Balaji Devakumar

List of Publications by Year
in descending order

91	3,890	81839	138417
papers	citations	39 h-index	58 g-index

92	92	92	1389
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Full-visible-spectrum lighting enabled by an excellent cyan-emitting garnet phosphor. Journal of Materials Chemistry C, 2020, 8, 4934-4943.	2.7	195
2	A broadband cyan-emitting Ca₂LuZr₂(AlO₄)₃:Ce³⁺ garnet phosphor for near-ultraviolet-pumped warm-white light-emitting diodes with an improved color rendering index. Journal of Materials Chemistry C, 2020, 8, 1095-1103.	2.7	176
3	Ultra-high color rendering warm-white light-emitting diodes based on an efficient green-emitting garnet phosphor for solid-state lighting. Chemical Engineering Journal, 2021, 405, 126950.	6.6	146
4	Novel Na 3 Sc 2 (PO 4) 3 :Ce 3+ ,Tb 3+ phosphors for white LEDs: Tunable blue-green color emission, high quantum efficiency and excellent thermal stability. Dyes and Pigments, 2018, 151, 81-88.	2.0	142
5	Highly efficient near-UV-excitable Ca₂YHf₂Al₃O₁₂:Ce³⁺,Tb³⁺ green-emitting garnet phosphors with potential application in high color rendering warm-white LEDs. Journal of Materials Chemistry C, 2020, 8, 4408-4420.	2.7	131
6	Highly efficient Ce³⁺ → Tb³⁺ energy transfer induced bright narrowband green emissions from garnet-type Ca₂YZr₂(AlO₄)₃:Ce³⁺,Tb³⁺ phosphors for white LEDs with high color rendering index. Journal of Materials Chemistry C, 2019, 7, 10471-10480.	2.7	110
7	Dy3+/Eu3+ co-doped CsGd(MoO4)2 phosphor with tunable photoluminescence properties for near-UV WLEDs applications. Dyes and Pigments, 2017, 137, 244-255.	2.0	105
8	Novel Mn⁴⁺-activated LiLaMgWO₆far-red emitting phosphors: high photoluminescence efficiency, good thermal stability, and potential applications in plant cultivation LEDs. RSC Advances, 2018, 8, 27144-27151.	1.7	103
9	Synthesis and photoluminescence properties of novel far-red-emitting BaLaMgNbO₆:Mn⁴⁺ phosphors for plant growth LEDs. RSC Advances, 2018, 8, 28538-28545.	1.7	93
10	Mn4+-activated KLaMgWO6: A new high-efficiency far-red phosphor for indoor plant growth LEDs. Ceramics International, 2019, 45, 4564-4569.	2.3	85
11	Novel highly luminescent double-perovskite Ca2GdSbO6:Eu3+ red phosphors with high color purity for white LEDs: Synthesis, crystal structure, and photoluminescence properties. Journal of Luminescence, 2020, 221, 117105.	1.5	75
12	Novel SrMg₂La₂W₂O₁₂:Mn⁴⁺ far-red phosphors with high quantum efficiency and thermal stability towards applications in indoor plant cultivation LEDs. RSC Advances, 2018, 8, 30191-30200.	1.7	73
13	Novel highly efficient and thermally stable Ca2GdTaO6:Eu3+ red-emitting phosphors with high color purity for UV/blue-excited WLEDs. Journal of Alloys and Compounds, 2019, 804, 93-99.	2.8	73
14	Full-Spectrum White Light-Emitting Diodes Enabled by an Efficient Broadband Green-Emitting CaY₂ZrScAl₃O₁₂:Ce³⁺ Garnet Phosphor. ACS Applied Materials & Interfaces, 2022, 14, 5643-5652.	4.0	72
15	Mn⁴⁺-activated Li₃Mg₂SbO₆ as an ultrabright fluoride-free red-emitting phosphor for warm white light-emitting diodes. RSC Advances, 2019, 9, 3429-3435.	1.7	65
16	Double perovskite Ca2LuTaO6:Eu3+ red-emitting phosphors: Synthesis, structure and photoluminescence characteristics. Journal of Alloys and Compounds, 2019, 804, 230-236.	2.8	65
