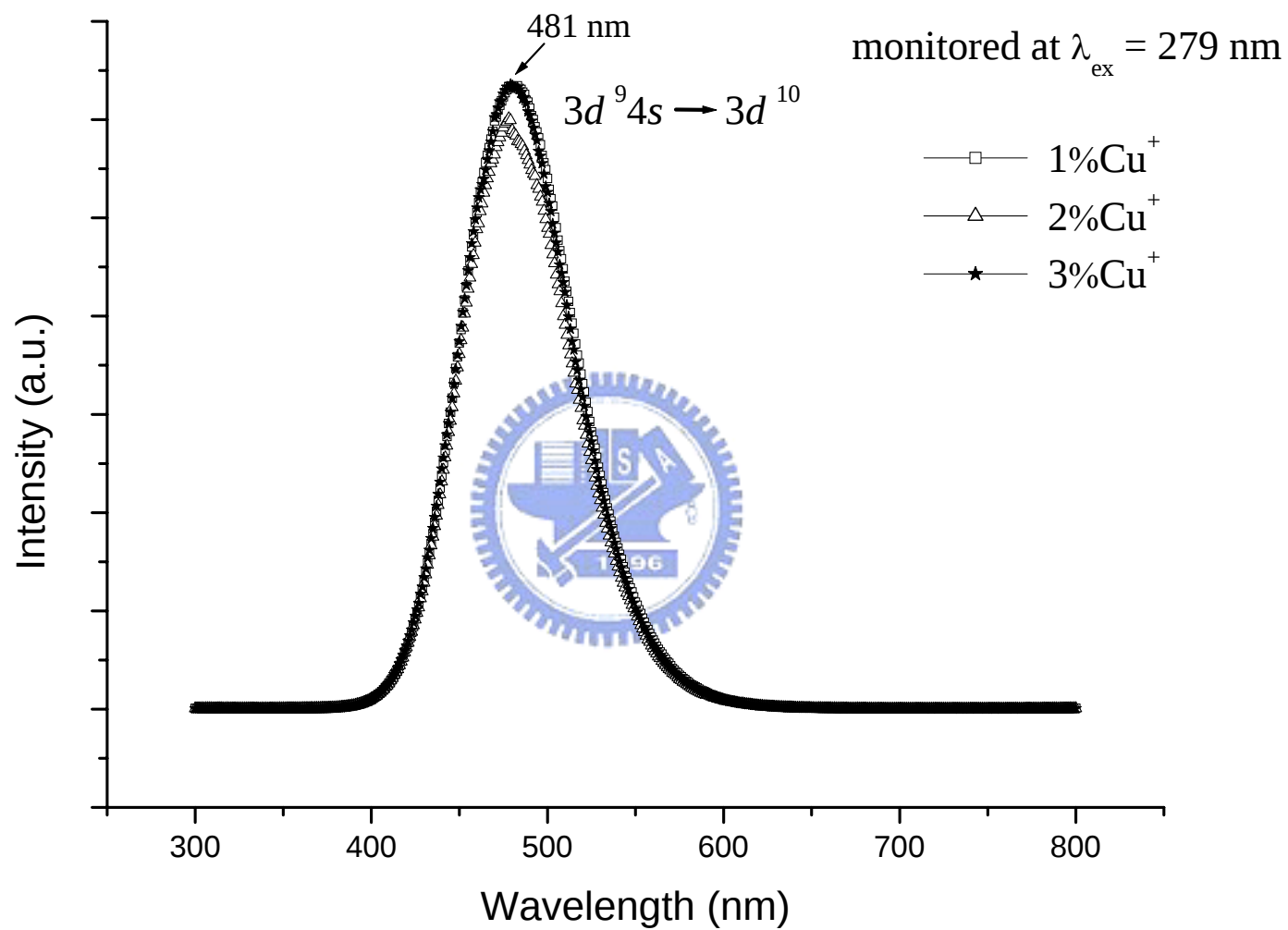


圖 59. 摻雜不同 Cu^+ 濃度 $(\text{Sr}_{0.9}\text{Mg}_{0.1})_3(\text{PO}_4)_2:\text{Cu}^+$ 螢光體放射光譜之比較

