

Cr_{5.7}Si_{2.3}P₈N₂₄ – A Chromium(+IV) Nitridosilicate Phosphate with Amphibole-Type Structure

M.M. Pointner, K.R. Fisher, M. Weidemann, F. Wolf, J. Wright, E. Lawrence Bright, C. Giacobbe, O. Oeckler, W. Schnick
Angew. Chem. **2024**, e202401421; *Angew. Chem. Int. Ed.* **2024**, e202401421

The Critical Role of Anharmonic Lattice Dynamics for Macroscopic Properties of the Visible Light Absorbing Nitride Semiconductor CuTaN₂

F.S. Hegner, A. Cohen, S.S. Rudel, S. Kronawitter, M. Grumet, X. Zhu, R. Korobko, L. Houben, C.-M. Jiang, W. Schnick, G. Kieslich, O. Yaffe, I.D. Sharp, D.A. Egger
Adv. Energy Mater. **2024** (accepted)

The Fundamental Disorder Unit in (Si, P)–(O, N) Networks

M. Dialer, K. Witthaut, T. Bräuniger, P.J. Schmidt, W. Schnick
Angew. Chem. **2024**, e202401419; *Angew. Chem. Int. Ed.* **2024**, e202401419

Simple Molecules under High-Pressure and High-Temperature Conditions: Synthesis and Characterization of α - and β -C(NH)₂ with Fully sp³-Hybridized Carbon

T.J. Koller, S. Jin, V. Krol, S.J. Ambach, U. Ranieri, S. Khandarkhaeva, J. Spender, S. McWilliams, F. Trybel, N. Giordano, T. Poreba, M. Mezouar, X. Kuang, C. Lu, L. Dubrovinsky, N. Dubrovinskaia, A. Hermann, W. Schnick, D. Laniel
Angew. Chem. **2024**, 136, e202318214; *Angew. Chem. Int. Ed.* **2024**, 63, e202318214

Nitride Synthesis Under High-pressure High-temperature Conditions – Unprecedented *in-situ* Insight into the Reaction Mechanism

S.J. Ambach, R.M. Pritzl, S. Bhat, R. Farla, W. Schnick
Inorg. Chem. **2024** (accepted)

A Theoretical Spectroscopy Study of the Photoluminescent Properties of Narrow Band Eu²⁺-doped Phosphors Containing Multiple Candidate Doping Centers. Prediction of an Unprecedented Narrow Band Red Phosphor

R. Shafei, P.J. Strobel, P.J. Schmidt, D. Maganas, W. Schnick, F. Neese
Phys. Chem. Chem. Phys. **2024**, 26, 6277

(Dis)Order and Luminescence in Silicon-Rich (Si,P)–N Network Sr₅Si₇P₂N₁₆:Eu²⁺

M. Dialer, M.M. Pointner, P. Strobel, P.J. Schmidt, W. Schnick
Inorg. Chem. **2024**, 63, 1480

Ba₁₂[BN₂]_{6.67}H₄ – A Disordered Anti-Skutterudite Filled with Nitridoborate Anions

S.L. Wandelt, A. Mutschke, D. Khalyavin, J. Steinadler, A.J. Karttunen, W. Schnick
Angew. Chem. **2024**, 136, e202316469; *Angew. Chem. Int. Ed.* **2024**, 63, e202316469

Synthesis of Ultra-Incompressible and Recoverable Carbon Nitrides Featuring CN₄ Tetrahedra

D. Laniel, F. Trybel, A. Aslandukov, S. Khandarkhaeva, T. Fedotenko, Y. Yin, N. Miyajima, F. Tasnádi, A.V. Ponomareva, N. Jena, F.I. Akbar, B. Winkler, A. Néri, S. Chariton, V. Prakapenka, V. Milman, W. Schnick, A.N. Rudenko, M.I. Katsnelson, I.A. Abrikosov, L. Dubrovinsky, N. Dubrovinskaia
Adv. Mater. **2024**, 36, 2308030

Blue Emitting SrBe_{1-x}Si_{2+x}O_{3-2x}N_{2+2x}:Eu²⁺ (x ≈ 0.1)

T. Giffthaler, M. Dialer, P. Strobel, P.J. Schmidt, W. Schnick
Z. Anorg. Allg. Chem. **2024**, 650, e202300208

Please Mind the Gap: Highly Condensed P–N Networks in LiP₄N₇ and Li_{3-x}P₆N_{11-x}(NH)_x

S. Schneider, S. Klenk, S.D. Klotz, W. Schnick
Chem. Eur. J. **2024**, 30, e202303251

Discovery of Multi-anion Antiperovskites X₆NFSn₂ (X = Ca, Sr) as Promising Thermoelectric Materials by Computational Screening

D. Han, B. Zhu, Z. Cai, K.B. Spooner, S.S. Rudel, W. Schnick, T. Bein, D.O. Scanlon, H. Ebert
Matter **2024**, 7, 158

Order and Disorder in Mixed (Si, P)–N Networks $\text{Sr}_2\text{SiP}_2\text{N}_6\text{:Eu}^{2+}$ and $\text{Sr}_5\text{Si}_2\text{P}_6\text{N}_{16}\text{:Eu}^{2+}$

M. Dialer, M.M. Pointner, S.L. Wandelt, P. Strobel, P.J. Schmidt, L. Bayarjargal, B. Winkler, W. Schnick
Adv. Optical Mater. **2023**, 2302668

Green-Emitting Oxonitridoberyllsilicate $\text{Ba}[\text{BeSiON}_2]\text{:Eu}^{2+}$ for Wide Gamut Displays

T. Giffthaler, P. Strobel, V. Weiler, A. Haffner, A. Neuer, J. Steinadler, T. Bräuniger, S.D. Kloß,
S. Rudel, P.J. Schmidt, W. Schnick
Adv. Optical Mater. **2023**, 2302343

Combining Nitridoborates, Nitrides and Hydrides – Synthesis and Characterization of the Multianionic $\text{Sr}_6\text{N}[\text{BN}_2]_2\text{H}_3$

S.L. Wandelt, A. Mutschke, D. Khalyavin, R. Calaminus, J. Steinadler, B.V. Lotsch, W. Schnick
Angew. Chem. **2023**, 135, e202313564; *Angew. Chem. Int. Ed.* **2023**, 62, e202313564

Synthesis and Crystal Structure of Silicon Pernitride SiN_2 at 140 GPa

P.L. Jurzick, G. Krach, L. Brüning, W. Schnick, M. Bykov
Acta Crystallogr. **2023**, E79, 923

Finding Order in Disorder: The Highly Disordered Lithium Oxonitridophosphate

Double Salt $\text{Li}_{8+x}\text{P}_3\text{O}_{10-x}\text{N}_{1+x}$ ($x = 1.4(5)$)

S. Schneider, S. Kreiner, L.G. Balzat, B.V. Lotsch, W. Schnick
Chem. Eur. J. **2023**, 29, e202301986

Tetra-Face-Capped Octahedra in a Tetrahedra Network – Structure Determination and Scanning Transmission Electron Microscopy of $\text{SrAl}_5\text{P}_4\text{N}_{10}\text{O}_2\text{F}_3$

M.M. Pointner, O. Oeckler, W. Schnick
Chem. Eur. J. **2023**, 29, e202301960

High-Pressure Synthesis, Crystal Structure, and Characterization of the New Non-Centrosymmetric Terbium Borate $\text{Tb}_3\text{B}_{10}\text{O}_{17}(\text{OH})_5$

T.A. Teichtmeister, C. Paulsen, S.J. Ambach, M.K. Reimann, K. Wurst, L. Bayarjargal, R. Pöttgen,
W. Schnick, H. Huppertz
J. Solid State Chem. **2023**, 325, 124170

A Novel Nitridoborate Hydride $\text{Sr}_{13}(\text{BN}_2)_6\text{H}_8$ Elucidated from X-Ray and Neutron Diffraction Data

S.L. Wandelt, A. Mutschke, D. Khalyavin, J. Steinadler, W. Schnick
Chem. Eur. J. **2023**, 29, e202301241

From Framework to Layers Driven by Pressure – The Monophyllo-Oxonitridophosphate $\beta\text{-MgSrP}_3\text{N}_5\text{O}_2$ and Comparison to its α -Polymorph

R.M. Pritzl, N. Prinz, P. Strobel, P.J. Schmidt, D. Johrendt, W. Schnick
Chem. Eur. J. **2023**, 29, e202301218

Oxonitridoberyllsilicate Phosphors

T. Giffthaler, P.-J. Strobel, P.J. Schmidt, H.-H. Bechtel, W. Schnick
PCT Int. Appl. **2023**, WO2023107239 (A1), 2023-06-15
Lumileds LLC, Ludwig-Maximilians-Universität München

Combining MN_6 Octahedra and PN_5 Trigonal Bipyramids in the Mica-like Nitridophosphates MP_6N_{11} ($M = \text{Al, In}$)

S.J. Ambach, M. Pointner, S. Falkai, C. Paulmann, O. Oeckler, W. Schnick
Angew. Chem. **2023**, 135, e202303580; *Angew. Chem. Int. Ed.* **2023**, 62, e202303580

The Importance of Lone Pairs to Structure and Bonding of the Novel Germanium Nitridophosphate GeP_2N_4

T. de Boer, C. Somers, T. Boyko, S. Ambach, L. Eisenburger, W. Schnick, A. Moewes
J. Mater. Chem. A **2023**, 11, 6198

Comprehensive Investigation of Anion Species in Crystalline Li⁺-ion Conductor

Li_{27-x}[P₄O_{7+x}N_{9-x}]O₃ (x ≈ 1.9(3))

S. Schneider, E.-M. Wendinger, V. Baran, A.-K. Hatz, B.V. Lotsch, M. Nentwig, O. Oeckler,
T. Bräuniger, W. Schnick
Chem. Eur. J. **2023**, *29*, e202300174

Modular Principle for Complex Disordered Tetrahedral Frameworks in Quenched High-pressure Phases of Phosphorus Oxide Nitrides

D. Günther, D. Baumann, W. Schnick, O. Oeckler
Chem. Eur. J. **2023**, *29*, e202203892

Structure Determination of Crystalline LiPON Model Structure Li_{5+x}P₂O_{6-x}N_{1+x} with x ≈ 0.9

S. Schneider, L.G. Balzat, B.V. Lotsch, W. Schnick
Chem. Eur. J. **2023**, *29*, e202202984

Structural Influence of Lone Pairs in GeP₂N₄, a Germanium(II) Nitridophosphate

S.J. Ambach, C. Somers, T. de Boer, L. Eisenburger, A. Moewes, W. Schnick
Angew. Chem. **2023**, *135*, e202215393; *Angew. Chem. Int. Ed.* **2023**, *62*, e202215393

Sodalite-type Ga_{16/3}[P₁₂N₂₄]O₂: Synthesis, Electron Crystallography and Powder X-ray Diffraction

D. Günther, L. Eisenburger, W. Schnick, O. Oeckler
Z. Anorg. Allg. Chem. **2022**, *648*, e202200280

Revealing Phosphorus Nitrides up to the Megabar Regime: Synthesis of α'-P₃N₅, δ-P₃N₅ and PN₂

D. Laniel, F. Trybel, A. Néri, Y. Yin, A. Aslandukov, T. Fedotenko, S. Khandarkhaeva, F. Tasnádi,
S. Chariton, C. Giacobbe, E. Lawrence Bright, M. Hanfland, V. Prakapenka, W. Schnick, I.A. Abrikosov,
L. Dubrovinsky, N. Dubrovinskaia
Chem. Eur. J. **2022**, *28*, e202201998

Strontium Nitridoborate Hydride Sr₂BN₂H, Verified by Single-Crystal X-ray and Neutron Powder Diffraction

S.L. Wandelt, A. Karnas, A. Mutschke, N. Kunkel, C. Ritter, W. Schnick
Inorg. Chem. **2022**, *61*, 12685

Bandgap and Electronic Structure of CaSiN₂: Experiment and Theory

T. de Boer, T.D. Boyko, C. Braun, W. Schnick, A. Moewes
Int. J. Appl. Ceram. Technol. **2022**, *20*, 197

Energy Levels of Eu²⁺ States in the Next-Generation LED-Phosphor SrLi₂Al₂O₂N₂:Eu²⁺

M. Ruhul Amin, P. Strobel, W. Schnick, P.J. Schmidt, A. Moewes
J. Mater. Chem. C **2022**, *10*, 9740

Synthesis and Luminescence Properties of Amber Emitting La₇Sr[Si₁₀N₁₉O₃]:Eu²⁺ and Syntheses of the Substitutional Variants RE_{8-x}AE_x[Si₁₀N_{20-x}O_{2+x}]:Eu²⁺ with RE = La, Ce; AE = Ca, Sr, Ba; 0 ≤ x ≤ 2

L. Gamperl, P. Strobel, P.J. Schmidt, W. Schnick
Chem. Eur. J. **2022**, *28*, e202200760

Electronic and Optical Properties of Eu²⁺-activated Narrow-Band Phosphors for Phosphor-Converted Light-Emitting Diode Applications: Insights from a Theoretical Spectroscopy Perspective

R. Shafei, D. Maganas, P.J. Strobel, P.J. Schmidt, W. Schnick, F. Neese
J. Am. Chem. Soc. **2022**, *144*, 8038

Band Gap and Electronic Structure of Defects in the Ternary Nitride BP₃N₆: Experiment and Theory

T. de Boer, M.F. Al Fattah, M.R. Amin, S.J. Ambach, S. Vogel, W. Schnick, A. Moewes
J. Mater. Chem. C **2022**, *10*, 6429

Self-doping Behavior and Cation Disorder in MgSnN₂

D. Han, S.S. Rudel, W. Schnick, H. Ebert
Phys. Rev. B **2022**, *105*, 125202

Discovery of Two Polymorphs of TiP₄N₈ Synthesized from Binary Nitrides

L. Eisenburger, V. Weippert, C. Paulmann, D. Johrendt, O. Oeckler, W. Schnick
Angew. Chem. **2022**, *134*, e202202014; *Angew. Chem. Int. Ed.* **2022**, *61*, e202202014

High-pressure Na₃(N₂)₄, Ca₃(N₂)₄, Sr₃(N₂)₄, and Ba(N₂)₃ Featuring Nitrogen Dimers with Noninteger Charges and Anion-driven Metallicity

D. Laniel, B. Winkler, T. Fedotenko, A. Aslandukova, A. Aslandukov, S. Vogel, T. Meier, M. Bykov, S. Chariton, K. Glazyrin, V. Milman, V. Prakapenka, W. Schnick, L. Dubrovinsky, N. Dubrovinskaia
Phys. Rev. Mater. **2022**, *6*, 023402