17	Eu³⁺ ion concentration induced 3D luminescence properties of novel red-emitting Ba₄La₆(SiO₄)O:Eu³⁺ oxyapatite phosphors for versatile applications. Journal of Materials Chemistry C, 2016, 4, 1039-1050.	2.7	63
18	Far-red-emitting double-perovskite CaLaMgSbO₆:Mn⁴⁺phosphors with high photoluminescence efficiency and thermal stability for indoor plant cultivation LEDs. RSC Advances, 2018, 8, 31666-31672.	1.7	63

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19	Novel SrLaAlO₄:Mn⁴⁺deep-red emitting phosphors with excellent responsiveness to phytochrome P_{FR}for plant cultivation LEDs: synthesis, photoluminescence properties, and thermal stability. RSC Advances, 2018, 8, 30223-30229.	1.7	60
20	A novel Sm³⁺ singly doped LiCa₃ZnV₃O₁₂ phosphor: a potential luminescent material for multifunctional applications. RSC Advances, 2018, 8, 33403-33413.	1.7	59
21	Facile low-temperature solid-state synthesis of efficient blue-emitting Cs3Cu2I5 powder phosphors for solid-state lighting. Materials Today Chemistry, 2020, 17, 100288.	1.7	53
22	Spectroscopic properties of Eu 3+ :KLa(WO 4) 2 novel red phosphors. Journal of Luminescence, 2016, 170, 547-555.	1.5	51
23	Filling the cyan gap toward full-visible-spectrum LED lighting with Ca2LaHf2Al3O12:Ce3+ broadband green phosphor. Journal of Alloys and Compounds, 2020, 836, 155469.	2.8	50
24	A single-phased warm-white-emitting K3Y(PO4)2:Dy3+,Sm3+ phosphor with tuneable photoluminescence for near-UV-excited white LEDs. Dyes and Pigments, 2018, 157, 72-79.	2.0	49
25	CaYAlO4:Mn4+,Mg2+: An efficient far-red-emitting phosphor for indoor plant growth LEDs. Journal of Alloys and Compounds, 2019, 785, 1198-1205.	2.8	49
26	Novel high color-purity Eu3+-activated Ba3Lu4O9 red-emitting phosphors with high quantum efficiency and good thermal stability for warm white LEDs. Journal of Luminescence, 2019, 209, 156-162.	1.5	49
27	Solâ€“gel synthesis and photoluminescence analysis of Sm 3+ :NaGd(WO 4) 2 phosphors. Journal of Luminescence, 2016, 170, 743-748.	1.5	48
28	Synthesis, structural and photoluminescence properties of novel orange-red emitting Ba3Y2B6O15:Eu3+ phosphors. Journal of Luminescence, 2019, 208, 75-81.	1.5	48
29	Simultaneously enhanced far-red luminescence and thermal stability in Ca3Al4ZnO10:Mn4+ phosphor via Mg2+ doping for plant growth lighting. Journal of Alloys and Compounds, 2019, 785, 312-319.	2.8	47
30	Deep-red-emitting Ca2LuSbO6:Mn4+ phosphors for plant growth LEDs: Synthesis, crystal structure, and photoluminescence properties. Journal of Alloys and Compounds, 2019, 804, 521-526.	2.8	46
31	Achieving full-visible-spectrum LED lighting via employing an efficient Ce3+-activated cyan phosphor. Materials Today Energy, 2020, 17, 100448.	2.5	46
32	Synthesis and photoluminescence properties of a novel high-efficiency red-emitting Ca2LuSbO6:Eu3+ phosphor for WLEDs. Journal of Luminescence, 2019, 214, 116605.	1.5	44
33	Cyan-emitting Ba3Y2B6O15:Ce3+,Tb3+ phosphor: A potential color converter for near-UV-excited white LEDs. Journal of Luminescence, 2019, 211, 388-393.	1.5	43
34	Synthesis and photoluminescence properties of a new blue-light-excitable red phosphor Ca2LaTaO6:Eu3+ for white LEDs. Journal of Luminescence, 2020, 222, 117173.	1.5	42
35	Synthesis and photoluminescence characteristics of high color purity Ba₃Y₄O₉:Eu³⁺red-emitting phosphors with excellent thermal stability for warm W-LED application. RSC Advances, 2018, 8, 32111-32118.	1.7	41
