

Peter Josef Schmidt

List of Publications by Year in descending order

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147566

31
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76769

74
g-index

95
all docs

95
docs citations

95
times ranked

3101
citing authors

#	ARTICLE	IF	CITATIONS
1	Narrow-band red-emitting Sr[LiAl ₃ N ₄]:Eu ²⁺ as a next-generation LED-phosphor material. Nature Materials, 2014, 13, 891-896.	13.3	1,217
2	A revolution in lighting. Nature Materials, 2015, 14, 454-458.	13.3	925
3	Highly efficient all-nitride phosphor-converted white light emitting diode. Physica Status Solidi (A) Applications and Materials Science, 2005, 202, 1727-1732.	0.8	564
4	Toward New Phosphors for Application in Illumination-Grade White pc-LEDs: The Nitridomagnesosilicates Ca[Mg ₃ SiN ₄]:Ce ³⁺ , Sr[Mg ₃ SiN ₄]:Eu ²⁺ , and Eu[Mg ₃ SiN ₄]. Chemistry of Materials, 2014, 26, 2712-2719.	3.2	234
5	SrAlSi ₄ N ₇ :Eu ²⁺ A Nitridoalumosilicate Phosphor for Warm White Light (pc)LEDs with Edge-Sharing Tetrahedra. Chemistry of Materials, 2009, 21, 1595-1601.	3.2	214
6	Luminescence properties of SrSi ₂ O ₂ N ₂ doped with divalent rare earth ions. Journal of Luminescence, 2006, 121, 441-449.	1.5	213
7	Ca[LiAl ₃ N ₄]:Eu ²⁺ A Narrow-Band Red-Emitting Nitridolithoaluminate. Chemistry of Materials, 2014, 26, 3544-3549.	3.2	201
8	One-Pot Synthesis of Single-Source Precursors for Nanocrystalline LED Phosphors M ₂ Si ₅ N ₈ :Eu ²⁺ (M = Sr, Ba). Chemistry of Materials, 2009, 21, 2467-2473.	3.2	142
9	Group (III) Nitrides M ₂ [Mg ₂ Al ₂ N ₄] (M = Ca, Sr, Ba, Eu) and Ba[Mg ₂ Ga ₂ N ₄] Structural Relation and Nontypical Luminescence Properties of Eu ²⁺ Doped Samples. Chemistry of Materials, 2014, 26, 6113-6119.	3.2	133
10	Narrow-Band Green Emitting Nitridolithoalumosilicate Ba[Li ₂ (Al ₂ Si ₂)N ₆]:Eu ²⁺ with Framework Topology whj for LED/LCD-Backlighting Applications. Chemistry of Materials, 2015, 27, 6109-6115.	3.2	113
11	Nitridomagnesosilicate Ba[Mg ₃ SiN ₄]:Eu ²⁺ and Structure-Property Relations of Similar Narrow-Band Red Nitride Phosphors. Chemistry of Materials, 2015, 27, 1780-1785.	3.2	88
12	Ultra-Narrow-Band Blue-Emitting Oxoberyllates AEL ₂ [Be ₄ O ₆]:Eu ²⁺ (AE=Sr,Ba) Paving the Way to Efficient RGB pc-LEDs. Angewandte Chemie - International Edition, 2018, 57, 8739-8743.	7.2	87
13	Luminescence of the Narrow-Band Red Emitting Nitridomagnesosilicate Li ₂ (Ca _{1-x} Sr _x) ₂ [Mg ₂ Si ₂ N ₆] (x = 0-0.06). Chemistry of Materials, 2017, 29, 1377-1383.		
14	Luminescence of an Oxonitridoberyllate: A Study of Narrow-Band Cyan-Emitting Sr[Be ₆ ON ₄]:Eu ²⁺ . Chemistry of Materials, 2018, 30, 3122-3130.	3.2	77
15	All-nitride monochromatic amber-emitting phosphor-converted light-emitting diodes. Physica Status Solidi - Rapid Research Letters, 2009, 3, 215-217.	1.2	74
16	Sr ₅ Al ₅ Si ₂₁ N ₃₅ O ₂ :Eu ²⁺ A Novel Green Phosphor for White Light pcLEDs with Disordered Intergrowth Structure. Chemistry - A European Journal, 2009, 15, 5311-5319.	1.7	73
17	Crystal Structure, Physical Properties and HRTEM Investigation of the New Oxonitridosilicate EuSi ₂ O ₂ N ₂ . Chemistry - A European Journal, 2006, 12, 6984-6990.	1.7	68
18	Ba ₂ AlSi ₅ N ₉ A New Host Lattice for Eu ²⁺ -Doped Luminescent Materials Comprising a Nitridoalumosilicate Framework with Corner- and Edge-Sharing Tetrahedra. Chemistry of Materials, 2009, 21, 1288-1295.	3.2	68