Inverse-tunable Red Luminescence and Electronic Properties of Nitridoberyllaluminates

Sr_{2-x}Ba_x[BeAl₃N₅]:Eu²⁺ (x = 0–2)

E. Elzer, P. Strobel, V. Weiler, M.R. Amin, P.J. Schmidt, A. Moewes, W. Schnick
Chem. Eur. J. **2022**, *28*, e202104121

Nitridic Analogs of Micas AESi₃P₄N₁₀(NH)₂ (AE = Mg, Mg_{0.94}Ca_{0.06}, Ca, Sr)

L. Eisenburger, P. Strobel, P.J. Schmidt, T. Bräuniger, J. Wright, E. Lawrence Bright, C. Giacobbe, O. Oeckler, W. Schnick
Angew. Chem. **2022**, *134*, e202114902; *Angew. Chem. Int. Ed.* **2022**, *61*, e202114902

Missing Member in the M^{II}M^{III}Si₄N₇ Compound Class: Carbothermal Reduction and Nitridation Synthesis Reveal Substitution of Nitrogen by Carbon and Oxygen in CaLu[Si₄N_{7-2x}C_xO_x]:Eu²⁺/Ce³⁺ (x ≈ 0.3)

L. Gamperl, O.E.O. Zeman, P. Strobel, P.J. Schmidt, W. Schnick
Chem. Eur. J. **2022**, *28*, e202104007

Detecting a Hierarchy of Deep-Level Defects in the Model Semiconductor ZnSiN₂

T. de Boer, J. Häusler, P. Strobel, T.D. Boyko, S. Rudel, W. Schnick, A. Moewes
J. Phys. Chem. C **2021**, *125*, 27959

Comprehensive Band Gap and Electronic Structure Investigations of the Prominent Phosphors M₂Si₅N₈:Eu²⁺ (M=Ca,Sr,Ba) Determined Using Soft X-ray Spectroscopy and Density Functional Theory

T.M. Tolhurst, C. Braun, W. Schnick, A. Moewes
J. Phys. Chem. C **2021**, *125*, 25799

Eu₃Be₂₂N₁₆O: A Highly Condensed Oxonitridoberyllate

E. Elzer, M. Weidemann, W. Schnick
Eur. J. Inorg. Chem. **2021**, 4979

Nitridophosphate Phosphors for Solid State Lighting and Method of Production

S. Wendl, P.-J. Schmidt, W. Schnick
PCT Int. Appl. **2021**, WO2021183847 (A1), 2021-09-16
Lumileds LLC

High-Pressure Synthesis of Sc₅P₁₂N₂₃O₃ and Ti₅P₁₂N₂₄O₂ by Activation of Binary Nitrides ScN and TiN with NH₄F

L. Eisenburger, V. Weippert, O. Oeckler, W. Schnick
Chem. Eur. J. **2021**, *27*, 14184

Structure Elucidation of Complex Endotaxially Intergrown Lanthanum Barium Oxonitridosilicate Oxides by Combination of Microfocused Synchrotron Radiation and Transmission Electron Microscopy

L. Gamperl, L. Neudert, P. Schultz, D. Durach, W. Schnick, O. Oeckler
Chem. Eur. J. **2021**, *27*, 12835

Unraveling the Energy Levels of Eu^{2+} Ions in $\text{MBe}_{20}\text{N}_{14}:\text{Eu}^{2+}$ ($\text{M} = \text{Sr}, \text{Ba}$) Phosphors

M.R. Amin, E. Elzer, W. Schnick, A. Moewes
J. Phys. Chem. C **2021**, 125, 11828

Synthesis of the Scandium Chloride Hydrates $\text{ScCl}_3 \cdot 3 \text{H}_2\text{O}$ and $\text{Sc}_2\text{Cl}_4(\text{OH})_2 \cdot 12 \text{H}_2\text{O}$ and their Characterisation by X-Ray Diffraction, ^{45}Sc NMR Spectroscopy and DFT Calculations

T. Bräuniger, P. Bielec, O.E.O. Zeman, I.L. Moudrakovski, C. Hoch, W. Schnick
Z. Naturforsch. B **2021**, 76, 217

Electronic Properties of Semiconducting $\text{Zn}(\text{Si},\text{Ge},\text{Sn})\text{N}_2$ Alloys

M. Ogura, D. Han, M. Pointner, L. Junkers, S.S. Rudel, W. Schnick, H. Ebert
Phys. Rev. Mater. **2021**, 5, 024601

High-Pressure High-Temperature Synthesis of Mixed Nitridosilicatephosphates and Luminescence of $\text{AESiP}_3\text{N}_7:\text{Eu}^{2+}$ ($\text{AE} = \text{Sr}, \text{Ba}$)

L. Eisenburger, O. Oeckler, W. Schnick
Chem. Eur. J. **2021**, 27, 4461

Synthesis, Crystal Structure and Structure-property Relations of Strontium Orthocarbonate Sr_2CO_4

D. Laniel, J. Binck, B. Winkler, S. Vogel, T. Fedotenko, S. Chariton, V. Prakapenka, V. Milman, W. Schnick, L. Dubrovinsky, N. Dubrovinskaia
Acta Crystallogr. B **2021**, B77, 131

Synthesis of Nitride Zeolites in a Hot Isostatic Press

S. Wendl, M. Zipkat, P. Strobel, P.J. Schmidt, W. Schnick
Angew. Chem. **2021**, 133, 4520; *Angew. Chem. Int. Ed.* **2021**, 60, 4470

Aus blau wird weiß – Beitrag der Chemie zu einer nachhaltigen Beleuchtung

D. Diekemper, W. Schnick, S. Schwarzer
Chemkon. **2021**, 28, 341

Post-Synthetic Modification: Systematic Study on a Simple Access to Nitridophosphates

S. Wendl, L. Seidl, P. Schüler, W. Schnick
Angew. Chem. **2020**, 132, 23785; *Angew. Chem. Int. Ed.* **2020**, 59, 23579

Illuminating Nitridoberyllaluminates: The Highly Efficient Red-Emitting Phosphor $\text{Sr}_2[\text{BeAl}_3\text{N}_5]:\text{Eu}^{2+}$

E. Elzer, P. Strobel, V. Weiler, P.J. Schmidt, W. Schnick
Chem. Mater. **2020**, 32, 6611

HIP to be Square: Simplifying Nitridophosphate Synthesis in a Hot Isostatic Press

S. Wendl, S. Mardazad, P. Strobel, P.J. Schmidt, W. Schnick
Angew. Chem. **2020**, 132, 18397; *Angew. Chem. Int. Ed.* **2020**, 59, 18240

Electronic Structure Investigation of Wide Band Gap Semiconductors - Mg_2PN_3 and Zn_2PN_3 : Experiment and Theory

M.F. Al Fattah, M.R. Amin, M. Mallmann, S. Kasap, W. Schnick, A. Moewes
J. Phys.: Condens. Matter **2020**, 32, 405504

Understanding of Luminescence Properties Using Direct Measurements on Eu^{2+} -doped Wide Bandgap Phosphors

M.R. Amin, P. Strobel, A. Qamar, T. Gifftthaler, W. Schnick, A. Moewes
Adv. Optical Mater. **2020**, 8, 2000504

Nitridophosphate-Based Ultra-Narrow-Band Blue-Emitters: Luminescence Properties of $\text{AEP}_8\text{N}_{14}:\text{Eu}^{2+}$ ($\text{AE} = \text{Ca}, \text{Sr}, \text{Ba}$)

S. Wendl, L. Eisenburger, P. Strobel, D. Günther, J.P. Wright, P.J. Schmidt, O. Oeckler, W. Schnick
Chem. Eur. J. **2020**, 26, 7292

Ammonothermal Synthesis and Crystal Growth of the Chain-type Oxonitridosilicate

Ca_{1+x}Y_{1-x}SiN_{3-x}O_x (x > 0)

M. Mallmann, C. Maak, W. Schnick
Z. Anorg. Allg. Chem. **2020**, 646, 1539

Sr₃P₃N₇: Complementary Approach by Ammonothermal and High-Pressure Syntheses

M. Mallmann, S. Wendl, P. Strobel, P.J. Schmidt, W. Schnick
Chem. Eur. J. **2020**, 26, 6257

Ammonothermal Synthesis of Ba₂PO₃N – An Oxonitridophosphate with Non-Condensed PO₃N-Tetrahedra

S. Wendl, M. Mallmann, P. Strobel, P.J. Schmidt, W. Schnick
Eur. J. Inorg. Chem. **2020**, 841

Facile One-step Synthesis of Zn_{1-x}Mn_xSiN₂ Nitride Semiconductor Solid Solutions via Solid-state Metathesis Reaction

O.E.O. Zeman, F.O. von Rohr, L. Neudert, W. Schnick
Z. Anorg. Allg. Chem. **2020**, 646, 228

BaP₆N₁₀NH:Eu²⁺ as a Case Study - An Imidonitridophosphate Showing Luminescence

S. Wendl, L. Eisenburger, M. Zipkat, D. Günther, J.P. Wright, P.J. Schmidt, O. Oeckler, W. Schnick
Chem. Eur. J. **2020**, 26, 5010

High-pressure Synthesis of Cyclic Phosphazenes by Near-UV Photo-induced Reactivity of NH₃ and Elemental Phosphorus

D. Scelta, A. Baldassarre, M. Serrano-Ruiz, A. Marchuk, S. Vogel, W. Schnick, M. Peruzzini, R. Bini, M. Ceppatelli
J. Phys. Chem. C **2020**, 124, 4308

Synthesis and Crystal Structure of Strontium Beryllate Sr₃Be₂O₅

T. Giffthaler, P. Strobel, W. Schnick
Z. Anorg. Allg. Chem. **2020**, 646, 103

Crystalline Nitridophosphates by Ammonothermal Synthesis

M. Mallmann, S. Wendl, W. Schnick
Chem. Eur. J. **2020**, 26, 2067

Nitride Spinel: An Ultraincompressible High-Pressure Form of BeP₂N₄

S. Vogel, M. Bykov, E. Bykova, S. Wendl, S.D. Kloß, A. Pakhomova, N. Dubrovinskaia, L. Dubrovinsky, W. Schnick
Angew. Chem. **2020**, 132, 2752; *Angew. Chem. Int. Ed.* **2020**, 59, 2730

Synthesis of RE_{6-x}Ca_{1.5x}Si₁₁N₂₀O (RE = Yb, Lu; x ≈ 2.2) with Lu_{6-x}Ca_{1.5x}Si₁₁N₂₀O:Ce³⁺ Offering Interesting Spectral Properties for Yellow-Emitting Phosphors in 1pcLEDs

L. Gamberl, G. Krach, P.J. Schmidt, W. Schnick
Eur. J. Inorg. Chem. **2019**, 4985

Microwave Synthesis of a Prominent LED Phosphor for School Students: Chemistry's Contribution to Sustainable Lighting

D. Diekemper, W. Schnick, S. Schwarzer
J. Chem. Edu. **2019**, 96, 3018

Solid Solutions of Grimm-Sommerfeld Analogous Nitride Semiconductors II-IV-N₂ (II = Mg, Mn, Zn; IV = Si, Ge): Ammonothermal Synthesis and DFT Calculations

M. Mallmann, R. Niklaus, T. Rackl, M. Benz, T.G. Chau, D. Johrendt, J. Minár, W. Schnick
Chem. Eur. J. **2019**, 25, 15887

**The Long-periodic Loop-branched Chain Structure of the Oxonitridophosphate $\text{La}_{21}\text{P}_{40}\text{O}_{46}\text{N}_{57}$,
Elucidated by a Combination of TEM and Microfocused Synchrotron Radiation**

M. Nentwig, S.D. Kloß, L. Neudert, L. Eisenburger, W. Schnick, O. Oeckler
Chem. Eur. J. **2019**, *25*, 14382

Luminescent Materials

P.-J. Strobel, P.J. Schmidt, W. Schnick
PCT Int. Appl. **2019**, US2019322932 (A1), 2019-10-24
Lumileds Holding BV, Ludwig-Maximilians-Universität München

Wavelength Converting Material for a Light Emitting Device

P.J. Schmidt, P.-J. Strobel, W. Schnick
PCT Int. Appl. **2019**, WO 2019141582 A1, 20190725
Lumileds Holding BV, Ludwig-Maximilians-Universität München

**High-pressure Synthesis of Ultraincompressible Hard Rhenium Nitride Pernitride
 $\text{Re}_2(\text{N}_2)(\text{N})_2$ Stable at Ambient Conditions**

M. Bykov, S. Chariton, H. Fei, T. Fedotenko, G. Aprilis, A.V. Ponomareva, F. Tasnádi,
I.A. Abrikosov, B. Merle, P. Feldner, S. Vogel, W. Schnick, V.B. Prakapenka, E. Greenberg,
M. Hanfland, A. Pakhomova, H.-P. Liermann, T. Katsura, N. Dubrovinskaia, L. Dubrovinsky
Nat. Commun. **2019**, *10*, 2994

**Boron Phosphorus Nitride at Extremes: PN_6 Octahedra in the High-Pressure
Polymorph $\beta\text{-BP}_3\text{N}_6$**

S. Vogel, M. Bykov, E. Bykova, S. Wendl, S.D. Kloß, A. Pakhomova, S. Chariton, E. Koemets,
N. Dubrovinskaia, L. Dubrovinsky, W. Schnick
Angew. Chem. **2019**, *131*, 9158; *Angew. Chem. Int. Ed.* **2019**, *58*, 9060

Nitridophosphates: A Success Story of Nitride Synthesis

S.D. Kloß, W. Schnick
Angew. Chem. **2019**, *131*, 8015; *Angew. Chem. Int. Ed.* **2019**, *58*, 7933

**Ab Initio Exploration and Prediction of AE-containing Nitrido(litho/magneso)tetrelates
(AE = Ca, Sr; Tt = Si, Ge) with $[\text{Si}_2\text{N}_6]^{10-}$ or $[\text{Ge}_2\text{N}_6]^{10-}$ -units**

R. Niklaus, J. Minár, P. Strobel, P.J. Schmidt, W. Schnick
Dalton Trans. **2019**, *48*, 8671

Author Profile - Prof. Dr. Wolfgang Schnick

Angew. Chem. **2019**, *131*, 6882; *Angew. Chem. Int. Ed.* **2019**, *58*, 6810

**A Quaternary Core-Shell Oxynitride Nanowire Photoanode Containing a
Hole-Extraction Gradient for Photoelectrochemical Water Oxidation**