36	Novel Mn⁴⁺ doped Ca₂GdSbO₆ redâ€“emitting phosphor: A potential color converter for lightâ€emitting diodes. Journal of the American Ceramic Society, 2019, 102, 4730-4736.	1.9	41

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37	Photoluminescence properties of Eu3+:RbGd(WO4)2 red phosphors prepared by solâ€“gel method. Journal of Luminescence, 2016, 170, 825-834.	1.5	40
38	Thermally stable La₂LiSbO₆:Mn⁴⁺,Mg²⁺far-red emitting phosphors with over 90% internal quantum efficiency for plant growth LEDs. RSC Advances, 2018, 8, 31835-31842.	1.7	40
39	Synthesis, Crystal Structure, and Photoluminescence Characteristics of High-Efficiency Deep-Red Emitting Ba₂GdTaO₆:Mn⁴⁺ Phosphors. ACS Omega, 2019, 4, 13474-13480.	1.6	40
40	Crystal structure, photoluminescence properties and thermal stability of BaLu2Si3O10:Eu3+ red-emitting phosphors with high color purity for near-UV-excited white LEDs. Journal of Luminescence, 2019, 215, 116623.	1.5	38
41	Novel Ca2GdTaO6:Mn4+,M (M = Li+, Na+, K+, and Mg2+) red phosphors for plant cultivation light-emitting diodes: Synthesis and luminescence properties. Journal of Luminescence, 2019, 214, 116525.	1.5	38
42	Solâ€“gel synthesis and characterizations of crystalline NaGd(WO4)2 powder for anisotropic transparent ceramic laser application. Optical Materials, 2013, 35, 740-743.	1.7	37
43	Novel efficient deep-red-emitting Ca2LuTaO6:Mn4+ double-perovskite phosphors for plant growth LEDs. Journal of Luminescence, 2020, 222, 117177.	1.5	36
44	Mn⁴⁺-activated BaLaMgSbO₆ double-perovskite phosphor: a novel high-efficiency far-red-emitting luminescent material for indoor plant growth lighting. RSC Advances, 2019, 9, 3303-3310.	1.7	34
45	Novel far-red-emitting SrGdAlO₄:Mn⁴⁺ phosphors with excellent responsiveness to phytochrome P_{FR} for plant growth lighting. RSC Advances, 2018, 8, 39307-39313.	1.7	33
46	Ce3+-activated CaSr2Al2O6 green-emitting phosphors: Potential application as color converter for warm WLEDs. Journal of Luminescence, 2019, 206, 571-577.	1.5	33
47	Preparation, crystal structure, and photoluminescence properties of high-brightness red-emitting Ca2LuNbO6:Eu3+ double-perovskite phosphors for high-CRI warm-white LEDs. Journal of Luminescence, 2020, 225, 117373.	1.5	33
48	Eu3+-activated Ca2YTaO6 double-perovskite compound: A novel highly efficient red-emitting phosphor for near-UV-excited warm w-LEDs. Journal of Luminescence, 2020, 226, 117408.	1.5	33
49	Photoluminescence properties of novel Sm3+ and Dy3+ co-activated CsGd(WO4)2 phosphors. Journal of Alloys and Compounds, 2015, 637, 350-360.	2.8	32
50	Solâ€“gel synthesis and photoluminescence studies on colour tuneable Dy3+/Tm3+ co-doped NaGd(WO4)2 phosphor for white light emission. Journal of Luminescence, 2015, 157, 357-364.	1.5	32
51	Optical properties of deep-red-emitting Ca2YTaO6:Mn4+ phosphors for LEDs applications. Optics and Laser Technology, 2020, 130, 106349.	2.2	29
52	Bright red luminescence from Mn4+ ions doped Sr2LuTaO6 double-perovskite phosphors. Journal of Luminescence, 2021, 233, 117901.	1.5	29
53	High-brightness cyan-emitting Eu2+-activated orthophosphate phosphors for near-UV-pumped white LEDs. Journal of Luminescence, 2022, 243, 118640.	1.5	27
54	Novel KGd1â^'(x+y)EuxBiy (W1â^'zMozO4)2 nanocrystalline red phosphors for tricolor white LEDs. Journal of Luminescence, 2013, 134, 244-250.	1.5	25