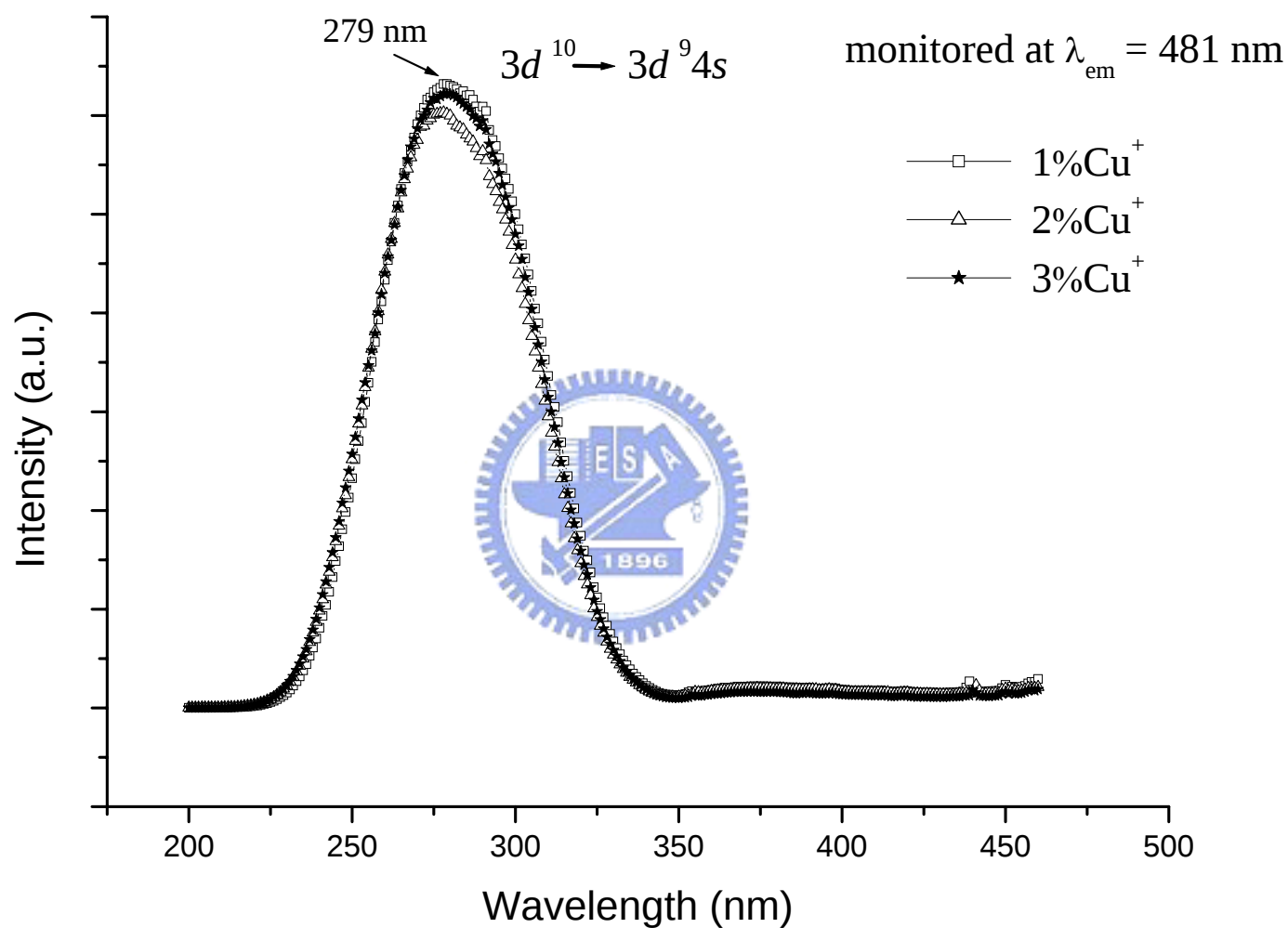


圖 60. 摻雜不同 Cu⁺濃度(Sr_{0.9}Mg_{0.1})₃(PO₄)₂:Cu⁺螢光體激發光譜之比較