Z. Ma, T. Thersleff, A. Görne, N. Cordes, Y. Liu, S. Jakobi, A. Rokicinska,
Z. Schichtl, R. Coridan, P. Kuśtrowski, W. Schnick, R. Dronskowski, A. Slabon
ACS Appl. Mater. Interfaces **2019**, *11*, 19077

**Ammonothermal Crystal Growth of ATaN_2 with A = Na, K, Rb, and Cs and their
Optical and Electronic Properties**

N. Cordes, R. Niklaus, W. Schnick
Cryst. Growth Des. **2019**, *19*, 3484

From Heptazines to Triazines – On the Formation of Poly(triazine imide)

F.K. Kessler, W. Schnick
Z. Anorg. Allg. Chem. **2019**, *645*, 857

**Ammelinium Sulfate Monohydrate and Ammelinium Sulfate Cyanuric Acid –
Synthesis and Structural Characterization**

F.K. Kessler, W. Schnick
Z. Anorg. Allg. Chem. **2019**, *645*, 848

Melamium Thiocyanate Melam, a Melamium Salt with Disordered Anion Sites

F.K. Kessler, A.M. Schuhbeck, W. Schnick
Z. Anorg. Allg. Chem. **2019**, 645, 840

Structure Elucidation of a Melam-Melem Adduct by a Combined Approach of Synchrotron X-ray Diffraction and DFT Calculations

F.K. Kessler, A.M. Burow, G. Savasci, T. Rosenthal, P. Schultz, E. Wirnhier, O. Oeckler, C. Ochsenfeld, W. Schnick
Chem. Eur. J. **2019**, 25, 8415

$M\text{Be}_{20}\text{N}_{14}:\text{Eu}^{2+}$ ($M = \text{Sr}, \text{Ba}$): Highly Condensed Nitridoberyllates with Exceptional Highly Energetic Eu^{2+} Luminescence

E. Elzer, R. Niklaus, P.J. Strobel, V. Weiler, P.J. Schmidt, W. Schnick
Chem. Mater. **2019**, 31, 3174

Open-shell 3d Transition Metal Nitridophosphates $M^{\text{II}}\text{P}_8\text{N}_{14}$ ($M^{\text{II}} = \text{Fe}, \text{Co}, \text{Ni}$) by High-pressure Metathesis

S.D. Kloß, O. Janka, T. Block, R. Pöttgen, R. Glaum, W. Schnick
Angew. Chem. **2019**, 131, 4733; *Angew. Chem. Int. Ed.* **2019**, 58, 4685

Ammonothermal Synthesis of the Mixed-Valence Nitrogen-Rich Europium Tantalum Ruddlesden-Popper Phase $\text{Eu}^{\text{II}}\text{Eu}^{\text{III}}_2\text{Ta}_2\text{N}_4\text{O}_3$

N. Cordes, M. Nentwig, L. Eisenburger, O. Oeckler, W. Schnick
Eur. J. Inorg. Chem. **2019**, 2304

$\text{Y}_{23}\text{Sr}_{17}[\text{Si}_{38}\text{O}_{18}\text{N}_{67}]\text{O}_9$ – An Oxonitridosilicate Oxide with a Unique Layered Structure

C. Maak, R. Niklaus, O. Oeckler, W. Schnick
Z. Anorg. Allg. Chem. **2019**, 645, 182

Rivalry under Pressure: The Coexistence of Ambient-pressure Motifs and Close-packing in Silicon Phosphorus Nitride Imide $\text{SiP}_2\text{N}_4\text{NH}$

S. Vogel, A.T. Buda, W. Schnick
Angew. Chem. **2019**, 131, 3436; *Angew. Chem. Int. Ed.* **2019**, 58, 3398

Cationic Pb_2 Dumbbells Stabilized in the Highly Covalent Lead Nitridosilicate $\text{Pb}_2\text{Si}_5\text{N}_8$

P. Bielec, R. Nelson, R. Stoffel, L. Eisenburger, D. Günther, A.-K. Henß, J.P. Wright, O. Oeckler, R. Dronskowski, W. Schnick
Angew. Chem. **2019**, 131, 1446; *Angew. Chem. Int. Ed.* **2019**, 58, 1432

Targeting Vacancies in Nitridosilicates: Aliovalent Substitution of M^{2+} ($M = \text{Ca}, \text{Sr}$) by Sc^{3+} and U^{3+}

P. Bielec, L. Eisenburger, L. Deubner, D. Günther, F. Kraus, O. Oeckler, W. Schnick
Angew. Chem. **2019**, 131, 850; *Angew. Chem. Int. Ed.* **2019**, 58, 840

Tailoring Emission Characteristics: Narrow-Band Red Luminescence from SLA to $\text{CaBa}[\text{Li}_2\text{Al}_6\text{N}_8]:\text{Eu}^{2+}$

P. Wagatha, V. Weiler, P.J. Schmidt, W. Schnick
Chem. Mater. **2018**, 30, 7885

Orange-Emitting $\text{Li}_4\text{Sr}_4[\text{Si}_4\text{O}_4\text{N}_6]\text{O}:\text{Eu}^{2+}$ - a Layered Lithium Oxonitridosilicate Oxide

R. Niklaus, L. Neudert, J. Stahl, P.J. Schmidt, W. Schnick
Inorg. Chem. **2018**, 57, 14304

Ammonothermal Synthesis of $E\text{AMO}_2\text{N}$ ($E\text{A} = \text{Sr}, \text{Ba}$; $M = \text{Nb}, \text{Ta}$) Perovskites and ^{14}N Solid-State NMR Spectroscopic Investigations of $\text{AM}(\text{O},\text{N})_3$ ($\text{A} = \text{Ca}, \text{Sr}, \text{Ba}, \text{La}$)

N. Cordes, T. Bräuniger, W. Schnick
Eur. J. Inorg. Chem. **2018**, 5019

$RE_4Ba_2[Si_{12}O_2N_{16}C_3]:Eu^{2+}$ ($RE = Lu, Y$): Green-Yellow Emitting Oxonitridocarbidosilicates with a Highly Condensed Network Structure Unraveled through Synchrotron Microdiffraction

C. Maak, L. Eisenburger, J.P. Wright, M. Nentwig, P.J. Schmidt, O. Oeckler, W. Schnick
Inorg. Chem. **2018**, *57*, 13840

$SrH_4P_6N_{12}$ and SrP_8N_{14} : Insights into the Condensation Mechanism of Nitridophosphates under High Pressure

S. Wendl, W. Schnick
Chem. Eur. J. **2018**, *24*, 15889

Ammonothermal Synthesis, Optical Properties, and DFT Calculations of Mg_2PN_3 and Zn_2PN_3

M. Mallmann, C. Maak, R. Niklaus, W. Schnick
Chem. Eur. J. **2018**, *24*, 13963

United in Nitride: The Highly Condensed Boron Phosphorus Nitride BP_3N_6

S. Vogel, A. T. Buda, W. Schnick
Angew. Chem. **2018**, *130*, 13386; *Angew. Chem. Int. Ed.* **2018**, *57*, 13202

SrP_3N_5NH : A Framework-type Imidonitridophosphate Featuring Structure-Directing Hydrogen Bonds

S. Vogel, W. Schnick
Chem. Eur. J. **2018**, *24*, 14275

Unprecedented Deep-Red Ce^{3+} Luminescence of the Nitridolithosilicates

$Li_{38.7}RE_{3.3}Ca_{5.7}[Li_2Si_{30}N_{59}]O_2F$ ($RE = La, Ce, Y$)
C. Maak, P. Strobel, V. Weiler, P.J. Schmidt, W. Schnick
Chem. Mater. **2018**, *30*, 5500

Oxoberyllates $SrBeO_2$ and $Sr_{12}Be_{17}O_{29}$ as Novel Host Materials for Eu^{2+} Luminescence

P. Strobel, R. Niklaus, P.J. Schmidt, W. Schnick
Chem. Eur. J. **2018**, *24*, 12678

Ultra-Narrow-Band Blue-Emitting Oxoberyllates $AELi_2[Be_4O_6]:Eu^{2+}$ ($AE = Sr, Ba$) Paving the Way to Efficient RGB pc-LEDs

P. Strobel, C. Maak, V. Weiler, P.J. Schmidt, W. Schnick
Angew. Chem. **2018**, *130*, 8875; *Angew. Chem. Int. Ed.* **2018**, *57*, 8739

Narrow-Band Yellow-Orange Emitting $La_{3-x}Ca_{1.5x}Si_6N_{11}:Eu^{2+}$ ($x \approx 0.77$):

A Promising Phosphor for Next-Generation Amber pcLEDs

C. Maak, D. Durach, C. Martiny, P.J. Schmidt, W. Schnick
Chem. Mater. **2018**, *30*, 3552

Luminescence of an Oxonitridoberyllate: A Study of Narrow-band Cyan-Emitting $Sr[Be_6ON_4]:Eu^{2+}$

P. Strobel, T. de Boer, V. Weiler, P.J. Schmidt, A. Moewes, W. Schnick
Chem. Mater. **2018**, *30*, 3122

Stishovite's Relative: A Post-Coesite Form of Phosphorus Oxonitride

S. Vogel, D. Baumann, R. Niklaus, E. Bykova, M. Bykov, N. Dubrovinskaia, L. Dubrovinsky, W. Schnick
Angew. Chem. **2018**, *130*, 6801; *Angew. Chem. Int. Ed.* **2018**, *57*, 6691

$Sr[BeSi_2N_4]:Eu^{2+}/Ce^{3+}$ and $Eu[BeSi_2N_4]$: Nontypical Luminescence in Highly Condensed Nitridoberyllosilicates

P. Strobel, V. Weiler, P.J. Schmidt, W. Schnick
Chem. Eur. J. **2018**, *24*, 7243

$LiPr_2P_4N_7O_3$: Structural Diversity of Oxonitridophosphates Accessed by High-pressure Metathesis

S.D. Kloß, W. Schnick
Inorg. Chem. **2018**, *57*, 4189

High-pressure Metathesis of the $M_{1-x}PO_{3+4x}N_{1-4x}$ ($x \approx 0.05$) and $M_{0.75}PO_4$ ($M = Zr, Hf$) Orthophosphates

S.D. Kloß, A. Weis, S. Wandelt, W. Schnick

Inorg. Chem. **2018**, *57*, 4164

Ammonothermal Synthesis of Nitrides: Recent Developments and Future Perspectives

J. Häusler, W. Schnick

Chem. Eur. J. **2018**, *24*, 11864

Tunable Red Luminescence in Nitridomagnesoaluminates α - $Sr_2[MgAl_5N_7]:Eu^{2+}$, β - $Sr_2[MgAl_5N_7]:Eu^{2+}$ and $Sr_8[LiMg_2Al_{21}N_{28}]:Eu^{2+}$

P. Wagatha, V. Weiler, P.J. Schmidt, W. Schnick

Chem. Mater. **2018**, *30*, 1755

Accessing Tetravalent Transition-Metal Nitridophosphates Through High-pressure Metathesis

S.D. Kloß, S. Wandelt, A. Weis, W. Schnick

Angew. Chem. **2018**, *130*, 3246; *Angew. Chem. Int. Ed.* **2018**, *57*, 3192

Oxonitridosilicate Oxides $RE_{26}Ba_6[Si_{22}O_{19}N_{36}]O_{16}:Eu^{2+}$ ($RE = Y, Tb$) with a Unique Layered Structure and Orange-Red Luminescence for $RE = Y$

C. Maak, C. Hoch, P.J. Schmidt, W. Schnick

Inorg. Chem. **2018**, *57*, 2242

HP- $CaSiN_2$ – A New High-pressure Modification

C. Braun, H. Ehrenberg, W. Schnick

Eur. J. Inorg. Chem. **2018**, 1107

$Fe_2Si_5N_8$: Access to Open-Shell Transition-Metal Nitridosilicates

P. Bielec, O. Janka, T. Block, R. Pöttgen, W. Schnick

Angew. Chem. **2018**, *130*, 2433; *Angew. Chem. Int. Ed.* **2018**, *57*, 2409

Synthesis and Structure of Melamium Bromide $C_6N_{11}H_{10}Br$ and Melamium Iodide $C_6N_{11}H_{10}I$

F.K. Kessler, T.J. Koller, W. Schnick

Z. Anorg. Allg. Chem. **2018**, *644*, 186

Ammonothermal Synthesis and Crystal Structure of the Nitridoalumogermanate

$Ca_{1-x}Li_xAl_{1-x}Ge_{1+x}N_3$ ($x \approx 0.2$)

J. Häusler, L. Eisenburger, O. Oeckler, W. Schnick

Eur. J. Inorg. Chem. **2018**, 759

Ammonothermal Synthesis and Optical Properties of Ternary Nitride Semiconductors

Mg -IV- N_2 , Mn -IV- N_2 and Li -IV- N_3 (IV = Si, Ge)

J. Häusler, R. Niklaus, J. Minár, W. Schnick

Chem. Eur. J. **2018**, *24*, 1686

Reversible Polymerization of Adamantane-type $[P_4N_{10}]^{10-}$ Anions to Honeycomb-type $[P_2N_5]^{5-}$ Layers under High-Pressure

E.-M. Bertschler, R. Niklaus, W. Schnick

Chem. Eur. J. **2018**, *24*, 736

Structural Variations in Indium Tin Tellurides and Their Thermoelectric Properties

L. Neudert, S. Schwarzmüller, S. Schmitzer, W. Schnick, O. Oeckler

J. Solid State Chem. **2018**, *258*, 289

Li^+ Ion Conductors with Adamantane-type Nitridophosphate Anions - β - $Li_{10}P_4N_{10}$ and $Li_{13}P_4N_{10}X_3$ with $X = Cl, Br$

E.-M. Bertschler, C. Dietrich, T. Leichtweiß, J. Janek, W. Schnick

Chem. Eur. J. **2018**, *24*, 196

Aggregated Molecular Fluorophores in the Ammonothermal Synthesis of Carbon Dots

C.J. Reckmeier, J. Schneider, Y. Xiong, J. Häusler, P. Kasák, W. Schnick, A.L. Rogach
Chem. Mater. **2017**, *29*, 10352

Highly Symmetric AB₂ Framework Related to Tridymite in the Disordered Nitridosilicate

La₂₄Sr_{14-7x}[Si₃₆N₇₂](O_{1-x}F_x)₁₄ (x = 0.486)

L. Neudert, D. Durach, F. Fahrnbauer, G.B.M. Vaughan, W. Schnick, O. Oeckler
Inorg. Chem. **2017**, *56*, 13070

Ammonothermal Synthesis of Alkali-Alkaline Earth Metal and Alkali-Rare Earth Metal

