Electronic Supplementary Information

Template-free Synthesis of Monodispersed $Y_3Al_5O_{12}:Ce^{3+}$ Nanosphere Phosphor

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Table S1. The integrated intensity of aluminum and yttrium of samples.

Sample	Integrated intensity of Al (I_{Al})	Integrated intensity of Y (I_Y)	I_{Al}/I_Y
R44-1300	24.26	106.20	0.2284
R46-1300	17.31	101.39	0.1707
R48-1300	5.99	147.74	0.0405

Table S2. The result of point- and area-mode EDS analysis of R46-1075 and R50-975.

Name	Weight % of Y	Weight % of Al	Atomic % of Y	Atomic % of Al
Point1	61.000	38.999	32.189	67.810
Point2	65.641	34.358	36.700	63.299
Point3	72.031	27.968	43.871	56.128
Point4	70.788	29.212	42.377	57.622
Area1	59.808	40.191	31.110	68.889
Area2	66.699	33.300	37.805	62.194

Table S3. The result of ICP-MS analysis of R46-1075 and R50-975.

Sample	Yttrium (mg/L)	Cerium (mg/L)	$R_{[Ce]/[Y+Ce]}$
R46-1075	11.34	0.57	0.031
R50-975	10.47	0.75	0.044

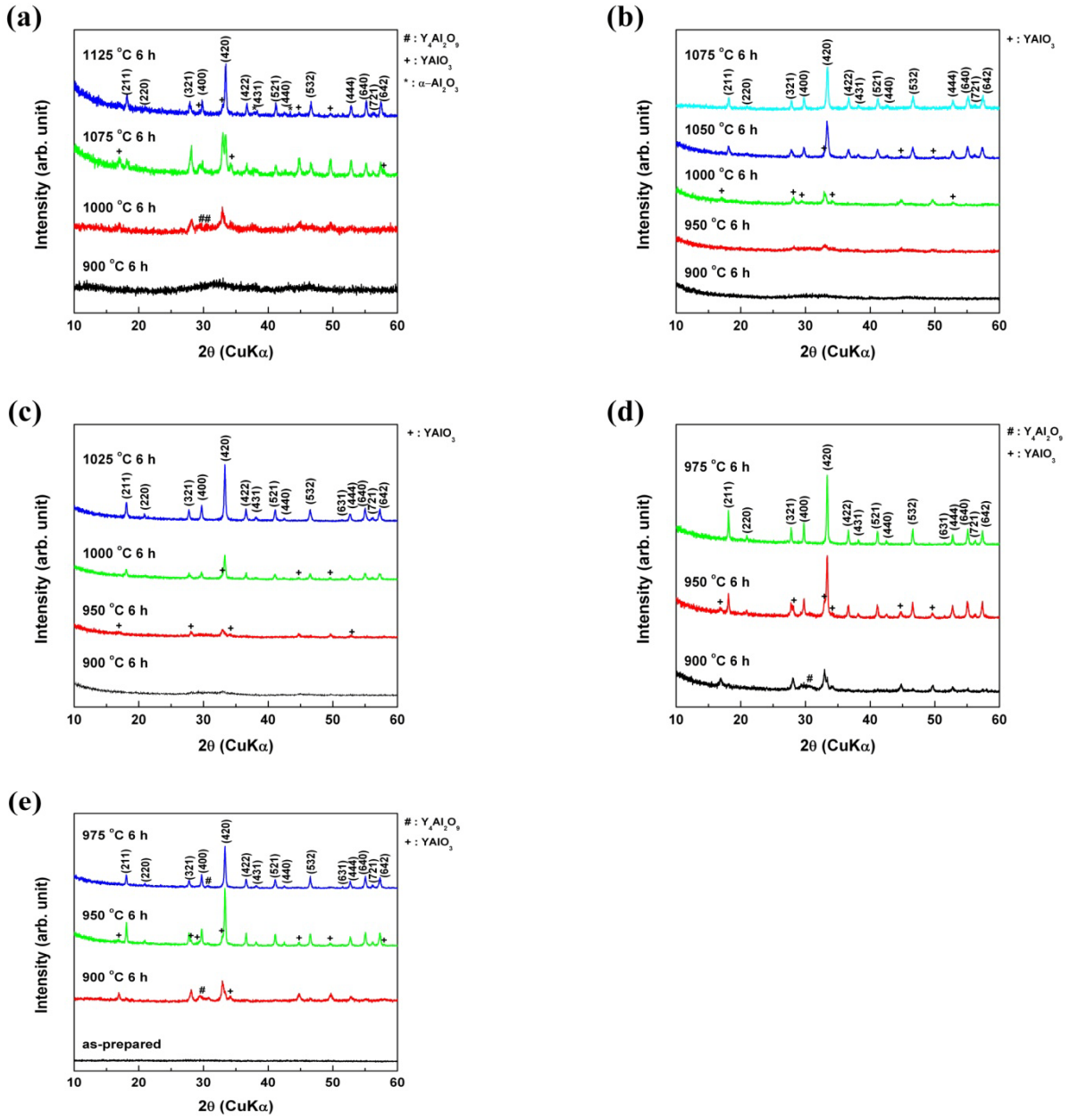

Figure S1. Phase evolutions of samples after subsequent heat-treatment : (a) R44, (b) R46, (c) R48, (d) R50 and (e) R52.