Electronic Supplementary Material (ESI) for Journal of Materials Chemistry

Supplementary Information (SI)

Non-stabilized europium-doped lanthanum oxyfluoride and fluoride nanoparticles well dispersed in thin silica films

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Table 1SI. Polar spherical coordinates for LaOF:Eu^{3+} (rhombohedral phase).

Bond	R / Å	θ / °	Φ / °
Eu – F	2.4240	90.0000	180.0000
Eu – F	2.4188	90.0000	104.8521
Eu – F	2.4195	146.8198	242.0802
Eu – F	2.4190	33.1627	242.0600
Eu – O	2.5860	90.0000	0.0000
Eu – O	2.5866	38.4752	46.6366
Eu – O	2.5869	90.0000	295.2872
Eu – O	2.5862	141.5374	46.6121

Table 2SI. Polar spherical coordinates for LaOF:Eu^{3+} (tetragonal phase).

Bond	R / Å	θ / °	Φ / °
Eu – F	2.4214	32.4192	128.4944
Eu – F	2.4231	90.0000	70.9220
Eu – F	2.4226	90.0000	186.0660
Eu – F	2.4231	147.6062	128.4944
Eu – O	2.6140	90.0000	70.7669
Eu – O	2.6136	141.5209	173.9508
Eu – O	2.6128	90.0000	122.3275
Eu – O	2.6136	38.4791	122.3275

Table 3SI. Polar spherical coordinates for LaF_3 (hexagonal phase).

Bond	R / Å	θ / °	Φ / °
Eu – F	2.6060	90.0000	0.0000
Eu – F	2.4201	90.0000	67.7589
Eu – F	2.4529	118.3565	190.1125
Eu – F	2.6060	34.6037	28.1408
Eu – F	2.4202	63.4174	299.3246
Eu – F	2.4742	76.5378	133.0970
Eu – F	2.4701	28.3435	202.3004
Eu – F	2.4711	150.5587	21.8978

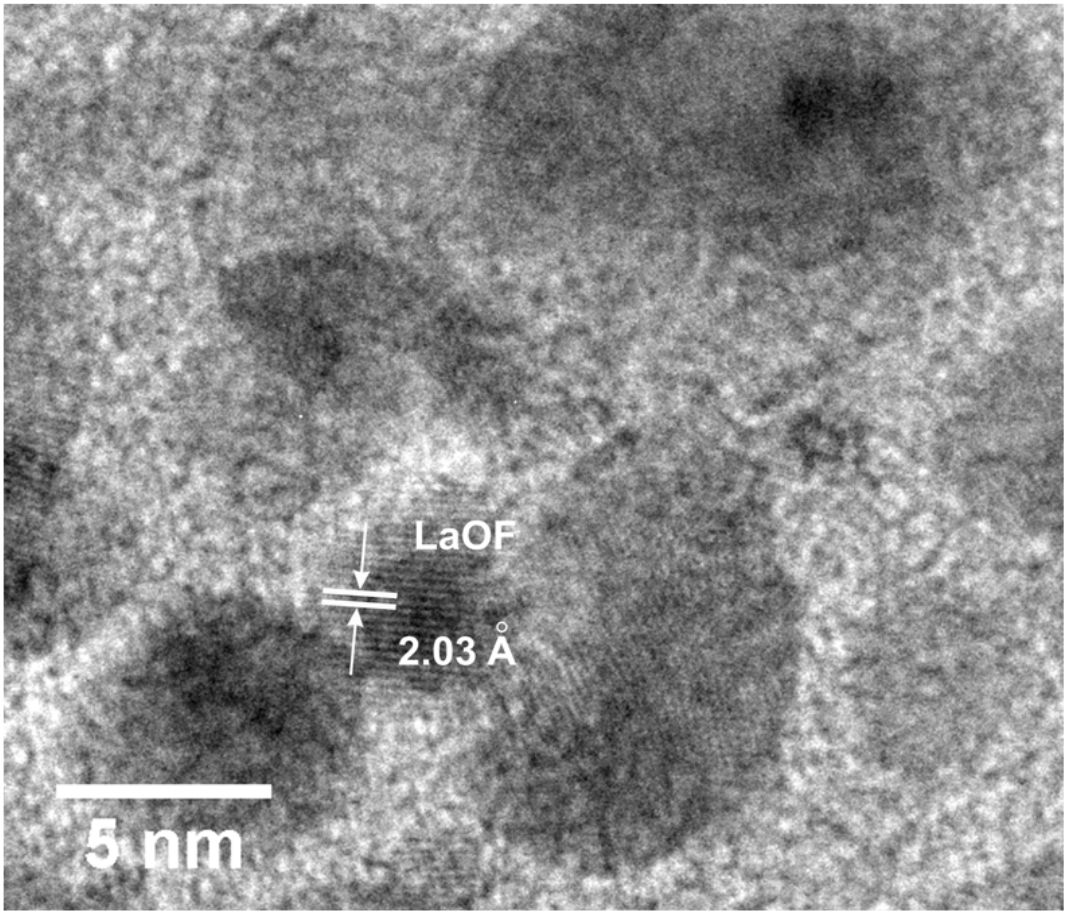

Figure 1SI: Transmission electron microscopy of the nanoparticle containing -non densified thin silica film (650 °C 5 min).