Carbodiimides: K_{5-x}M_x(CN₂)_{2+x}(HCN₂)_{1-x} (M = Sr, Eu) and Na_{4.32}Sr_{0.68}(CN₂)_{2.68}(HCN₂)_{0.32}

M. Mallmann, J. Häusler, N. Cordes, W. Schnick
Z. Anorg. Allg. Chem. **2017**, *643*, 1956

Efficient Yellow-orange Phosphor Lu₄Ba₂[Si₉ON₁₆]O:Eu²⁺ and Orange-red Emitting Y₄Ba₂[Si₉ON₁₆]O:Eu²⁺: Two Oxonitridosilicate Oxides with Outstanding Structural Variety

C. Maak, R. Niklaus, F. Friedrich, A. Mähringer, P.J. Schmidt, W. Schnick
Chem. Mater. **2017**, *29*, 8377

Wavelength Converting Material for a Light Emitting Device

P.J. Schmidt, D. Durach, W. Schnick
PCT Int. Appl. **2017**, WO2017144433 A1
Lumileds Holding BV, Ludwig-Maximilians-Universität München

Direct Measurements of Energy Levels and Correlation with Thermal Quenching Behaviour in Nitride Phosphors

T.M. Tolhurst, P. Strobel, P.J. Schmidt, W. Schnick, A. Moewes
Chem. Mater. **2017**, *29*, 7976

Puzzling Intergrowth in Cerium Nitridophosphate Unraveled by Joint Venture of Aberration-Corrected Scanning Transmission Electron Microscopy and Synchrotron Diffraction

S.D. Kloß, L. Neudert, M. Döblinger, M. Nentwig, O. Oeckler, W. Schnick
J. Am. Chem. Soc. **2017**, *139*, 12724

Ammonothermal Synthesis of Crystalline Oxonitride Perovskites LnTaON₂

(Ln = La, Ce, Pr, Nd, Sm, Gd)

N. Cordes, W. Schnick
Chem. Eur. J. **2017**, *23*, 11410

Designing Luminescent Materials and Band Gaps: A Soft X-ray Spectroscopy and Density Functional Theory Study of Li₂Ca₂[Mg₂Si₂N₆]:Eu²⁺ and Ba[Li₂(Al₂Si₂)N₆]:Eu²⁺

T.M. Tolhurst, P. Strobel, P.J. Schmidt, W. Schnick, A. Moewes
J. Phys. Chem. C. **2017**, *121*, 14296

Functional Carbon Nitride Materials – Design Strategies for Electrochemical Devices

F.K. Kessler, Y. Zheng, D. Schwarz, C. Merschjann, W. Schnick, X. Wang, M.J. Bojdys
Nat. Rev. Mater. **2017**, *2*, 17030

Li₁₂P₃N₉ with Non-Condensed [P₃N₉]¹²⁻-Rings and its High-Pressure Polymorph Li₄PN₃ with Infinite Chains of PN₄-Tetrahedra

E.-M. Bertschler, R. Niklaus, W. Schnick
Chem. Eur. J. **2017**, *23*, 9592

Li₂₄Sr₁₂[Si₂₄N₄₇O]F:Eu²⁺ - Structure and Luminescence of an Orange Phosphor

K. Horky, W. Schnick
Chem. Mater. **2017**, *29*, 4590

Ammonothermal Synthesis of Earth-abundant Nitride Semiconductors ZnSiN₂ and ZnGeN₂ and Dissolution Monitoring by In Situ X-ray Imaging

J. Häusler, S. Schimmel, P. Wellmann, W. Schnick
Chem. Eur. J. **2017**, *23*, 12275

Crystal Structure and Nontypical Deep-Red Luminescence of Ca₃Mg[Li₂Si₂N₆]:Eu²⁺

C. Poesl, W. Schnick
Chem. Mater. **2017**, *29*, 3778

The Crystal Structure of Nitridomagnesogermanate Ba[Mg₃GeN₄]:Eu²⁺ and Theoretical Calculations of Its Electronic Properties

C. Poesl, R. Niklaus, W. Schnick
Eur. J. Inorg. Chem. **2017**, 2422

First-principle and Experimental Characterization of the Electronic Properties of CaGaSiN₃ and CaAlSiN₃: The Impact of Chemical Disorder

R. Niklaus, J. Minár, J. Häusler, W. Schnick
Phys. Chem. Chem. Phys. **2017**, *19*, 9292

Li₄₇B₃P₁₄N₄₂ – A Lithium Nitridoborophosphate with [P₃N₉]¹²⁻, [P₄N₁₀]¹⁰⁻, and the Unprecedented [B₃P₃N₁₃]¹⁵⁻ Ion

E.-M. Bertschler, T. Bräuniger, C. Dietrich, J. Janek, W. Schnick
Angew. Chem. **2017**, *129*, 4884; *Angew. Chem. Int. Ed.* **2017**, *56*, 4806

Increased Synthetic Control - Gaining Access to Predicted Mg₂Si₅N₈ and β-Ca₂Si₅N₈

P. Bielec, W. Schnick
Angew. Chem. **2017**, *129*, 4888; *Angew. Chem. Int. Ed.* **2017**, *56*, 4810

An Unusual Nitride Network of Aluminum-centered Octahedra and Phosphorus-centered Tetrahedra and Structure Determination from Microcrystalline Samples

L. Neudert, F. Heinke, T. Bräuniger, F. Pucher, G.B. Vaughan, O. Oeckler, W. Schnick
Chem. Commun. **2017**, *53*, 2709

Ca₄Mg₅Ge₃N₁₀ and Sr₂Mg₃Ga_{4.33} – Two Mg-containing Nitrides and their Structural Relations to (Sr,Ba)₂Si₅N₈

C. Poesl, W. Schnick
Eur. J. Inorg. Chem. **2017**, 1498

Anti-Perovskite Nitridophosphate Oxide Ho₃[PN₄]O by High-Pressure Metathesis

S.D. Kloß, N. Weidmann, W. Schnick
Eur. J. Inorg. Chem. **2017**, 1930

Luminescence of the Narrow-band Red Emitting Nitridomagnesosilicate

Li₂(Ca_{1-x}Sr_x)₂[Mg₂Si₂N₆]:Eu²⁺ (x = 0–0.06)
P. Strobel, V. Weiler, C. Hecht, P.J. Schmidt, W. Schnick
Chem. Mater. **2017**, *29*, 1377

LiCa₄Si₄N₈F and LiSr₄Si₄N₈F: Nitridosilicate Fluorides with a BCT-Zeolite-Type Network Structure

K. Horky, W. Schnick
Eur. J. Inorg. Chem. **2017**, 1107

Ba₃₂[Li₁₅Si₉W₁₆N₆₇O₅]: A Barium-containing Oxonitridolithotungstosilicate with a Highly Condensed Network Structure

K. Horky, W. Schnick
Eur. J. Inorg. Chem. **2017**, 1100

Li₁₈P₆N₁₆ – A Lithium Nitridophosphate with Unprecedented Tricyclic [P₆N₁₆]¹⁸⁻ Ions

E.-M. Bertschler, C. Dietrich, J. Janek, W. Schnick
Chem. Eur. J. **2017**, *23*, 2185

Layered Nitridomagnesogallates CaMg₂GaN₃ and CaMg₂Ga₂N₄

C. Poesl, L. Neudert, W. Schnick
Eur. J. Inorg. Chem. **2017**, 1067

Ammonothermal Synthesis of Novel Nitrides: Case Study on CaGaSiN₃

J. Häusler, L. Neudert, M. Mallmann, R. Niklaus, A.-C.L. Kimmel, N.S.A. Alt, E. Schlücker, O. Oeckler, W. Schnick
Chem. Eur. J. **2017**, *23*, 2583

High-pressure Synthesis of Melilite-Type Rare-Earth Nitridophosphates RE₂P₃N₇ and a Ba₂Cu[Si₂O₇]-type Polymorph

S.D. Kloß, N. Weidmann, R. Niklaus, W. Schnick
Inorg. Chem. **2016**, *55*, 9400

Insight in the 3D Morphology of Silica-based Nanotubes Using Electron Microscopy

T. Dennenwaldt, A. Wisnet, S.J. Sedlmaier, M. Döblinger, W. Schnick, C. Scheu
Micron **2016**, *90*, 6

Ca₂Mg₅GeN₆ – A Layered Nitridomagnesogermanate

C. Poesl, W. Schnick
Z. Anorg. Allg. Chem. **2016**, *642*, 882

LED Phosphor Comprising Bow-tie Shaped A₂N₆ Building Blocks

P.J. Schmidt, P.J. Strobel, S.F. Schmiechen, C.S. Hecht, V. Weiler, W. Schnick
PCT Int. Appl. **2016**, WO 2016075021 A1
Koninklijke Philips NV, Ludwig-Maximilians-Universität München

Field-induced Transition of the Magnetic Ground State from A-type Antiferromagnetic to Ferromagnetic Order in CsCo₂Se₂

F. v. Rohr, A. Krzton-Maziopa, V. Pomjakushin, H. Grundmann, Z. Guguchia, W. Schnick, A. Schilling
J. Phys.: Cond. Matter **2016**, *28*, 276001

Experiment-Driven Modeling of Crystalline Phosphorus Nitride P₃N₅: Wide-Ranging Implications from a Unique Structure

T.M. Tolhurst, C. Braun, T.D. Boyko, W. Schnick, A. Moewes
Chem. Eur. J. **2016**, *22*, 10475

Ba_{1.63}La_{7.39}Si₁₁N₂₃Cl_{0.42}:Ce³⁺ - A Nitridosilicate Chloride with a Zeolite-like Structure

P. Schultz, D. Durach, W. Schnick, O. Oeckler
Z. Anorg. Allg. Chem. **2016**, *642*, 603

From Minor Side Phases to Bulk Samples of Lanthanum Oxonitridosilicates – An Investigation with Microfocused Synchrotron Radiation

D. Durach, P. Schultz, O. Oeckler, W. Schnick
Inorg. Chem. **2016**, *55*, 3624

CdP₂N₄ and MnP₂N₄ – Ternary Transition-Metal Nitridophosphates

F.J. Pucher, F.W. Karau, J. Schmedt auf der Günne, W. Schnick
Eur. J. Inorg. Chem. **2016**, 1497

Ca_{18.75}Li_{10.5}[Al₃₉N₅₅]:Eu²⁺ - Supertetrahedron Phosphor for Solid-State Lighting

P. Wagatha, P. Pust, V. Weiler, A.S. Wochnik, P.J. Schmidt, C. Scheu, W. Schnick
Chem. Mater. **2016**, *28*, 1220

M_2PO_3N ($M = Ca, Sr$) – *ortho*-Oxonitridophosphates with β - K_2SO_4 Structure Type

A. Marchuk, P. Schultz, C. Hoch, O. Oeckler, W. Schnick
Inorg. Chem. **2016**, *55*, 974

A ^{45}Sc -NMR and DFT Calculation Study of Crystalline Scandium Compounds

T. Bräuniger, A.J. Hofmann, I.L. Moudrakovski, C. Hoch, W. Schnick
Solid State Sci. **2016**, *51*, 1

Electronic Structure, Band Gap, and Thermal Quenching of $Sr[Mg_3SiN_4]:Eu^{2+}$ in Comparison to $Sr[LiAl_3N_4]:Eu^{2+}$

T.M. Tolhurst, S. Schmiechen, P. Pust, P. Schmidt, W. Schnick, A. Moewes
Adv. Opt. Mater. **2016**, *4*, 584

Lanthanum (Oxo)nitridosilicates: From Ordered to Disordered Crystal Structures

D. Durach, W. Schnick
Z. Anorg. Allg. Chem. **2016**, *642*, 101

Crystal Structures of Cristobalite-Type and Coesite-Type PON Redetermined on the Basis of Single-Crystal X-Ray Diffraction Data

M. Bykov, E. Bykova, V. Dyadkin, D. Baumann, W. Schnick, L. Dubrovinsky, N. Dubrovinskaja
Acta Crystallogr. **2015**, *E71*, 1325

Supertetrahedron Phosphor for Solid-State Lighting

V. Weiler, P.J. Schmidt, P.A.H. Pust, W. Schnick
PCT Int. Appl. **2015**, WO 2015135888 A1
Koninklijke Philips NV, Ludwig-Maximilians-Universität München

Nontypical Luminescence Properties and Structural Relation of $Ba_3P_5N_{10}X:Eu^{2+}$ ($X = Cl, I$): Nitridophosphate Halides with Zeolite-like Structure

A. Marchuk, S. Wendl, N. Imamovic, F. Tambornino, D. Wiechert, P.J. Schmidt, W. Schnick
Chem. Mater. **2015**, *27*, 6432

Narrow-Band Green Emitting Nitridolithoalumosilicate $Ba[Li_2(Al_2Si_2)N_6]:Eu^{2+}$ with Framework Topology whj for LED/LCD-Backlighting Applications

P. Strobel, S. Schmiechen, M. Siegert, A. Tücks, P.J. Schmidt, W. Schnick
Chem. Mater. **2015**, *27*, 6109

$La_6Ba_3[Si_{17}N_{29}O_2]Cl$ – An Oxonitridosilicate Chloride with Exceptional Structural Motifs

D. Durach, F. Fahrnbauer, O. Oeckler, W. Schnick
Inorg. Chem. **2015**, *54*, 8727

Non-Condensed (Oxo-)Nitridosilicates: $La_3[SiN_4]F$ and the Polymorph $o-La_3[SiN_3O]O$

D. Durach, W. Schnick
Eur. J. Inorg. Chem. **2015**, 4095

Rare-Earth-Metal Nitridophosphates through High-Pressure Metathesis

S.D. Kloß, W. Schnick
Angew. Chem. **2015**, *127*, 11402; *Angew. Chem. Int. Ed.* **2015**, *54*, 11250

$La_3BaSi_5N_9O_2:Ce^{3+}$ – A Yellow Phosphor with an Unprecedented Tetrahedra Network Structure Investigated by Combination of Electron Microscopy and Synchrotron X-ray Diffraction

D. Durach, L. Neudert, P.J. Schmidt, O. Oeckler, W. Schnick
Chem. Mater. **2015**, *27*, 4832

A Revolution in Lighting

P. Pust, P.J. Schmidt, W. Schnick
Nat. Mater. **2015**, *14*, 454

New Nitridoalumosilicate Phosphor for Solid State Lighting

A. Tuecks, B.-S. Schreinemacher, P.J. Schmidt, S.F. Schmiechen, W. Schnick
PCT Int. Appl. **2015**, WO 2015044106 A1
Koninklijke Philips Electronics NV, Ludwig-Maximilians-Universität München