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19	New Polymorph of the Highly Efficient LED-Phosphor $\text{SrSi}_2\text{O}_2\text{N}_2\text{:Eu}^{2+}$ – Polytypism of a Layered Oxonitridosilicate. <i>Chemistry of Materials</i> , 2013, 25, 1852-1857.	3.2	62
20	$\text{La}_3\text{BaSi}_5\text{N}_9\text{O}_2\text{:Ce}^{3+}$ – A Yellow Phosphor with an Unprecedented Tetrahedra Network Structure Investigated by Combination of Electron Microscopy and Synchrotron X-ray Diffraction. <i>Chemistry of Materials</i> , 2015, 27, 4832-4838.	3.2	56
21	$\text{Ba}_3\text{Ga}_3\text{N}_5$ – A Novel Host Lattice for Eu^{2+} -Doped Luminescent Materials with Unexpected Nitridogallate Substructure. <i>Chemistry of Materials</i> , 2012, 24, 402-407.	3.2	50
22	Unexpected Luminescence Properties of $\text{Sr}_{0.25}\text{Ba}_{0.75}\text{Si}_2\text{O}_2\text{N}_2\text{:Eu}^{2+}$ – A Narrow Blue Emitting Oxonitridosilicate with Cation Ordering. <i>Chemistry - A European Journal</i> , 2012, 18, 13446-13452.	1.7	48
23	$\text{Ca}_{18.75}\text{Li}_{10.5}[\text{Al}_{39}\text{N}_{55}]\text{:Eu}^{2+}$ – Supertetrahedron Phosphor for Solid-State Lighting. <i>Chemistry of Materials</i> , 2016, 28, 1220-1226.	3.2	47
24	Luminescent Nitridophosphates $\text{CaP}_2\text{N}_4\text{:Eu}^{2+}$, $\text{SrP}_2\text{N}_4\text{:Eu}^{2+}$, $\text{BaP}_2\text{N}_4\text{:Eu}^{2+}$, and $\text{BaSr}_2\text{P}_6\text{N}_{12}\text{:Eu}^{2+}$. <i>Chemistry - A European Journal</i> , 2015, 21, 6443-6448.	1.7	46
25	Narrow-Band Yellow-Orange Emitting $\text{La}_3\text{Ca}_{1.5}\text{Si}_6\text{N}_{11}\text{:Eu}^{2+}$ ($\eta \approx 0.77$): A Promising Phosphor for Next-Generation Amber pcLEDs. <i>Chemistry of Materials</i> , 2018, 30, 3552-3558.	3.2	44
26	Synthesis and Characterization of $\text{Tb}[\text{N}(\text{CN})_2]_3 \cdot 2\text{H}_2\text{O}$ and $\text{Eu}[\text{N}(\text{CN})_2]_3 \cdot 2\text{H}_2\text{O}$: Two New Luminescent Rare-Earth Dicyanamides. <i>Chemistry of Materials</i> , 2006, 18, 5738-5745.	3.2	41
27	Electronic Structure, Bandgap, and Thermal Quenching of $\text{Sr}[\text{Mg}_3\text{SiN}_4]\text{:Eu}^{2+}$ in Comparison to $\text{Sr}[\text{LiAl}_3\text{N}_4]\text{:Eu}^{2+}$. <i>Advanced Optical Materials</i> , 2016, 4, 584-591.	3.6	41