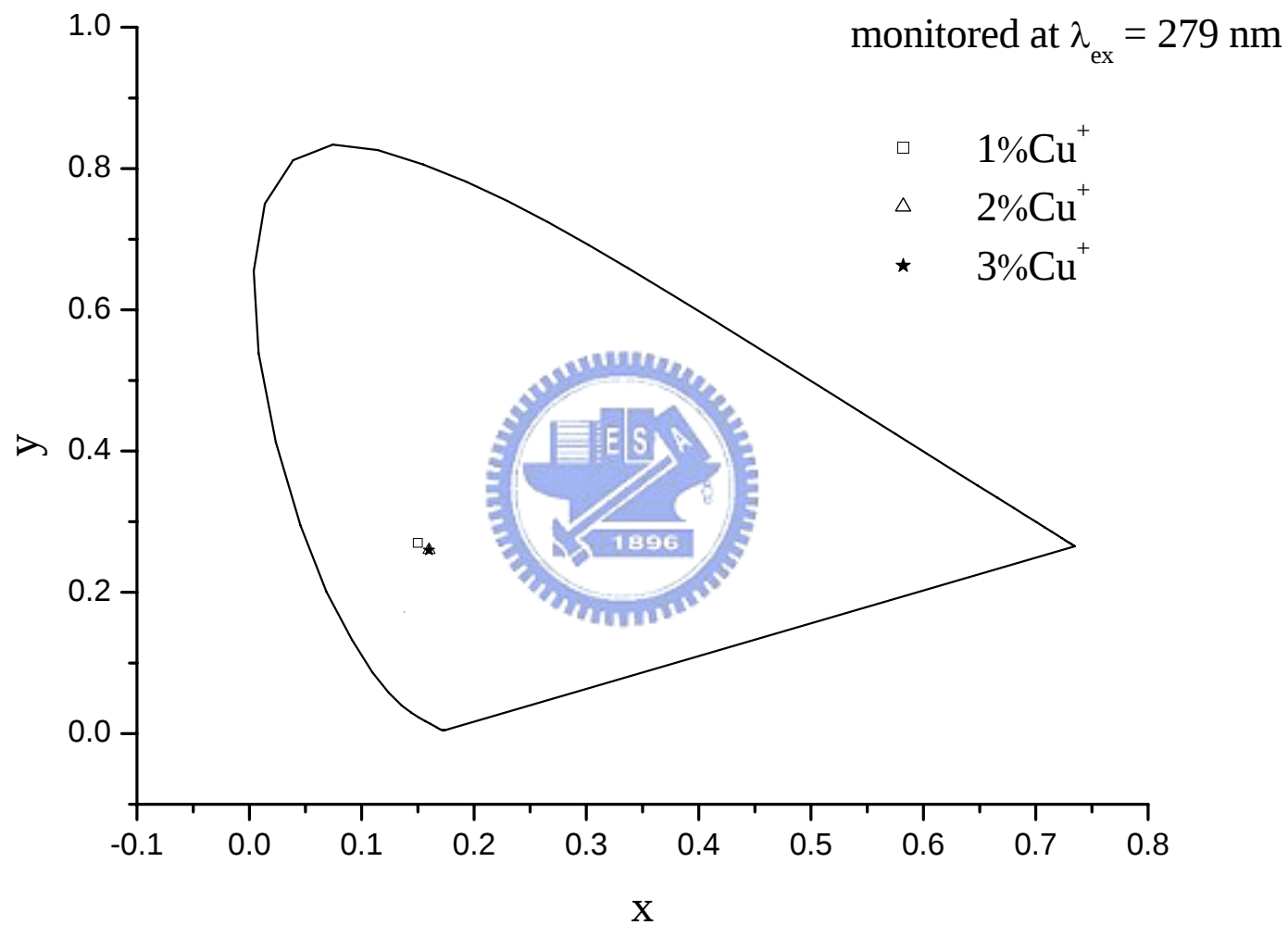


圖 61. 摻雜不同 Cu⁺濃度(Sr_{0.9}Mg_{0.1})₃(PO₄)₂:Cu⁺螢光體色度座標之比較

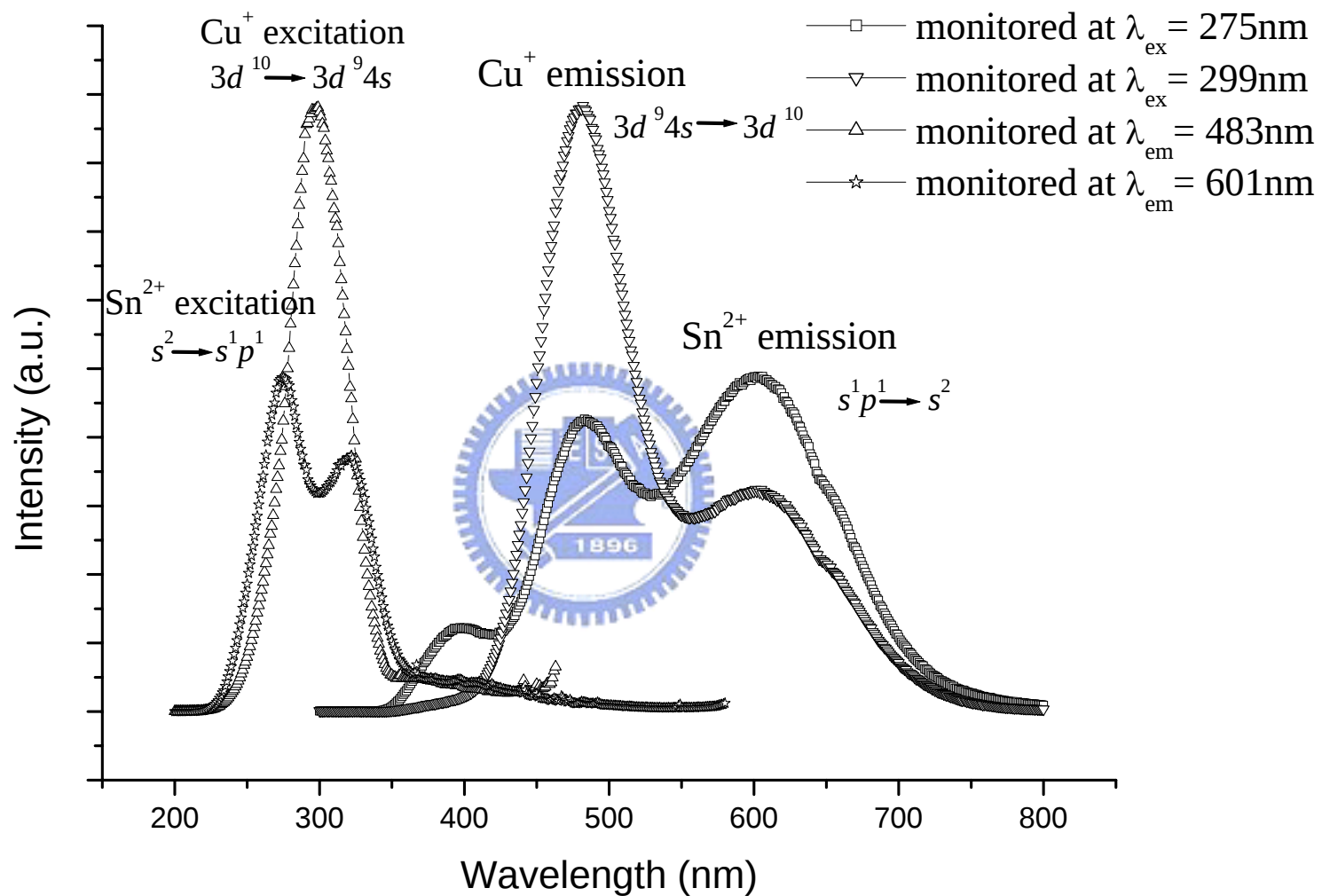


圖 62. $(\text{Sr}_{0.9}\text{Mg}_{0.1})_3(\text{PO}_4)_2:4\%\text{Sn}^{2+}, 1\%\text{Cu}^+$ 螢光與激發光譜之比較