Band Gap and Electronic Structure of MgSiN₂ Determined Using Soft X-ray Spectroscopy and Density Functional Theory

T. de Boer, T.D. Boyko, C. Braun, W. Schnick, A. Moewes
Phys. Status Solidi RRL **2015**, 9, 250

Synthesis of Triazine-Based Materials by Functionalization with Alkynes

N.E. Braml, L. Stegbauer, B.V. Lotsch, W. Schnick
Chem. Eur. J. **2015**, 21, 7866

Luminescent Nitridophosphates CaP₂N₄:Eu²⁺, SrP₂N₄:Eu²⁺, BaP₂N₄:Eu²⁺, and BaSr₂P₆N₁₂:Eu²⁺

F.J. Pucher, A. Marchuk, P.J. Schmidt, D. Wiechert, W. Schnick
Chem. Eur. J. **2015**, 21, 6443

Nitridomagnesosilicate Ba[Mg₃SiN₄]:Eu²⁺ and Structure-Property Relations of Similar Narrow-Band Red Nitride Phosphors

S. Schmiechen, P. Strobel, C. Hecht, T. Reith, M. Siegert, P.J. Schmidt, P. Huppertz, D. Wiechert, W. Schnick
Chem. Mater. **2015**, 27, 1780

MH₄P₆N₁₂ (M = Mg, Ca): New Imidonitridophosphates with an Unprecedented Layered Network Structure Type

A. Marchuk, V.R. Celinski, J. Schmedt auf der Günne, W. Schnick
Chem. Eur. J. **2015**, 21, 5836

Structural Relationship Between the Mg-Containing Nitridosilicates Ca₂Mg[Li₄Si₂N₆] and Li₂Ca₂[Mg₂Si₂N₆]

S. Schmiechen, F. Nietschke, W. Schnick
Eur. J. Inorg. Chem. **2015**, 1592

CuPN₂: Synthesis, Crystal Structure, and Electronic Properties

F.J. Pucher, F. Hummel, W. Schnick
Eur. J. Inorg. Chem. **2015**, 1886

A High-Pressure Polymorph of Phosphorus Oxonitride with the Coesite Structure

D. Baumann, R. Niklaus, W. Schnick
Angew. Chem. **2015**, 127, 4463; *Angew. Chem. Int. Ed.* **2015**, 54, 4388

Li₁₄(PON₃)₂O – A Non-condensed Oxonitridophosphate Oxide

D. Baumann, W. Schnick
Eur. J. Inorg. Chem. **2015**, 617

Ba₃P₅N₁₀Br:Eu²⁺: A Natural-White-Light Single Emitter with Zeolite Structure Type

A. Marchuk, W. Schnick
Angew. Chem. **2015**, 127, 2413; *Angew. Chem. Int. Ed.* **2015**, 54, 2383

Investigations of the Electronic Structure and Bandgap of the Next-Generation LED-Phosphor Sr[LiAl₃N₄]:Eu²⁺ - Experiment and Calculations

T.M. Tolhurst, T.D. Boyko, P. Pust, N.W. Johnson, W. Schnick, A. Moewes
Adv. Opt. Mater. **2015**, 3, 546

Sn₆[P₁₂N₂₄] – A Sodalite-Type Nitridophosphate

F.J. Pucher, Constantin Frhr. von Schirnding, F. Hummel, V.R. Celinski, J. Schmedt auf der Günne, B. Gerke, R. Pöttgen, W. Schnick
Eur. J. Inorg. Chem. **2015**, 382

**Group (III) Nitrides $M[\text{Mg}_2\text{Al}_2\text{N}_4]$ ($M = \text{Ca}, \text{Sr}, \text{Ba}, \text{Eu}$) and $\text{Ba}[\text{Mg}_2\text{Ga}_2\text{N}_4]$ -
Structural Relation and Nontypical Luminescence Properties of Eu^{2+} Doped Samples**

P. Pust, F. Hintze, C. Hecht, V. Weiler, A. Locher, D. Zitnanska, S. Harm,
D. Wiechert, P.J. Schmidt, W. Schnick
Chem. Mater. **2014**, *26*, 6113

$\text{MgSrP}_3\text{N}_5\text{O}_2$ – A Novel Oxonitridophosphate

F.J. Pucher, W. Schnick
Z. Anorg. Allg. Chem. **2014**, *640*, 2708

Weißes Licht aus Nitriden

S. Schmiechen, P. Pust, P.J. Schmidt, W. Schnick
Nachr. Chem. **2014**, *62*, 847

**High-Pressure Polymorph of Phosphorus Nitride Imide HP_4N_7 Representing
a New Framework Topology**

D. Baumann, W. Schnick
Inorg. Chem. **2014**, *53*, 7977

**Pentacoordinated Phosphorus in a High-Pressure Polymorph of
Phosphorus Nitride Imide $\text{P}_4\text{N}_6(\text{NH})$**

D. Baumann, W. Schnick
Angew. Chem. **2014**, *126*, 14718; *Angew. Chem. Int. Ed.* **2014**, *53*, 14490

Narrow-Band Red-Emitting $\text{Sr}[\text{LiAl}_3\text{N}_4]:\text{Eu}^{2+}$ as a Next-Generation LED-Phosphor Material

P. Pust, V. Weiler, C. Hecht, A. Tücks, A.S. Wochnik, A.-K. Henß, D. Wiechert, C. Scheu,
P.J. Schmidt, W. Schnick
Nat. Mater. **2014**, *13*, 891

A New Route to Metal Azides

T.G. Müller, F. Karau, W. Schnick, F. Kraus
Angew. Chem. **2014**, *126*, 13913; *Angew. Chem. Int. Ed.* **2014**, *53*, 13695

$\text{Ca}[\text{LiAl}_3\text{N}_4]:\text{Eu}^{2+}$ - A Narrow-Band Red-Emitting Nitridolithoaluminate

P. Pust, A.S. Wochnik, E. Baumann, P.J. Schmidt, D. Wiechert, C. Scheu, W. Schnick
Chem. Mater. **2014**, *26*, 3544

**$\text{CaMg}_2\text{P}_6\text{O}_3\text{N}_{10}$ - A Quinary Oxonitridophosphate with an Unprecedented Tetrahedra
Network Structure Type**

A. Marchuk, L. Neudert, O. Oeckler, W. Schnick
Eur. J. Inorg. Chem. **2014**, 3427

Bonding Behavior and Chemical Stability of Silica-based Nanotubes and Their 3D Assembly

T. Dennenwaldt, S.J. Sedlmaier, A. Binek, W. Schnick, C. Scheu
J. Phys. Chem. C **2014**, *118*, 8416

**Toward New Phosphors for Application in Illumination-Grade White pc-LEDs:
The Nitridomagnesosilicates $\text{Ca}[\text{Mg}_3\text{SiN}_4]:\text{Ce}^{3+}$, $\text{Sr}[\text{Mg}_3\text{SiN}_4]:\text{Eu}^{2+}$ and $\text{Eu}[\text{Mg}_3\text{SiN}_4]$**

S. Schmiechen, H. Schneider, P. Wagatha, C. Hecht, P.J. Schmidt, W. Schnick
Chem. Mater. **2014**, *26*, 2712

High-Resolution Spectroscopy of Bonding in a Novel BeP_2N_4 Compound

T. Dennenwaldt, J. Ciston, U. Dahmen, W.-Y. Ching, F.J. Pucher, W. Schnick, C. Scheu
Microsc. Microanal. **2014**, *20*, 664

**TAGS-Related Indium Compounds and their Thermoelectric Properties –
the Solid Solution Series $(\text{GeTe})_x\text{AgIn}_y\text{Sb}_{1-y}\text{Te}_2$ ($x = 1 - 12$; $y = 0.5, 1$)**

T. Schröder, T. Rosenthal, N. Giesbrecht, S. Maier, E.-W. Scheidt, W. Scherer,
G.J. Snyder, W. Schnick, O. Oeckler
J. Mater. Chem. A **2014**, 2, 6384

A High-Pressure Polymorph of Phosphorus Nitride Imide

A. Marchuk, F.J. Pucher, F.W. Karau, W. Schnick
Angew. Chem. **2014**, 126, 2501, *Angew. Chem. Int. Ed.* **2014**, 53, 2469

**Highly Efficient pc-LED Phosphors $\text{Sr}_{1-x}\text{Ba}_x\text{Si}_2\text{O}_7\text{N}_2:\text{Eu}^{2+}$ ($0 \leq x \leq 1$) –
Crystal Structures and Luminescence Properties Revisited**

M. Seibald, T. Rosenthal, O. Oeckler, W. Schnick
Crit. Rev. Solid State Mater. Sci. **2014**, 39, 215

New Phosphors, such as New Narrow-Band Red Emitting Phosphors, for Solid State Lighting

P.J. Schmidt, F. Hintze, P.A.H. Pust, V. Weiler, C. Hecht, S.F. Schmiechen, W. Schnick, D.U. Wiechert
PCT Int. Appl. **2013**, WO 2013175336 A1
Koninklijke Philips Electronics NV, Philips Intellectual Property & Standards GmbH, Germany

Intermediates in Ammonothermal GaN Crystal Growth under Ammonoacidic Conditions

S. Zhang, F. Hintze, W. Schnick, R. Niewa
Eur. J. Inorg. Chem. **2013**, 5387

Two Synthetic Approaches to $\text{Ag}_{3.4}\text{In}_{3.7}\text{Sb}_{76.4}\text{Te}_{16.5}$ Bulk Samples and their Transport Properties

T. Schröder, T. Rosenthal, C. Gold, E.-W. Scheidt, W. Schnick, O. Oeckler
Z. Anorg. Allg. Chem. **2013**, 639, 2868

**High-Pressure Synthesis and Characterization of $\text{Li}_2\text{Ca}_3[\text{N}_2]_3$ – An Uncommon
Metallic Diazenide with $[\text{N}_2]^{2-}$ Ions**

S.B. Schneider, M. Seibald, V.L. Deringer, R.P. Stoffel, R. Frankovsky, G.M. Friederichs,
H. Laqua, V. Duppel, G. Jeschke, R. Dronskowski, W. Schnick
J. Am. Chem. Soc. **2013**, 135, 16668

**Electronic and Ionic Conductivity in Alkaline Earth Diazenides $\text{M}_{\text{AE}}\text{N}_2$ ($\text{M}_{\text{AE}} = \text{Ca}, \text{Sr}, \text{Ba}$)
and in Li_2N_2**

S.B. Schneider, M. Mangstl, G.M. Friederichs, R. Frankovsky, J. Schmedt auf der Günne,
W. Schnick
Chem. Mater. **2013**, 25, 4149

Aperiodic CrSc Multilayer Mirrors for Attosecond Water Window Pulses

A. Guggenmos, R. Rauhut, M. Hofstetter, S. Hertrich, B. Nickel, J. Schmidt,
E.M. Gullikson, M. Seibald, W. Schnick, U. Kleineberg
OpEx **2013**, 21, 21728

**Magnesium Double Nitride Mg_3GaN_3 as New Host Lattice for Eu^{2+} Doping:
Synthesis, Structural Studies, Luminescence, and Band-Gap Determination**

F. Hintze, N.W. Johnson, M. Seibald, D. Muir, A. Moewes, W. Schnick
Chem. Mater. **2013**, 25, 4044

Mn-Activated Hexafluorosilicates for LED Applications

V. Weiler, P.J. Schmidt, W. Schnick, M.A. Seibald
PCT Int. Appl. **2013**, WO 2013088313 A1
Koninklijke Philips Electronics NV, Philips Intellectual Property & Standards GmbH,
Germany

Asymmetric Fluorodinitromethyl Derivatives of 2,2,2-trinitroethyl N-(2,2,2-trinitroethyl)carbamate

T.M. Klapötke, B. Krumm, R. Moll, S.F. Rest, W. Schnick, M. Seibald
J. Fluor. Chem. **2013**, *156*, 253

Metal-Organic Framework Luminescence in the Yellow Gap by Codoping of the Homoleptic Imidazolate [Balm₂] with Divalent Europium

J.-C. Rybak, M. Hailmann, P.R. Matthes, A. Zurawski, J. Nitsch, A. Steffen, J. Heck, C. Feldmann, S. Götzendörfer, J. Meinhardt, G. Sextl, H. Kohlmann, S.J. Sedlmaier, W. Schnick, K. Müller-Buschbaum
J. Am. Chem. Soc. **2013**, *135*, 6896

Band Gap Tuning in Poly(triazine imide), a Nonmetallic Photocatalyst

E. McDermott, E. Wirnhier, W. Schnick, K. Singh Viridi, C. Scheu, Y. Kauffmann, W.D. Kaplan, E. Kurmaev, A. Moewes
J. Phys. Chem. C. **2013**, *117*, 8806

Ammonothermal Synthesis and Crystal Structure of BaAl₂(NH₂)₈·2NH₃

P. Pust, S. Schmiechen, F. Hintze, W. Schnick
Z. Anorg. Allg. Chem. **2013**, *639*, 1185

New Polymorph of the Highly Efficient LED-Phosphor SrSi₂O₂N₂:Eu²⁺ – Polytypism of a Layered Oxonitridosilicate

M. Seibald, T. Rosenthal, O. Oeckler, C. Maak, A. Tücks, P.J. Schmidt, D. Wiechert, W. Schnick
Chem. Mater. **2013**, *25*, 1852

Triazine-based Carbon Nitrides for Visible-Light-Driven Hydrogen Evolution

K. Schwinghammer, B. Tuffy, M.B. Mesch, E. Wirnhier, C. Martineau, F. Taulelle, W. Schnick, J. Senker, B.V. Lotsch
Angew. Chem. **2013**, *125*, 2495; *Angew. Chem. Int. Ed.* **2013**, *52*, 2435

Ca[LiAlN₂]: A Quaternary Nitridoaluminate

P. Pust, S. Pagano, W. Schnick
Eur. J. Inorg. Chem. **2013**, 1157

Formation and Characterization of Melam, Melam Hydrate and a Melam-Melem Adduct

E. Wirnhier, M.B. Mesch, J. Senker, W. Schnick
Chem. Eur. J. **2013**, *19*, 2041

New Heptazine Based Materials with a Divalent Cation – Sr[HC₆N₇O₃] · 4H₂O and Sr[HC₆N₇(NCN)₃] · 7H₂O