28	$\text{HPaCa}_2\text{Si}_5\text{N}_8$ – A New High-Pressure Nitridosilicate: Synthesis, Structure, Luminescence, and DFT Calculations. <i>Chemistry - A European Journal</i> , 2008, 14, 7892-7902.	1.7	35
29	Real structure and diffuse scattering of $\text{Sr}_{0.5}\text{Ba}_{0.5}\text{Si}_2\text{O}_2\text{N}_2\text{:Eu}^{2+}$ - A highly efficient yellow phosphor for pc-LEDs. <i>Solid State Sciences</i> , 2011, 13, 1769-1778.	1.5	34
30	Efficient Yellow-Orange Phosphor $\text{Lu}_4\text{Ba}_2[\text{Si}_9\text{ON}_{16}]\text{O}\text{:Eu}^{2+}$ and Orange-Red Emitting $\text{Y}_4\text{Ba}_2[\text{Si}_9\text{ON}_{16}]\text{O}\text{:Eu}^{2+}$: Two Oxonitridosilicate Oxides with Outstanding Structural Variety. <i>Chemistry of Materials</i> , 2017, 29, 8377-8384.	3.2	34
31	Lumiramic: a new phosphor technology for high performance solid state light sources. <i>Proceedings of SPIE</i> , 2008, , .	0.8	33
32	Progress in high-luminance LED technology for solid-state lighting. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2017, 214, 1600826.	0.8	32
33	Tunable Red Luminescence in Nitridomagnesoaluminates $\text{Sr}_2[\text{MgAl}_5\text{N}_7]\text{:Eu}^{2+}$, $\text{Sr}_2[\text{MgAl}_5\text{N}_7]\text{:Eu}^{2+}$, and $\text{Sr}_8[\text{LiMg}_2\text{Al}_{21}\text{N}_{28}]\text{:Eu}^{2+}$. <i>Chemistry of Materials</i> , 2018, 30, 1755-1761.	3.2	30
34	Nontypical Luminescence Properties and Structural Relation of $\text{Ba}_3\text{P}_5\text{N}_{10}\text{X}\text{:Eu}^{2+}$ (X = Cl, I): Nitridophosphate Halides with Zeolite-like Structure. <i>Chemistry of Materials</i> , 2015, 27, 6432-6441.	3.2	29
35	Electronic and Optical Properties of Eu^{2+} -Activated Narrow-Band Phosphors for Phosphor-Converted Light-Emitting Diode Applications: Insights from a Theoretical Spectroscopy Perspective. <i>Journal of the American Chemical Society</i> , 2022, 144, 8038-8053.	6.6	28
36	Direct Measurements of Energy Levels and Correlation with Thermal Quenching Behavior in Nitride Phosphors. <i>Chemistry of Materials</i> , 2017, 29, 7976-7983.	3.2	27