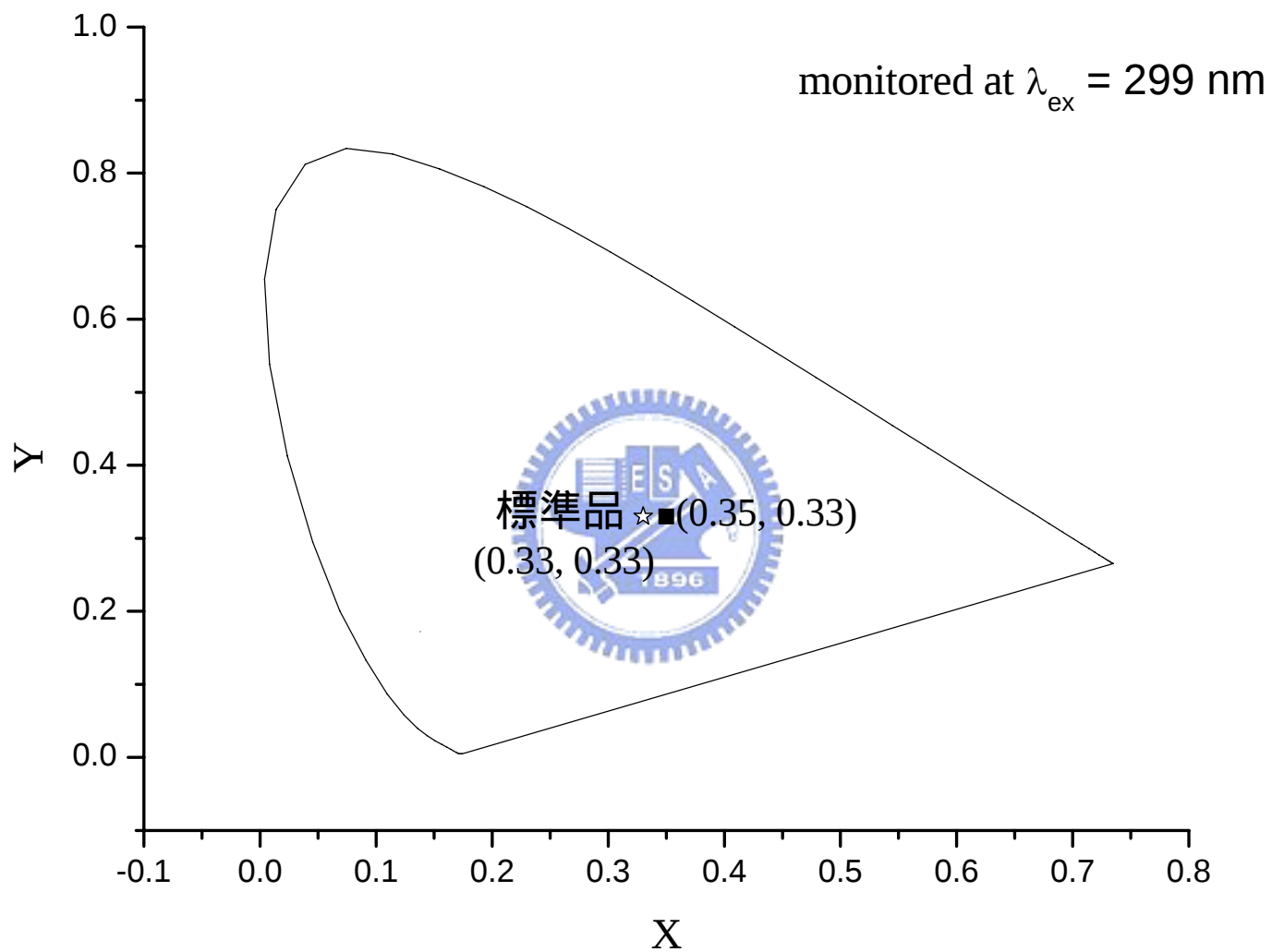


圖 63. $(\text{Sr}_{0.9}\text{Mg}_{0.1})_3(\text{PO}_4)_2:4\%\text{Sn}^{2+}, 1\%\text{Cu}^{+}$ 之色度座標圖