N.E. Braml, W. Schnick
Z. Anorg. Allg. Chem. **2013**, *639*, 275

Ca₂Ga₃MgN₅ – A Highly Condensed Nitridogallate

F. Hintze, W. Schnick
Z. Anorg. Allg. Chem. **2012**, *638*, 2243

Materials Properties of Ultra-Incompressible Re₂P

S.B. Schneider, D. Baumann, A. Salamat, Z. Konopkova, W. Morgenroth, H.-P. Liermann, M. Schwarz, L. Bayarjargal, A. Friedrich, B. Winkler, W. Schnick
Chem. Mater. **2012**, *24*, 3240

Unexpected Luminescence Properties of Sr_{0.25}Ba_{0.75}Si₂O₂N₂:Eu²⁺ - A Narrow Blue Emitting Oxonitridosilicate with Cation Ordering

M. Seibald, T. Rosenthal, O. Oeckler, F. Fahrnbauer, A. Tücks, P.J. Schmidt, W. Schnick
Chem. Eur. J. **2012**, *18*, 13446

Orange to Red Emitting Silicon-Oxynitride Luminescent Materials

P.J. Schmidt, C.S. Hecht, W. Schnick
PCT Int. Appl. **2012**, WO 2012077042 A1
Koninklijke Philips Electronics NV, Philips Intellectual Property & Standards GmbH, Germany

Template-free Inorganic Synthesis of Silica-based Nanotubes and their Self-Assembly to Mesocrystals

S.J. Sedlmaier, T. Dennenwaldt, C. Scheu, W. Schnick
J. Mater. Chem. **2012**, 22, 15511

BaSi₄O₆N₂ – A Hexacelsian-Type Layered Oxonitridosilicate

C. Braun, H. Ehrenberg, W. Schnick
Eur. J. Inorg. Chem. **2012**, 3923

Ca₃Sm₃[Si₉N₁₇] and Ca₃Yb₃[Si₉N₁₇] - Nitridosilicates with Interpenetrating Nets Consisting of Star-Shaped [N⁴⁺(SiN₃)₄]-Units and [Si₅N₁₆]-Supertetrahedra

H. Huppertz, O. Oeckler, A. Lieb, R. Glaum, D. Johrendt, M. Tegel, R. Kaindl, W. Schnick
Chem. Eur. J. **2012**, 18, 10857

Li₁₄Ln₅[Si₁₁N₁₉O₅]O₂F₂ with Ln = Ce, Nd – Representatives of a Family of Potential Lithium Ion Conductors

S. Lupart, G. Gregori, J. Maier, W. Schnick
J. Am. Chem. Soc. **2012**, 134, 10132

Ammonothermal Synthesis of Alkali N,N'-bis(aminocarbonyl)-phosphorodiamidates M[PO₂(NHCONH₂)₂] (M = Na, K, Rb)

E. Wirnhier, R.D. Boller, W. Schnick
Eur. J. Inorg. Chem. **2012**, 3296

Reversible High-Pressure Phase Transition in LaN

S.B. Schneider, D. Baumann, A. Salamat, W. Schnick
J. Appl. Phys. **2012**, 111, 093503

LiCa₃Si₂N₅ – A Lithium Nitridosilicate with a [Si₂N₅]⁷⁻ Double-Chain

S. Lupart, W. Schnick
Z. Anorg. Allg. Chem. **2012**, 638, 2015

Ca[PO₂(NH)₃(CO)₂] – The First Biuretooxophosphate with a Divalent Cation

E. Wirnhier, W. Schnick
Z. Anorg. Allg. Chem. **2012**, 638, 920

An Unprecedented AB₂ Tetrahedra Network Structure Type in a High-Pressure Phase of Phosphorus Oxonitride PON

D. Baumann, S.J. Sedlmaier, W. Schnick
Angew. Chem. **2012**, 124, 4785; *Angew. Chem. Int. Ed.* **2012**, 51, 4707

Rare-Earth Melonates LnC₆N₇(NCN)₃·xH₂O (Ln = La, Ce, Pr, Nd, Sm, Eu, Tb; x = 8-12): Synthesis, Crystal Structures, Thermal Behavior, and Photoluminescence Properties of Heptazine Salts with Trivalent Cations

S.J. Makowski, A. Schwarze, P.J. Schmidt, W. Schnick
Eur. J. Inorg. Chem. **2012**, 1832

A Systematic Approach to Alkali Biuretooxophosphates

E. Wirnhier, W. Schnick
Eur. J. Inorg. Chem. **2012**, 1840

Crystal Structure of Barium Oxonitridophosphate, Ba₃P₆O₆N₈

S.J. Sedlmaier, D. Weber, W. Schnick
Z. Kristallogr. – NCS **2012**, 227, 1

Supramolecular Hydrogen-Bonded Structures Between Melamine and *N*-Heterocycles

S.J. Makowski, M. Lacher, C. Lermer, W. Schnick
J. Mol. Struct. **2012**, *1013*, 19

High-Pressure Synthesis and Structural Investigation of $\text{H}_3\text{P}_8\text{O}_8\text{N}_9$: A New Phosphorus(V) Oxonitride Imide with an Interrupted Framework Structure

S.J. Sedlmaier, V.R. Celinski, J. Schmedt auf der Günne, W. Schnick
Chem. Eur. J. **2012**, *18*, 4358

Luminescence Tuning of MOFs via Ligand to Metal and Metal to Metal Energy Transfer by Co-Doping of $[\text{Gd}_2\text{Cl}_6(\text{bipy})_3]\cdot 2\text{bipy}$ with Europium and Terbium

P.R. Matthes, C.J. Höller, M. Mai, J. Heck, S.J. Sedlmaier, S. Schmiechen, C. Feldmann, W. Schnick, K. Müller-Buschbaum
J. Mater. Chem. **2012**, *22*, 10179

Formation of a Hydrogen-Bonded Heptazine Framework by Self-Assembly of Melem into a Hexagonal Channel Structure

S.J. Makowski, P. Köstler, W. Schnick
Chem. Eur. J. **2012**, *18*, 3248

$\text{Ba}_3\text{Ga}_3\text{N}_5$ – A Novel Host Lattice for Eu^{2+} -Doped Luminescent Materials with Unexpected Nitridogallate Substructure

F. Hintze, F. Hummel, P.J. Schmidt, D. Wiechert, W. Schnick
Chem. Mater. **2012**, *24*, 402

High-Pressure Synthesis and Characterization of the Alkali Diazenide Li_2N_2

S.B. Schneider, R. Frankovsky, W. Schnick
Angew. Chem. **2012**, *124*, 1909; *Angew. Chem. Int. Ed.* **2012**, *51*, 1873

Synthesis of Alkaline Earth Diazenides $\text{M}_{\text{AE}}\text{N}_2$ ($\text{M}_{\text{AE}} = \text{Ca}, \text{Sr}, \text{Ba}$) by Controlled Thermal Decomposition of Azides under High Pressure

S.B. Schneider, R. Frankovsky, W. Schnick
Inorg. Chem. **2012**, *51*, 2366

$\text{Ba}_6\text{P}_{12}\text{N}_{17}\text{O}_9\text{Br}_3$ – A Column-Type Phosphate Structure Solved from Single-Nanocrystal Data Obtained by Automated Electron Diffraction Tomography

E. Mugnaioli, S.J. Sedlmaier, O. Oeckler, U. Kolb, W. Schnick
Eur. J. Inorg. Chem. **2012**, 121

$\text{Li}_2\text{Sr}_4\text{Al}_2\text{Ta}_2\text{N}_8\text{O}$ - ANitridoalumotantalate with BCT-Zeolite Type Structure

P. Pust, W. Schnick
Z. Anorg. Allg. Chem. **2012**, *638*, 352

Investigation of the Hydrolysis Stability of Triazine Tricarboxylate in the Presence of Transition Metal(II) Ions and Synthesis and Crystal Structure of the Alkaline Earth Triazine Tricarboxylates $\text{M}_3[\text{C}_3\text{N}_3(\text{CO}_2)_3]_2\cdot 12\text{H}_2\text{O}$ ($\text{M} = \text{Sr}, \text{Ba}$)

S.J. Makowski, E. Calta, M. Hörmannsdorfer, W. Schnick
Z. Anorg. Allg. Chem. **2012**, *638*, 345

Formation of Cocrystals between Alkali Triazine Tricarboxylates and Cyanuric Acid – Reactivity Considerations and Structural Characterization of the Adduct Phases

$\text{M}_3[\text{C}_3\text{N}_3(\text{CO}_2)_3][\text{C}_3\text{N}_3\text{O}_3\text{H}_3] \cdot \text{H}_2\text{O}$ ($\text{M} = \text{K}, \text{Rb}$)
S.J. Makowski, E. Calta, M. Lacher, W. Schnick
Z. Anorg. Allg. Chem. **2012**, *638*, 88

$\text{LiLa}_5\text{Si}_4\text{N}_{10}\text{O}$ and $\text{LiPr}_5\text{Si}_4\text{N}_{10}\text{O}$ – Chain-Type Oxonitridosilicates

S. Lupart, W. Schnick
Z. Anorg. Allg. Chem. **2012**, *638*, 94

Formation of Melamium Adducts by Pyrolysis of Thiourea or Melamine/NH₄Cl Mixtures

N.E. Braml, A. Sattler, W. Schnick
Chem. Eur. J. **2012**, *18*, 1811

Novel Alkali Triazine Tricarboxylates Li₃[C₃N₃(CO₂)₃] · 4H₂O, Rb₃[C₃N₃(CO₂)₃] · 2H₂O and Cs₃[C₃N₃(CO₂)₃] · 2H₂O – Synthesis, Crystal Structure and Thermal Behavior

S.J. Makowski, E. Calta, W. Schnick
Z. Anorg. Allg. Chem. **2011**, *637*, 2142

Synthesis and Characterization of Ca₂(PO₂NH)₄·8H₂O

S.J. Sedlmaier, S.R. Römer, W. Schnick
Z. Anorg. Allg. Chem. **2011**, *637*, 2228

Real Structure and Diffuse Scattering of Sr_{0.5}Ba_{0.5}Si₂O₂N₂:Eu²⁺ - A Highly Efficient Yellow Phosphor for pc-LEDs

M. Seibald, O. Oeckler, V.R. Celinski, P.J. Schmidt, A. Tücks, W. Schnick
Solid State Sci. **2011**, *13*, 1769

Unprecedented Zeolite-Like Framework Topology Constructed from Cages with 3-Rings in a Barium Oxonitridophosphate

S.J. Sedlmaier, M. Döblinger, O. Oeckler, J. Weber, J. Schmedt auf der Günne, W. Schnick
J. Am. Chem. Soc. **2011**, *133*, 12069

SrP₃N₅O: A Highly Condensed Layer Phosphate Structure Solved from a Nanocrystal by Automated Electron Diffraction Tomography

S.J. Sedlmaier, E. Mugnaioli, O. Oeckler, U. Kolb, W. Schnick
Chem. Eur. J. **2011**, *17*, 11258

Li₃₅Ln₉Si₃₀N₅₉O₂F with Ln = Ce, Pr - Highly Condensed Nitridosilicates

S. Lupart, D. Durach, W. Schnick
Z. Anorg. Allg. Chem. **2011**, *637*, 1841

LiSr₂[TaN₃]F - A Single Chain Nitridotantalate

P. Pust, W. Schnick
Z. Anorg. Allg. Chem. **2011**, *637*, 1486

Self-Assembly of Melem on Ag(111) - Emergence of Porous Structures Based on Amino-Heptazine Hydrogen Bonds

J. Eichhorn, S. Schlögl, B.V. Lotsch, W. Schnick, W.M. Heckl, M. Lackinger
CrystEngComm **2011**, *13*, 5559

Electronic Structure and Physical Properties of the Spinel-Type Phase of BeP₂N₄ from All-Electron Density Functional Calculations

W.Y. Ching, S. Aryal, P. Rulis, W. Schnick
Phys. Rev. B **2011**, *83*, 155109-1

Li₂Sr₄[Si₂N₅]N - A Layered Lithium Nitridosilicate Nitride

S. Lupart, S. Pagano, O. Oeckler, W. Schnick
Eur. J. Inorg. Chem. **2011**, 2118

Ca₃N₂ and Mg₃N₂: Unpredicted High-Pressure Behavior of Binary Nitrides

C. Braun, S.L. Börger, T.D. Boyko, G. Miehe, H. Ehrenberg, P. Höhn, A. Moewes, W. Schnick
J. Am. Chem. Soc. **2011**, *133*, 4307

High-Pressure Synthesis, Crystal Structure, and Characterization of Zn₂PN₃ – A New *catena*-Polynitridophosphate

S.J. Sedlmaier, M. Eberspächer, W. Schnick
Z. Anorg. Allg. Chem. **2011**, *637*, 362

Nitridosilicates and Oxonitridosilicates: From Ceramic Materials to Structural and Functional Diversity

M. Zeuner, S. Pagano, W. Schnick

Angew. Chem. **2011**, 123, 7898; *Angew. Chem. Int. Ed.* **2011**, 50, 7754

**Poly(triazine imide) with Intercalation of Lithium and Chloride Ions [(C₃N₃)₂(NH_xLi_{1-x})₃·LiCl]:
A Crystalline 2D Carbon Nitride Network**

E. Wirnhier, M. Döblinger, D. Gunzelmann, J. Senker, B.V. Lotsch, W. Schnick

Chem. Eur. J. **2011**, 17, 3213

Red-Emitting Luminescent Materials and Light-Emitting Devices Using Them

P.J. Schmidt, M. Zeuner, W. Schnick, S. Pagano

PCT Int. Appl. **2010**, WO 2010119375 A1, Philips Intellectual Property & Standards GmbH, Germany,
Koninklijke Philips Electronics NV

Li₂CaSi₂N₄ and Li₂SrSi₂N₄ - A Synthetic Approach to Three-Dimensional Lithium Nitridosilicates

M. Zeuner, S. Pagano, S. Hug, P. Pust, S. Schmiechen, C. Scheu, W. Schnick

Eur. J. Inorg. Chem. **2010**, 4945

**K₃[C₃N₃(COO)₃] · 2H₂O – Crystal Structure of a New Alkali Derivative of the Multidentate Ligand
Triazine Tricarboxylate**

S.J. Makowski, M. Hörmannsdorfer, W. Schnick

Z. Anorg. Allg. Chem. **2010**, 636, 2584

Melemium Hydrogensulfate H₃C₆N₇(NH₂)₃(HSO₄)₃ – The First Triple Protonation of Melem

A. Sattler, W. Schnick

Z. Anorg. Allg. Chem. **2010**, 636, 2589

Li₄Ca₃Si₂N₆ and Li₄Sr₃Si₂N₆ - Quaternary Lithium Nitridosilicates with Isolated [Si₂N₆]¹⁰⁻ Ions