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37	Tailoring Emission Characteristics: Narrow-Band Red Luminescence from SLA to CaBa[Li ₂ Al ₆ N ₈]:Eu ²⁺ . Chemistry of Materials, 2018, 30, 7885-7891.	3.2	26
38	Rare-Earth Tricyanomelaminates [NH ₄]Ln[HC ₆ N ₉] ₂ [H ₂ O] ₇ ·xH ₂ O (Ln=La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy): Structural Investigation, Solid-State NMR Spectroscopy, and Photoluminescence. Chemistry - A European Journal, 2007, 13, 3512-3524.	1.7	25
39	Excitation dependent quenching of luminescence in LED phosphors. Physica Status Solidi - Rapid Research Letters, 2016, 10, 310-314.	1.2	25
40	Unprecedented Deep-Red Ce ³⁺ Luminescence of the Nitridolithosilicates Li _{38.7} RE _{3.3} Ca _{5.7} [Li ₂ Si ₃₀ N ₅₉ O ₂] ₂ F ₂ (RE = La, Ce, Y). Chemistry of Materials, 2018, 30, 5500-5506.	3.2	25
41	MBe ₂ ON ₁₄ :Eu ²⁺ (M = Sr, Ba): Highly Condensed Nitridoberyllates with Exceptional Highly Energetic Eu ²⁺ Luminescence. Chemistry of Materials, 2019, 31, 3174-3182.	3.2	24
42	Nitridophosphate-Based Ultra-Narrow-Band Blue Emitters: Luminescence Properties of $\text{P}_8\text{N}_{14}:\text{Eu}^{2+}$ (AE = Ca, Sr, Ba). Chemistry - A European Journal, 2020, 26, 7292-7298.	1.7	24
43	Ultra-Narrow-Band Blue-Emitting Oxoberyllates AELi ₂ [Be ₄ O ₆]:Eu ²⁺ (AE=Sr,Ba) Paving the Way to Efficient RGB pc-LEDs. Angewandte Chemie, 2018, 130, 8875-8879.	1.6	22
44	Illuminating Nitridoberylloaluminates: The Highly Efficient Red-Emitting Phosphor Sr ₂ [BeAl ₃ N ₅]:Eu ²⁺ . Chemistry of Materials, 2020, 32, 6611-6617.	3.2	21
45	Wei-Yes Licht aus Nitriden. Nachrichten Aus Der Chemie, 2014, 62, 847-851.	0.0	20
46	Sr[BeSi ₂ N ₄]:Eu ²⁺ /Ce ³⁺ and Eu[BeSi ₂ N ₄]: Nontypical Luminescence in Highly Condensed Nitridoberyllosilicates. Chemistry - A European Journal, 2018, 24, 7243-7249.	1.7	20
47	Sr ₃ P ₃ N ₇ : Complementary Approach by Ammonothermal and High-Pressure Syntheses. Chemistry - A European Journal, 2020, 26, 6257-6263.	1.7	18
48	Designing Luminescent Materials and Band Gaps: A Soft X-ray Spectroscopy and Density Functional Theory Study of Li ₂ Ca ₂ [Mg ₂ Si ₂ N ₆]:Eu ²⁺ and Ba[Li ₂ (Al ₂ Si ₂ N ₆)] ₂ :Eu ²⁺ . Journal of Physical Chemistry C, 2017, 121, 14296-14301.	1.5	15
49	Energy levels of Eu ²⁺ states in the next-generation LED-phosphor SrLi ₂ Al ₂ O ₂ N ₂ :Eu ²⁺ . Journal of Materials Chemistry C, 2022, 10, 9740-9747.	2.7	13
50	Oxoberyllates SrBeO ₂ and Sr ₁₂ Be ₁₇ O ₂₉ as Novel Host Materials for Eu ²⁺ Luminescence. Chemistry - A European Journal, 2018, 24, 12678-12685.	1.7	11
51	Nitridic Analogs of Micas $\text{AE}_3\text{Si}_3\text{P}_4\text{N}_{10}(\text{NH})_2$ (AE = Mg, Mg _{0.94} Ca _{0.06} , Ca, Sr). Angewandte Chemie - International Edition, 2022, 61, e202114902.	7.2	11
52	Materials design and properties of nitride phosphors for LEDs. Proceedings of SPIE, 2007, 6669, 136.	0.8	10
53	Fully phosphor-converted LEDs with Lumiramic phosphor technology. Proceedings of SPIE, 2010, , .	0.8	10
54	Rare-Earth Melonates LnC ₆ N ₇ (NCN) ₃ ·xH ₂ O (Ln) Tj ETQq0 0 0 rgBT /Over Photoluminescence Properties of Heptazine Salts with Trivalent Cations. European Journal of Inorganic Chemistry, 2012, 2012, 1832-1839.	1.0	10