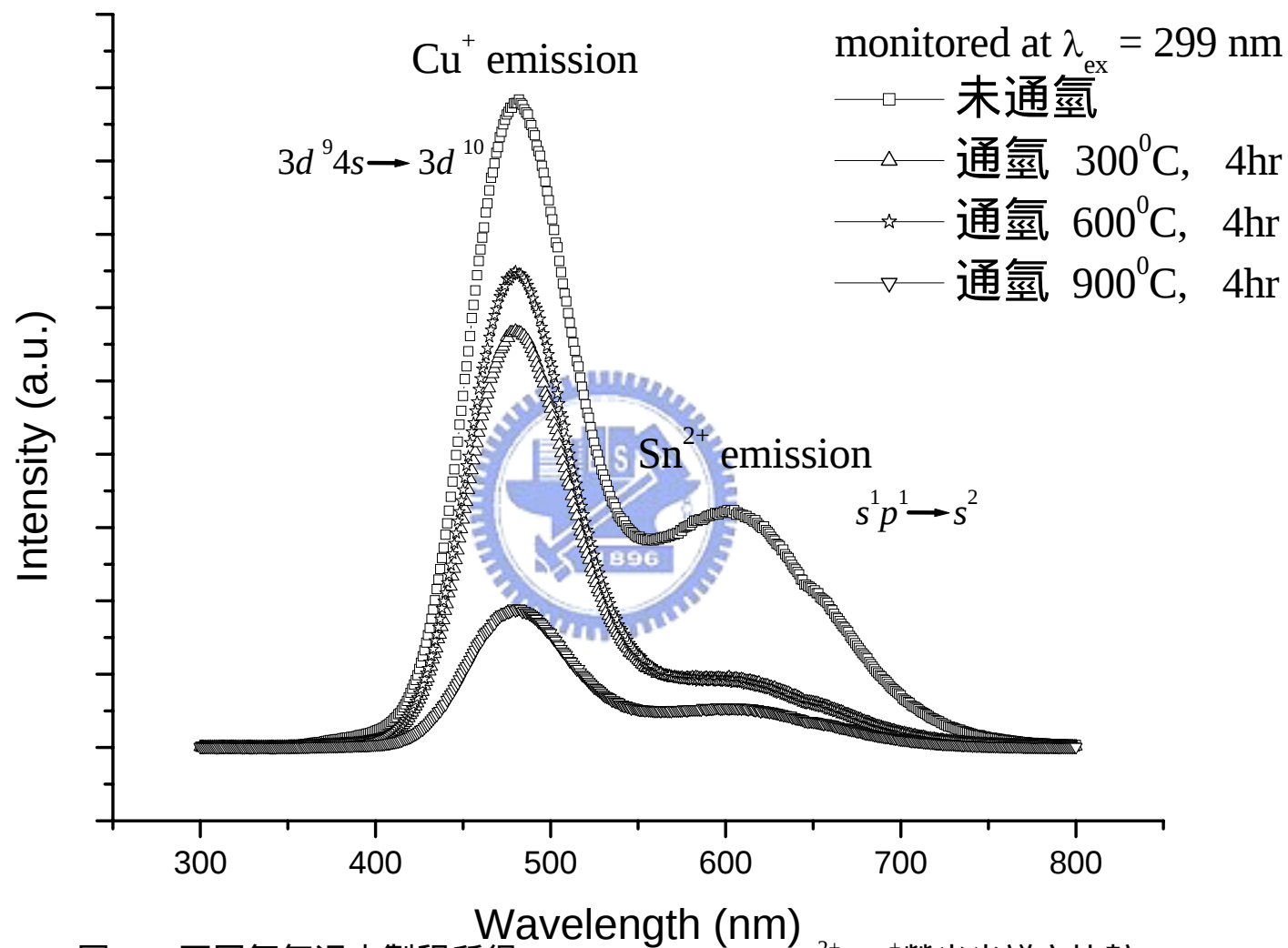


圖 64. 不同氫氣退火製程所得 $(\text{Sr}_{0.9}\text{Mg}_{0.1})_3(\text{PO}_4)_2:\text{Sn}^{2+}, \text{Cu}^+$ 螢光光譜之比較