S. Pagano, S. Lupart, S. Schmiechen, W. Schnick

Z. Anorg. Allg. Chem. **2010**, 636, 1907

**Synthesis of Rare Earth (Oxo)nitridocarbonates by Employment of Supercritical Carbon Dioxide,
Single-Source Precursor, Solid-State and Ion Exchange Reactions**

S. Pagano, M. Zeuner, U. Baisch, W. Schnick

Z. Anorg. Allg. Chem. **2010**, 636, 2212

**Material Properties and Structural Characterization of M₃Si₆O₁₂N₂·Eu²⁺ (M = Ba, Sr) –
A Comprehensive Study on a Promising Green Phosphor for pc-LEDs**

C. Braun, M. Seibald, S.L. Börger, O. Oeckler, T.D. Boyko, A. Moewes, G. Miehe, A. Tücks, W. Schnick

Chem. Eur. J. **2010**, 16, 9646

A Novel Nitridogallate Fluoride LiBa₅GaN₃F₅ – Synthesis, Crystal Structure, and Band Gap Determination

F. Hintze, W. Schnick

Solid State Sci. **2010**, 12, 1368

Chain-Type Lithium Rare-Earth Nitridosilicates Li₅Ln₅Si₄N₁₂ with Ln = La, Ce

S. Lupart, M. Zeuner, S. Pagano, W. Schnick

Eur. J. Inorg. Chem. **2010**, 2636

Phenakite-Type BeP₂N₄ – A Possible Precursor for a New Hard Spinel-Type Material

F.J. Pucher, S.R. Römer, F.W. Karau, W. Schnick

Chem. Eur. J. **2010**, 16, 7208

Melemium Methylsulfonates HC₆N₇(NH₂)₃H₂C₆N₇(NH₂)₃(SO₃Me)₃·H₂O and H₂C₆N₇(NH₂)₃(SO₃Me)₂·H₂O

A. Sattler, S. Schönberger, W. Schnick

Z. Anorg. Allg. Chem. **2010**, 636, 476

Tackling the Stacking Disorder of Melon – Structure Elucidation in a Semicrystalline Material

L. Seyfarth, J. Seyfarth, B.V. Lotsch, W. Schnick, J. Senker
Phys. Chem. Chem. Phys. **2010**, *12*, 2227

$Ln_3[SiON_3]O$ ($Ln = La, Ce, Pr$) – Three Oxonitridosilicate Oxides with Crystal Structures Derived from the Anti-Perovskite Structure Type

J.A. Kechele, C. Schmolke, S. Lupart, W. Schnick
Z. Anorg. Allg. Chem. **2010**, *636*, 176

On the Formation and Decomposition of the Melonate Ion in Cyanate and Thiocyanate Melts and the Crystal Structure of Potassium Melonate, $K_3[C_6N_7(NCN)_3]$

A. Sattler, W. Schnick
Eur. J. Inorg. Chem. **2009**, 4972

Melamine-Melem Adduct Phases: Investigating the Thermal Condensation of Melamine

A. Sattler, S. Pagano, M. Zeuner, A. Zurawski, D. Gunzelmann, J. Senker, K. Müller-Buschbaum, W. Schnick
Chem. Eur. J. **2009**, *15*, 13161

Shine a Light with Nitrides

W. Schnick
Phys. Status Solidi RRL **2009**, *3*, A113

Mixed Valence Europium Nitridosilicate Eu_2SiN_3

M. Zeuner, S. Pagano, P. Matthes, D. Bichler, D. Johrendt, T. Harmening, R. Pöttgen, W. Schnick
J. Am. Chem. Soc. **2009**, *131*, 11242

$Rb_3[C_6N_7(NCN)_3] \cdot 3H_2O$ and $Cs_3[C_6N_7(NCN)_3] \cdot 3H_2O$ – Synthesis, Crystal Structure and Thermal Behavior of Two Novel Alkali Melonates

S.J. Makowski, W. Schnick
Z. Anorg. Allg. Chem. **2009**, *635*, 2197

Light Emitting Device Comprising a Green Emitting Sialon-Based Material

P.J. Schmidt, W. Mayr, J. Meyer, J.A. Kechele, W. Schnick, O.M. Oeckler
PCT Int. Appl. **2009**, WO 2009072043 A1, Philips Intellectual Property & Standards GmbH, Germany, Koninklijke Philips Electronics NV

Tuning the Dimensionality of Nitridosilicates in Lithium Melts

S. Pagano, S. Lupart, M. Zeuner, W. Schnick
Angew. Chem. **2009**, *121*, 6453; *Angew. Chem. Int. Ed.* **2009**, *48*, 6335

Protonated Melonate $Ca[HC_6N_7(NCN)_3] \cdot 7H_2O$ - Synthesis, Crystal Structure, and Thermal Properties

S.J. Makowski, D. Gunzelmann, J. Senker, W. Schnick
Z. Anorg. Allg. Chem. **2009**, *635*, 2434

Complex Interrupted Tetrahedral Frameworks in the Nitridosilicates $M_7Si_6N_{15}$ ($M = La, Ce, Pr$)

C. Schmolke, O. Oeckler, D. Bichler, D. Johrendt, W. Schnick
Chem. Eur. J. **2009**, *15*, 9215

High-Pressure Phases and Transitions of the Layered Alkaline Earth Nitridosilicates $SrSiN_2$ and $BaSiN_2$

S.R. Römer, P. Kroll, W. Schnick
J. Phys.: Condens. Matter **2009**, *21*, 275408

$(Sr_{1-x}Ca_x)_{(11+16y-25z)/2}(Si_{1-y}Al_y)_{16}(N_{1-z}O_z)_{25}$ ($x \approx 0.24$, $y \approx 0.18$, $z \approx 0.19$) – A Novel Sialon with a Highly Condensed Silicate Framework

J.A. Kechele, O. Oeckler, P.J. Schmidt, W. Schnick
Eur. J. Inorg. Chem. **2009**, 3326

**A Density Functional Study of the High-Pressure Chemistry of MSiN₂ (M = Be, Mg, Ca):
Prediction of High-Pressure Phases and Examination of Pressure-Induced Decomposition**

S.R. Römer, P. Kroll, W. Schnick
J. Phys.: Condens. Matter **2009**, *21*, 275407

Pr₅Si₃N₉

S. Lupart, W. Schnick
Acta Crystallogr. **2009**, *E65*, i43

Group II Element Nitrides M₃N₂ Under Pressure: A Comparative Density Functional Study

S.R. Römer, T. Dörfler, P. Kroll, W. Schnick
Phys. Status Solidi (b) **2009**, *246*, 1604

**One-Pot Synthesis of Single-Source Precursors for Nanocrystalline LED-Phosphors M₂Si₅N₈:Eu²⁺
(M = Sr, Ba)**

M. Zeuner, P.J. Schmidt, W. Schnick
Chem. Mater. **2009**, *21*, 2467

Sr₃P₆O₆N₈ – A Highly Condensed Layered Phosphate

S.J. Sedlmaier, J. Schmedt auf der Günne, W. Schnick
Dalton Trans. **2009**, 4081

Ba₆Si₆N₁₀O₂(CN₂) - A Nitridosilicate with a NPO-Zeolite Structure Type Containing Carbodiimide Ions

S. Pagano, O. Oeckler, T. Schröder, W. Schnick
Eur. J. Inorg. Chem. **2009**, 2678

Metal(II) Cyamelurates Prepared from Aqueous Ammonia

A. Sattler, M.R. Budde, W. Schnick
Z. Anorg. Allg. Chem. **2009**, *635*, 1933

**Urea Route to Homoleptic Cyanates – Characterization and Luminescence Properties of
[M(OCN)₂(urea)] and M(OCN)₂ with M = Sr, Eu**

S. Pagano, G. Montana, C. Wickleder, W. Schnick
Chem. Eur. J. **2009**, *15*, 6186

**SrAlSi₄N₇:Eu²⁺ – A Nitridoalumosilicate Phosphor for Warm White Light (pc)LEDs with
Edge-Sharing Tetrahedra**

C. Hecht, F. Stadler, P.J. Schmidt, J. Schmedt auf der Günne, V. Baumann, W. Schnick
Chem. Mater. **2009**, *21*, 1595

**Sr₅Al_{5+x}Si_{21-x}N_{35-x}O_{2+x}:Eu²⁺ (x ≈ 0) – A Novel Green Phosphor for White Light pcLEDs with
Disordered Intergrowth Structure**

O. Oeckler, J.A. Kechele, H. Koss, P.J. Schmidt, W. Schnick
Chem. Eur. J. **2009**, *15*, 5311

**Ba₂AlSi₅N₉ – A New Host Lattice for Eu²⁺-Doped Luminescent Materials Comprising a
Nitridoalumosilicate Framework with Corner- and Edge-Sharing Tetrahedra**

J.A. Kechele, C. Hecht, O. Oeckler, J. Schmedt auf der Günne, P.J. Schmidt, W. Schnick
Chem. Mater. **2009**, *21*, 1288

Cs₁₀Ta_{29.27}O₇₈

M. Zeuner, A. Hofer, W. Schnick
Acta Crystallogr. **2009**, *E65*, i12

**Synthesis, Single Crystal Structure Determination and Rietveld Refinement of Cadmium
Tetrametaphosphate Octahydrate Cd₂(PO₂NH)₄·8H₂O**

S.R. Römer, W. Schnick
Z. Anorg. Allg. Chem. **2009**, *635*, 1555

**Structure Elucidation of Polyheptazine Imide by Electron Diffraction –
A Templated 2D Carbon Nitride Network**

M. Döblinger, B.V. Lotsch, J. Wack, J. Thun, J. Senker, W. Schnick
Chem. Commun. **2009**, 1541

**Single-Crystal Structure Determination and Solid-State NMR Investigations of Lithium Nitridosilicate Li_2SiN_2
Synthesized by a Precursor Approach Employing Amorphous “ $\text{Si}(\text{CN}_2)_2$ ”**

S. Pagano, M. Zeuner, S. Hug, W. Schnick
Eur. J. Inorg. Chem. **2009**, 1579

**Low Temperature Precursor Route for Highly Efficient Spherically Shaped LED-Phosphors
 $\text{M}_2\text{Si}_5\text{N}_8:\text{Eu}^{2+}$ (M = Eu, Sr, Ba)**

M. Zeuner, F. Hintze, W. Schnick
Chem. Mater. **2009**, 21, 336

**Density Functional Study of Calcium Nitride: Refined Geometries and Prediction of
High-Pressure Phases**

S.R. Römer, W. Schnick, P. Kroll
J. Phys. Chem. C **2009**, 113, 2943

Color Point Tuning for $(\text{Sr,Ca,Ba})\text{Si}_2\text{O}_2\text{N}_2:\text{Eu}^{2+}$ for White Light LEDs

V. Bachmann, C. Ronda, O. Oeckler, W. Schnick, A. Meijerink
Chem. Mater. **2009**, 21, 316

**Compression Behaviour of Nitridocarbidosilicates $\text{M}_2[\text{Si}_4\text{N}_6\text{C}]$ M = Y, Ho, Er - Studied with X-ray Diffraction
and ab-initio Calculations**

A. Friedrich, K. Knorr, B. Winkler, A. Lieb, H.A. Höpfe, W. Schnick, V. Milman, M. Hanfland
J. Phys. Chem. Solids **2009**, 70, 97

$\text{La}_{16}[\text{Si}_8\text{N}_{22}][\text{SiON}_3]_2$ – A Nitridosilicate with Isolated, Corner-Sharing and Edge-Sharing Tetrahedra

C. Schmolke, S. Lupart, W. Schnick
Solid State Sci. **2009**, 11, 305

Synthesis and Crystal Structure of the First Chain-Type Nitridosilicates $\text{RE}_5\text{Si}_3\text{N}_9$ (RE = La, Ce)

C. Schmolke, D. Bichler, D. Johrendt, W. Schnick
Solid State Sci. **2009**, 11, 389

**Structure Elucidation of $\text{BaSi}_2\text{O}_2\text{N}_2$ – A Host Lattice for Rare-Earth Doped Luminescent Materials in
Phosphor Converted (pc)LEDs**

J.A. Kechele, O. Oeckler, F. Stadler, W. Schnick
Solid State Sci. **2009**, 11, 537

High-Pressure Synthesis and Characterization of the Alkaline Earth Borate $\beta\text{-BaB}_4\text{O}_7$

J.S. Knyrim, S.R. Römer, W. Schnick, H. Huppertz
Solid State Sci. **2009**, 11, 336

**Nitridogermanate Nitrides $\text{Sr}_7[\text{GeN}_4]\text{N}_2$ and $\text{Ca}_7[\text{GeN}_4]\text{N}_2$: Synthesis Employing Sodium Melts,
Crystal Structure, and Density-Functional Theory Calculations**

S.C. Junggeburth, O. Oeckler, D. Johrendt, W. Schnick
Inorg. Chem. **2008**, 47, 12018

Red Emitting Oxynitride Luminescent Materials

P.J. Schmidt, F. Stadler, W. Schnick
PCT Int. Appl. **2008**, WO 2008096291 A1, Philips Intellectual Property & Standards GmbH, Germany,
Koninklijke Philips Electronics NV

Red Emitting Luminescent Materials

P.J. Schmidt, W. Mayr, J. Meyer, W. Schnick, C.S. Hecht, F. Stadler
PCT Int. Appl. **2008**, WO 2008096300 A1, Philips Intellectual Property & Standards GmbH, Germany,
Koninklijke Philips Electronics NV

HP-Ca₂Si₅N₈ - A New High-Pressure Nitridosilicate: Synthesis, Structure, Luminescence, and DFT Calculations

S.R. Römer, C. Braun, O. Oeckler, P.J. Schmidt, P. Kroll, W. Schnick
Chem. Eur. J. **2008**, *14*, 7892

Crystal Structure of Ammonium Catena-polyphosphate IV [NH₄PO₃]_x

S.J. Sedlmaier, W. Schnick
Z. Anorg. Allg. Chem. **2008**, *634*, 1501

Sr₅Ge₂N₆ – A Nitridogermanate with Edge-sharing Double Tetrahedra

S.C. Junggeburth, O. Oeckler, W. Schnick
Z. Anorg. Allg. Chem. **2008**, *634*, 1309

Di-μ-tert-butanolato-bis[bis(η⁵-cyclopentadienyl)erbium(III)]

