Supporting Information

Mutual energy transfer luminescent properties in novel $CsGd(MoO_4)_2$:Yb^{3+}, Er^{3+}/Ho^{3+} phosphors for solid-state lighting and solar cells

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Table S1 The ionic radii for Cs^+, Gd^{3+} and Mo^{6+} ions with respective coordination number CN and corresponding D_r values for substitutions by Yb^{3+} and Er^{3+}/Ho^{3+} ions.

Ions	Wyckoff	Ionic radii (Å),CN = 4	Ionic radii (Å),CN = 8	D_r (%)
Cs^+	2f	×	1.82	×
Gd^{3+}	2e	×	1.06	×
Mo^{6+}	4g	0.65	×	×
Yb^{3+}	2e	×	0.98	7.5
Er^{3+}	2e	×	1.00	5.7
Ho^{3+}	2e	×	1.02	3.8

Table S2 CIE chromaticity coordinates (x, y) for $CsGd_{0.98-x}(MoO_4)_2:xYb^{3+}$, $0.02Er^{3+}$ and $CsGd_{0.99-a}(MoO_4)_2:aYb^{3+}$, $0.01Ho^{3+}$ upon 975 nm laser excitation.

Sample no.	Content (x)	CIE chromaticity coordinate (x, y)	Sample no.	Content (a)	CIE chromaticity coordinate (x,y)
1	0.05	(0.257, 0.716)	7	0.05	(0.559, 0.429)
2	0.10	(0.251, 0.724)	8	0.10	(0.557, 0.434)
3	0.15	(0.249, 0.726)	9	0.20	(0.533, 0.459)
4	0.20	(0.247, 0.728)	10	0.30	(0.507, 0.484)
5	0.30	(0.245, 0.730)	11	0.40	(0.488, 0.502)
6	0.40	(0.242, 0.732)	12	0.50	(0.479, 0.511)