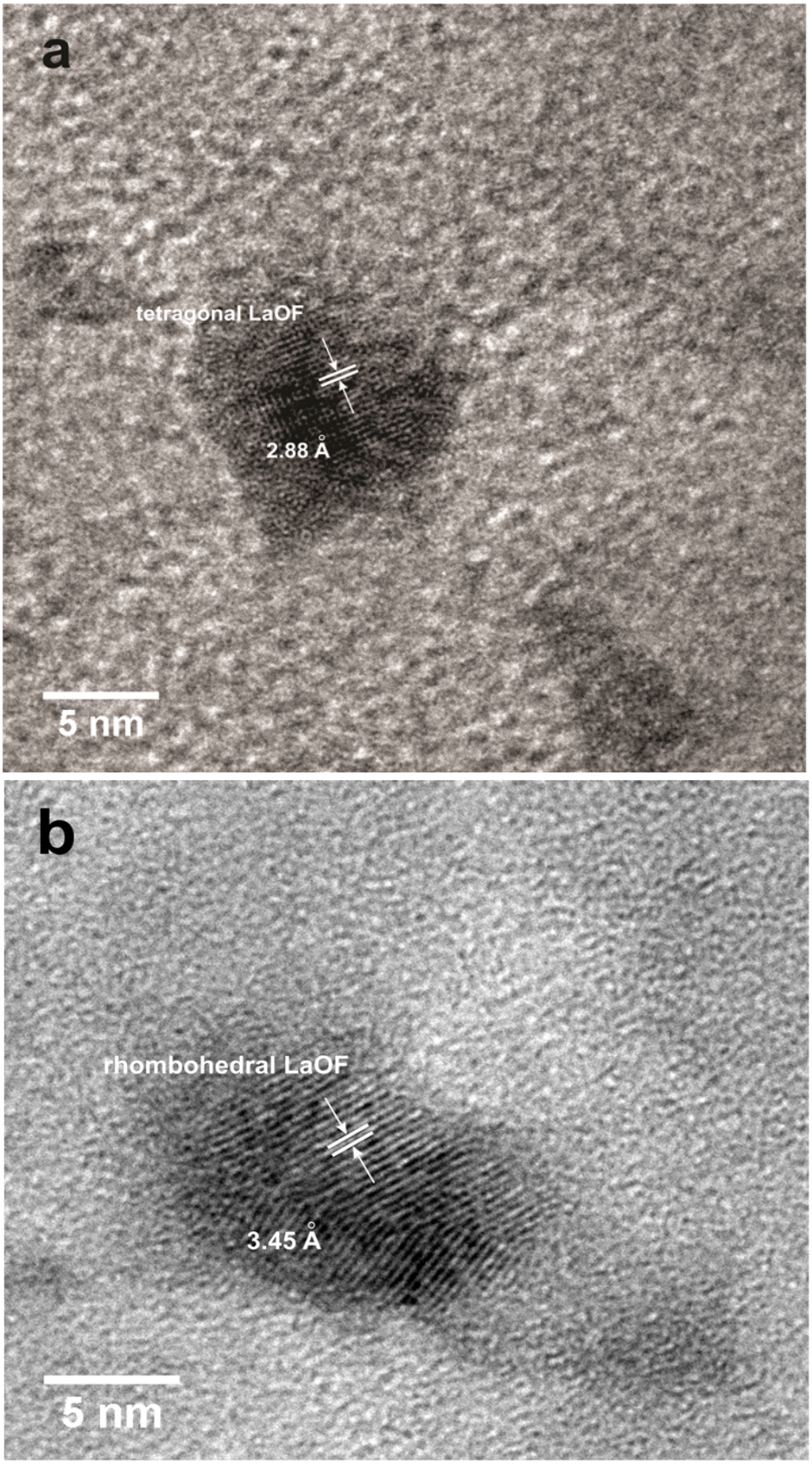

Figure 2SI: Transmission electron microscopy of the nanoparticles containing densified thin silica film (1150 °C 2 min). (a) tetragonal LaOF. (b) rhombohedral LaOF.