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55	Novel Eu³⁺-activated Ba₂Y₅B₅O₁₇ red-emitting phosphors for white LEDs: high color purity, high quantum efficiency and excellent thermal stability. RSC Advances, 2018, 8, 23323-23331.	1.7	25
56	Synthesis, energy transfer and photoluminescence properties of thermal-stable multicolour-emitting Ca3Gd(AlO)3(BO3)4:Tb3+,Eu3+ phosphors. Journal of Luminescence, 2018, 204, 386-393.	1.5	25
57	Novel high-efficiency violet-red dual-emitting Lu2GeO5: Bi3+, Eu3+ phosphors for indoor plant growth lighting. Journal of Luminescence, 2019, 214, 116544.	1.5	24
58	Preparation and photoluminescence properties of novel Mn4+ doped Li3Mg2TaO6 red-emitting phosphors. Inorganic Chemistry Communication, 2020, 116, 107903.	1.8	24
59	Using an excellent near-UV-excited cyan-emitting phosphor for enhancing the color rendering index of warm-white LEDs by filling the cyan gap. Materials Today Chemistry, 2021, 20, 100471.	1.7	23
60	Finding an efficient far-red-emitting CaMg2La2W2O12:Mn4+ phosphor toward indoor plant cultivation LED lighting. Materials Today Chemistry, 2021, 21, 100512.	1.7	23
61	Utilizing energy transfer strategy to produce efficient green luminescence in Ca2LuHf2Al3O12:Ce3+,Tb3+ garnet phosphors for high-quality near-UV-pumped warm-white LEDs. Journal of Colloid and Interface Science, 2021, 601, 365-377.	5.0	23
62	Realizing bright blue-red color-tunable emissions from Gd2GeO5:Bi3+,Eu3+ phosphors through energy transfer toward light-emitting diodes. Journal of Luminescence, 2020, 222, 117127.	1.5	22
63	Dazzling Red-Emitting Europium(III) Ion-Doped Ca₂LaHf₂Al₃O₁₂ Garnet-Type Phosphor Materials with Potential Application in Solid-State White Lighting. Inorganic Chemistry, 2022, 61, 6898-6909.	1.9	22
64	Solâ€“gel synthesis and luminescent properties of Eu3+:CsGd(WO4)2 red emitting phosphors. Journal of Luminescence, 2014, 146, 458-463.	1.5	21
65	Preparation, characterization, and luminescence properties of double perovskite SrLaMgSbO₆:Mn⁴⁺ far-red emitting phosphors for indoor plant growth lighting. RSC Advances, 2018, 8, 35187-35194.	1.7	21
66	Novel high-efficiency Eu³⁺-activated Na₂Gd₂B₂O₇ red-emitting phosphors with high color purity. RSC Advances, 2018, 8, 32948-32955.	1.7	20
67	Effect of Ca²⁺ ion co-doping on radiative properties via tuning the local symmetry around the Eu³⁺ ions in orange red light emitting GdPO₄:Eu³⁺ phosphors. New Journal of Chemistry, 2019, 43, 63-71.	1.4	20
68	A novel efficient Mn4+-activated Ba2YTaO6 far-red emitting phosphor for plant cultivation LEDs: Preparation and photoluminescence properties. Journal of Luminescence, 2020, 228, 117621.	1.5	20
69	SiO2/KGd(WO4)2:Eu3+ composite luminescent nanoparticles: Synthesis and characterization. Materials Chemistry and Physics, 2012, 135, 1115-1121.	2.0	19
70	KCa2Mg2V3O12: A novel efficient rare-earth-free self-activated yellow-emitting phosphor. Journal of Photochemistry and Photobiology A: Chemistry, 2020, 401, 112765.	2.0	19
71	Novel high color purity and thermally stable Eu3+ ions activated Ba2Gd5B5O17 red emitting phosphor for near-UV based WLEDs. Optical Materials, 2018, 84, 312-317.	1.7	18
72	Efficient green-emitting Ca2GdZr2Al3O12:Ce3+,Tb3+ phosphors for near-UV-pumped high-CRI warm-white LEDs. Journal of Luminescence, 2020, 220, 117012.	1.5	18

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73	Bright cyan-to-green color-tunable emissions from Ce3+/Tb3+ co-activated garnet phosphors for high-color-quality solid-state lighting. Materials Today Energy, 2020, 17, 100487.	2.5	18