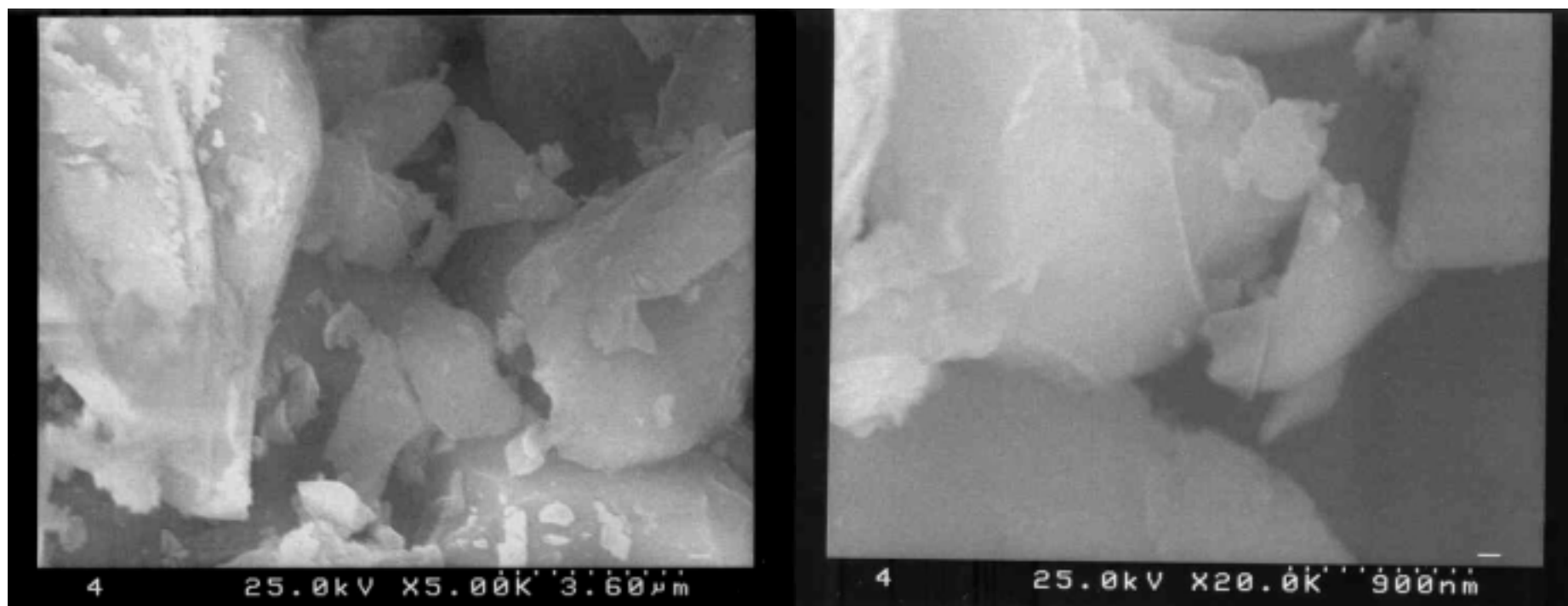


圖 65. $(\text{Sr}_{0.9}\text{Mg}_{0.1})_3(\text{PO}_4)_2:4\%\text{Sn}^{2+},1\%\text{Cu}^+$ 之 SEM 影像圖