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55	Ammonothermal Synthesis of Ba ₂ PO ₃ N – An Oxonitridophosphate with Non-Condensed PO ₃ N Tetrahedra. <i>European Journal of Inorganic Chemistry</i> , 2020, 2020, 841-846.	1.0	10
56	Oxonitridosilicate Oxides $\text{RE}_2\text{Ba}_6[\text{Si}_{22}\text{O}_{19}\text{N}_{36}]\text{O}_{16}:\text{F}_2\text{Y}_2$ (RE = Y, Tb) with a Unique Layered Structure and Orange-Red Luminescence for RE = Y. <i>Inorganic Chemistry</i> , 2018, 57, 2242-2248.	1.9	9
57	HIP to be Square: Simplifying Nitridophosphate Synthesis in a Hot Isostatic Press. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 18240-18243.	7.2	9
58	RE ₄ Ba ₂ [Si ₁₂ O ₂ N ₁₆ C ₃]:Eu ²⁺ (RE = Lu, Y): Green-Yellow Emitting Oxonitridocarbidosilicates with a Highly Condensed Network Structure Unraveled through Synchrotron Microdiffraction. <i>Inorganic Chemistry</i> , 2018, 57, 13840-13846.	1.9	8
59	HIP to be Square: Simplifying Nitridophosphate Synthesis in a Hot Isostatic Press. <i>Angewandte Chemie</i> , 2020, 132, 18397-18400.	1.6	8
60	SrAlSi ₄ N ₇ :Eu ²⁺ – A Nitridoalumosilicate Phosphor for Warm White-light LEDs with Edge-sharing Tetrahedrons. <i>Zeitschrift Fur Anorganische Und Allgemeine Chemie</i> , 2008, 634, 2044-2044.	0.6	7
61	BaP ₆ N ₁₀ NH:Eu ²⁺ as a Case Study – An Imidonitridophosphate Showing Luminescence. <i>Chemistry - A European Journal</i> , 2020, 26, 5010-5016.	1.7	7
62	(Sr ₁ Ca _x)(_{11+16y})(_{25z})(Si ₁ Al _x) ₂ (x = 0.24, y = 0.18, z = 0.19) – A Novel Sialon with a Highly Condensed Silicate Framework. <i>European Journal of Inorganic Chemistry</i> , 2009, 2009, 3326-3332.	1.0	6
63	Synthesis of Nitride Zeolites in a Hot Isostatic Press. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 4470-4473.	7.2	6
64	Orange-Emitting Li ₄ Sr ₄ [Si ₄ O ₄ N ₆]O:Eu ²⁺ – a Layered Lithium Oxonitridosilicate Oxide. <i>Inorganic Chemistry</i> , 2018, 57, 14304-14313.	1.9	4
65	Nitridic Analogs of Micas AESi ₃ P ₄ N ₁₀ (NH) ₂ (AE = Mg, Mg _{0.94} Ca _{0.06} , Ca, Sr). <i>Angewandte Chemie</i> , 2022, 134, e202114902.	1.6	4
66	Nitridosilicates: a new family of phosphors for color conversion of LEDs. , 2005, 5941, 169.		3
67	Synthesis and Luminescence Properties of Amber Emitting La ₇ Sr ₁₀ N ₁₉ O ₃ :Eu ²⁺ and Syntheses of the Substitutional Variants $\text{RE}_8\text{Ca}_x\text{AE}_x[\text{Si}_{10}\text{N}_{20}\text{O}_2\text{RE}_x]$ with RE = La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Y, Yb, Lu. <i>Chemistry - A European Journal</i> , 2022, 28,	1.7	3
68	Layered oxonitrido silicate (SiON) phosphors for high power LEDs. <i>Proceedings of SPIE</i> , 2008, , .	0.8	2
69	Ab initio exploration and prediction of AE-containing nitrido(litho/magnesio)tetrelates (AE = Ca,) Tj ETQq1 1 0.784314 rgBT /Over [Ce ₂ N ₆] ¹⁰⁺ units. <i>Dalton Transactions</i> , 2019, 48, 8671-8677.	1.6	2
70	RE ₆ Ca _{1.5} Si ₁₁ N ₂₀ O (RE = Yb,) Tj ETQq0 0 0 rgBT /Over Lu ₆ Ca _{1.5} Si ₁₁ N ₂₀ O:Ce ³⁺ Offering Interesting Spectral Properties for Yellow-Emitting Phosphors in 1pcLEDs. <i>European Journal of Inorganic Chemistry</i> , 2019, 2019, 4985-4993.	1.0	2
71	Missing Member in the M ₄ N ₇ Compound Class: Carbothermal Reduction and Nitridation Synthesis Revealing Substitution of N by C and O in CaLu[Si ₄ N ₇ ~ ₂ CxOx]:Eu ²⁺ /Ce ³⁺ (x = 0.3). <i>Chemistry - A European Journal</i> , 2021, , .	1.7	2
72	Inverse-Tunable Red Luminescence and Electronic Properties of Nitridoberyllaluminates Sr ₂ Ca _x BeAl ₃ N ₅ :Eu ²⁺ (x = 0-2). <i>Chemistry - A European Journal</i> , 2022, 28, .	1.7	2

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73	HP-Ca ₂ Si ₅ N ₈ - A new High-Pressure Nitridosilicate: Synthesis, Structure and Luminescence. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2008, 634, 2032-2032.	0.6	0
74	(Ca, Sr) _{5.5+(x/y)/2} Si ₁₆ Al _x N ₂₅ O _y - a Novel Framework Sialon. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2008, 634, 2051-2051.	0.6	0
75	Synthesis of Nitride Zeolites in a Hot Isostatic Press. Angewandte Chemie, 2021, 133, 4520-4523.	1.6	0