74	Synthesis and characterization of monoclinic KGd(WO4)2 particles for non-cubic transparent ceramics. Optical Materials, 2013, 35, 753-756.	1.7	17
75	Energy transfer induced color-tunable emissions from Ba2Gd5B5O17:Ce3+/Tb3+ borate phosphors for white LEDs. Journal of Luminescence, 2021, 229, 117685.	1.5	17
76	Synthesis, crystal structure and photoluminescence properties of novel far-red-emitting SrLaZnSbO6:Mn4+ double-perovskite phosphors for plant cultivation LEDs. Journal of Photochemistry and Photobiology A: Chemistry, 2021, 410, 113166.	2.0	16
77	Investigation of structural and luminescent properties of Pr3+ activated CsGd(WO4)2 by solâ€“gel synthesis. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2013, 178, 762-767.	1.7	15
78	A novel blue-emitting phosphors (CsBaYB6O12:Ce3+): Potential applications in w-LEDs and X-ray phosphors. Journal of Alloys and Compounds, 2021, 873, 159676.	2.8	15
79	Synthesis and characterization of Ca₃Lu(GaO)₃(BO₃)₄:Ce³⁺,Tb³⁺ phosphors: tunable-color emissions, energy transfer, and thermal stability. RSC Advances, 2018, 8, 23284-23293.	1.7	14
80	Synthesis and photoluminescence properties of near-UV-excitable cyan-emitting Ca2YHf2Ga3O12:Ce3+ garnet phosphors. Journal of Luminescence, 2020, 227, 117544.	1.5	14
81	Photoluminescence properties of novel Ba₂Lu₅B₅O₁₇:Eu³⁺ red emitting phosphors with high color purity for near-UV excited white light emitting diodes. RSC Advances, 2018, 8, 30396-30403.	1.7	11
82	Enhanced efficiency of luminescence with stoichiometry control in LiGd(W (1â^'x) Mo x O 4) 2 :Eu 3+ red phosphors. Journal of Crystal Growth, 2017, 468, 766-769.	0.7	10
83	Growth, vibrational and luminescence analysis of monoclinic KGd(1â^'x)Prx(WO4)2 (x=0.005, 0.02, 0.05) single crystals. Journal of Crystal Growth, 2013, 362, 319-323.	0.7	9
84	Synthesis, structure, and luminescence characteristics of far-red emitting Mn⁴⁺-activated LaScO₃perovskite phosphors for plant growth. RSC Advances, 2018, 8, 33035-33041.	1.7	8
85	Blue-light-excitable broadband yellow-emitting CaGd2HfSc(AlO4)3:Ce3+ garnet phosphors for white light-emitting diode devices with improved color rendering index. Materials Today Chemistry, 2022, 23, 100638.	1.7	7
86	One-step low-temperature solid-state synthesis of lead-free cesium copper halide Cs3Cu2Br5 phosphors with bright blue emissions. Materials Today Chemistry, 2022, 23, 100678.	1.7	5
87	Full-spectrum solid-state white lighting with high color rendering index exceeding 96 based on a bright broadband green-emitting phosphor. Applied Materials Today, 2022, 27, 101439.	2.3	5
88	Comparative analysis of LiGd(WO4)2:Eu3+ phosphors derived by sol gel and hydrothermal methods. Journal of Crystal Growth, 2017, 468, 159-161.	0.7	4
89	Novel Ba3Lu4O9:Bi3+,Eu3+ phosphors for white LEDs: Efficient energy transfer, broad near-UV excitation band and green-yellow-orange-red color tunable emissions. Journal of Luminescence, 2021, 238, 118291.	1.5	4
90	An energy transfer strategy for highly luminescent green-emitting Ce3+/Tb3+ codoped Ca2LaHf2Al3O12 garnet phosphors in white light-emitting diodes. Materials Today Chemistry, 2022, 24, 100773.	1.7	2

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91	Synthesis, crystal growth and characterization of Zn0.5Mn0.5Te single crystal grown via the Bridgman technique. CrystEngComm, 2018, 20, 4989-4996.	1.3	1