S. Pagano, W. Schnick
Acta Crystallogr. **2008**, *E64*, m473

C₆N₇H₃O₃·H₂N(CH₃)₂Cl·H₂O - A Dimethylammonium Chloride Adduct of Cyameluric Acid – Synthesis, Structure and Properties

A. Sattler, W. Schnick
Z. Anorg. Allg. Chem. **2008**, *634*, 1063

Tl₄(PO₂NH)₄·H₂O – A Commensurately Modulated Tetrametaphosphimate

S.J. Sedlmaier, O. Oeckler, W. Schnick
Solid State Sci. **2008**, *10*, 1150

Preparation and Structure of Melemium Melem Perchlorate HC₆N₇(NH₂)₃ClO₄·C₆N₇(NH₂)₃

A. Sattler, W. Schnick
Z. Anorg. Allg. Chem. **2008**, *634*, 457

Precursor Approach to Lanthanide Dioxo Monocarbodiimides Ln₂O₂CN₂ (Ln = Y, Ho, Er, Yb) by Insertion of CO₂ into Organometallic Ln-N Compounds

M. Zeuner, S. Pagano, W. Schnick
Chem. Eur. J. **2008**, *14*, 1524

Cubic Di-μ-amido-bis[bis(η⁵-cyclopentadienyl)ytterbium(III)]

M. Zeuner, W. Schnick
Acta Crystallogr. **2007**, *E63*, m2581

Reorientational Dynamics and Solid-Phase Transformation of Ammonium Dicyanamide into Dicyandiamide: A ²H Solid-State NMR Study

B.V. Lotsch, W. Schnick, E. Naumann, J. Senker
J. Phys. Chem. B **2007**, *111*, 11680

Synthesis and Crystal Structure of Sodium Copper Tetrametaphosphimate Heptahydrate Na₂Cu(PO₂NH)₄·7H₂O and Sodium Potassium Copper Tetrametaphosphimate Heptahydrate K_xNa_{2-x}Cu(PO₂NH)₄·7H₂O

S.R. Römer, W. Schnick
Solid State Sci. **2007**, *9*, 644

The Crystal Structures of Two Non-Metal Tricyanomelaminates: Diammonium Tricyanomelamine Dihydrate $(\text{NH}_4)_2[\text{C}_6\text{N}_9\text{H}] \cdot 2\text{H}_2\text{O}$ and Dimelaminium Tricyanomelamine Melamine Dihydrate $[\text{C}_3\text{N}_6\text{H}_7]_2[\text{C}_6\text{N}_9\text{H}] \cdot \text{C}_3\text{N}_6\text{H}_6 \cdot 2\text{H}_2\text{O}$

B.V. Lotsch, W. Schnick
Z. Anorg. Allg. Chem. **2007**, 633, 1435

The Stuffed Framework Structure of SrP_2N_4 : Challenges to Synthesis and Crystal Structure Determination

F.W. Karau, L. Seyfarth, O. Oeckler, J. Senker, K. Landskron, W. Schnick
Chem. Eur. J. **2007**, 13, 6841

Synthesis, Crystal Structure and Properties of the Trimetaphosphimates $\text{Na}_2\text{M}(\text{PO}_2\text{NH})_3 \cdot 2\text{H}_2\text{O}$ with $\text{M} = \text{K}, \text{TI}$

S.J. Sedlmaier, D. Johrendt, O. Oeckler, W. Schnick
Z. Anorg. Allg. Chem. **2007**, 633, 2217

Coupled Al/Si and O/N Order/Disorder in $\text{BaYb}[\text{Si}_{4-x}\text{Al}_x\text{O}_x\text{N}_{7-x}]$ Sialon: Neutron Powder Diffraction and Monte Carlo Simulations

V.L. Vinograd, E.A. Juarez-Arellano, A. Lieb, K. Knorr, W. Schnick, J.D. Gale, B. Winkler
Z. Kristallogr. **2007**, 222, 402

New Light on an Old Story: Formation of Melam during Thermal Condensation of Melamine

B.V. Lotsch, W. Schnick
Chem. Eur. J. **2007**, 13, 4956

Unmasking Melon by a Complimentary Approach Employing Electron Diffraction, Solid-State NMR Spectroscopy and Theoretical Calculations - Structural Characterization of a Carbon Nitride Polymer

B.V. Lotsch, M. Döblinger, J. Sehnert, L. Seyfarth, J. Senker, O. Oeckler, W. Schnick
Chem. Eur. J. **2007**, 13, 4969

Das reduzierte Nitridosilicat BaSi_6N_8

F. Stadler, W. Schnick
Z. Anorg. Allg. Chem. **2007**, 633, 589

$\text{Zn}_8[\text{P}_{12}\text{N}_{24}]\text{O}_2$ – ein Nitridophosphat-oxid mit Sodalith-Struktur

F. Karau, O. Oeckler, F. Schäfers, R. Niewa, W. Schnick
Z. Anorg. Allg. Chem. **2007**, 633, 1333

Rare-Earth Tricyanomelaminates $[\text{NH}_4]\text{Ln}[\text{HC}_6\text{N}_9]_2[\text{H}_2\text{O}]_7 \cdot \text{H}_2\text{O}$ ($\text{Ln} = \text{La}, \text{Ce}, \text{Pr}, \text{Nd}, \text{Sm}, \text{Eu}, \text{Gd}, \text{Tb}, \text{Dy}$): Structural Investigation, Solid-State NMR Spectroscopy, and Photoluminescence

A. Nag, B.V. Lotsch, J. Schmedt auf der Günne, O. Oeckler, P.J. Schmidt, W. Schnick
Chem. Eur. J. **2007**, 13, 3512

Real Structure of $\text{SrSi}_2\text{O}_2\text{N}_2$

O. Oeckler, F. Stadler, T. Rosenthal, W. Schnick
Solid State Sci. **2007**, 9, 205

The Sialons $\text{MLn}[\text{Si}_{4-x}\text{Al}_x\text{O}_x\text{N}_{7-x}]$ with $\text{M} = \text{Eu}, \text{Sr}, \text{Ba}$ and $\text{Ln} = \text{Ho-Yb}$ - Twelve Substitution Variants with the $\text{MYb}[\text{Si}_4\text{N}_7]$ Structure Type

A. Lieb, J.A. Kechele, R. Kraut, W. Schnick
Z. Anorg. Allg. Chem. **2007**, 633, 166

Synthese von Cadmiumnitrid Cd_3N_2 durch thermischen Abbau von Cadmiumazid $\text{Cd}(\text{N}_3)_2$ und Kristallstrukturbestimmung aus Röntgen-Pulverbeugungsdaten

F. Karau, W. Schnick
Z. Anorg. Allg. Chem. **2007**, 633, 223

**Synthesis and Characterization of Tb[N(CN)₂]₃· 2H₂O and Eu[N(CN)₂]₃· 2H₂O:
Two New Luminescent Rare-Earth Dicyanamides**

A. Nag, P.J. Schmidt, W. Schnick
Chem. Mater. **2006**, *18*, 5738

Illumination System Comprising a Radiation Source and a Blue-Emitting Phosphor

P.J. Schmidt, B.S. Schreinemacher, W. Schnick, F.M. Stadler, J. Meyer
PCT Int. Appl. **2006**, WO 2006061778 A1, Philips Intellectual Property & Standards GmbH,
Germany, Koninklijke Philips Electronics NV, Lumileds Lighting US, Llc.

**Carbon Dioxide Fixation of Organolanthanides and Thermal Degradation into Amorphous and
Higher Condensed Ln/O/C/N Solids**

U. Baisch, S. Pagano, M. Zeuner, W. Schnick
Eur. J. Inorg. Chem. **2006**, 3517

**Crystal Structure, Physical Properties and HRTEM Investigation of the New
Oxonitridosilicate EuSi₂O₂N₂**

F. Stadler, O. Oeckler, H.A. Höpfe, M.H. Möller, R. Pöttgen, B.D. Mosel, P. Schmidt, V. Duppel,
A. Simon, W. Schnick
Chem. Eur. J. **2006**, *12*, 6984

Zur Frage der Tautomerie von Cyamelursäure im Kristall

A. Sattler, W. Schnick
Z. Anorg. Allg. Chem. **2006**, *632*, 1518

A Nitridic Clathrate: P₄N₄(NH)₄(NH₃)

F. Karau, W. Schnick
Angew. Chem. **2006**, *118*, 4617; *Angew. Chem. Int. Ed.* **2006**, *45*, 4505

**Synthesis, Structure, and Dynamics of Tris(η⁵-cyclopentadienyl)lanthanides and
Bis(η⁵-cyclopentadienyl)[bis(trimethylsilyl)amido]cerium(III)**

U. Baisch, S. Pagano, M. Zeuner, J. Schmedt auf der Günne, O. Oeckler, W. Schnick
Organometallics **2006**, *25*, 3027

**Compressibility of the Nitridosilicate SrYb[Si₄N₇] and the Oxonitridoaluminosilicates
MYb[Si_{4-x}Al_xO_xN_{7-x}] (x = 2; M = Sr, Ba)**

E.A. Juarez-Arellano, A. Friedrich, K. Knorr, A. Lieb, B. Winkler, M. Amboage,
M. Hanfland, W. Schnick
Acta Crystallogr. **2006**, *B62*, 424

**Single-Crystal X-ray Diffraction and Electron Microprobe Analysis of the Structurally Related
J-Phases Nd₄[Si₂O₅N₂]O₂, Nd₄[Si_{2-x}Al_xO_{5+x}N_{2-x}]O₂ with x ≈ 0.4 and Sr_xHo_{4-x}[Si_{2-y}Al_yO_{5+(x+y)}N_{2-(x+y)}]O₂
with x ≈ 0.2 and y ≈ 0.4**

A. Lieb, R. Kraut, W. Schnick
Z. Anorg. Allg. Chem. **2006**, *632*, 1496

**Synthesis and Structural Characterization of the Ammelinium Salts [C₃H₆N₅O]Cl, [C₃H₆N₅O]Br,
and [C₃H₆N₅O]NO₃**

B.V. Lotsch, W. Schnick
Z. Anorg. Allg. Chem. **2006**, *632*, 1457

Illumination System Comprising a Radiation Source and a Fluorescent Material

T. Juestel, P. Schmidt, W. Schnick, F.M. Stadler
PCT Int. Appl. **2006**, WO 2006006099 A1, 31 pp, Philips Intellectual Property & Standards GmbH,
Germany, Koninklijke Philips Electronics NV, Lumileds Lighting US, Llc.

Crystal Structure of the High-Pressure Phase of the Oxonitridosilicate Chloride $Ce_4[Si_4O_{3+x}N_{7-x}]Cl_{1-x}O_x$, $x \approx 0.2$

A. Friedrich, E. Haussühl, W. Morgenroth, A. Lieb, B. Winkler, K. Knorr, W. Schnick
Acta Crystallogr. **2006**, B62, 205

Nanocrystalline Lanthanide Nitride Materials Synthesized by Thermal Treatment of Amido and Ammine Metallocenes: X-ray Studies and DFT Calculations

U. Baisch, S. Pagano, M. Zeuner, N. Barros, L. Maron, W. Schnick
Chem. Eur. J. **2006**, 12, 4785

From Triazines to Heptazines: Novel Nonmetal Tricyanomelaminates as Precursors for Graphitic Carbon Nitride Materials

B.V. Lotsch, W. Schnick
Chem. Mater. **2006**, 18, 1891

Synthesis, Crystal Structure and Thermal Behavior of Gadolinium Dicyanamide Dihydrate $Gd[N(CN)_2]_3 \cdot 2H_2O$

A. Nag, W. Schnick
Z. Anorg. Allg. Chem. **2006**, 632, 609

Kristallstruktur von Natrium-Dihydrogencyamelurat-Tetrahydrat $Na[H_2(C_6N_7)O_3] \cdot 4H_2O$

A. Sattler, W. Schnick
Z. Anorg. Allg. Chem. **2006**, 632, 531

Die neuen Schichtsilicate $Ba_3Si_6O_9N_4$ und $Eu_3Si_6O_9N_4$

F. Stadler, W. Schnick
Z. Anorg. Allg. Chem. **2006**, 632, 949

$Pr_{10}[Si_{10-x}Al_xO_{9+x}N_{17-x}]Cl$ with $x \approx 1$ - An Oxonitridoaluminosilicate Chloride

A. Lieb, R. Lauterbach, W. Schnick
Z. Anorg. Allg. Chem. **2006**, 632, 313

$BaSm_5[Si_9Al_3N_{20}]O$ – A Nitridoaluminosilicate Oxide with a New Structure Type Composed of “Star-Shaped” $[N^{4-}((Si,Al)N_3)_4]$ Units as Secondary Building Units

A. Lieb, W. Schnick
Solid State Sci. **2006**, 8, 185

Hochdrucksynthese von $BaSr_2P_6N_{12}$ und $BaCa_2P_6N_{12}$ und Strukturvergleich der Reihe BaP_2N_4 , $BaCa_2P_6N_{12}$ und $BaSr_2P_6N_{12}$

F. Karau, W. Schnick
Z. Anorg. Allg. Chem. **2006**, 632, 231

Zur Kenntnis der Kristallstruktur von Melem $C_6N_7(NH_2)_3$

A. Sattler, W. Schnick
Z. Anorg. Allg. Chem. **2006**, 632, 238

Illumination System Comprising a Radiation Source and a Fluorescent Material

P.J. Schmidt, T. Juestel, H. Hoeppe, W. Schnick
PCT Int. Appl. **2005**, WO 2005083037 A1, 33 pp., Philips Intellectual Property & Standards GmbH, Germany; Koninklijke Philips Electronics N.V.; Lumileds Lighting U.S. Llc.

Darstellung und Kristallstruktur von Diamminmagnesiumdiazid $Mg(NH_3)_2(N_3)_2$

F. Karau, W. Schnick
Z. Anorg. Allg. Chem. **2006**, 632, 49

Syntheses and Crystal Structure of Lithium Tetrametaphosphimate Tetrahydrate

$Li_4(PO_2NH)_4 \cdot 4H_2O$
S.R. Römer, W. Schnick
Z. Anorg. Allg. Chem. **2006**, 632, 59

Synthese, Kristallstruktur und festkörper-NMR-spektroskopische Untersuchung neuer Oxonitridosilicate der Mischkristallreihe $Ba_{4-x}Ca_xSi_6N_{10}O$

F. Stadler, O. Oeckler, W. Schnick
Z. Anorg. Allg. Chem. **2006**, 632, 54

$Ce_{10}[Si_{10}O_9N_{17}]Br$, $Nd_{10}[Si_{10}O_9N_{17}]Br$ and $Nd_{10}[Si_{10}O_9N_{17}]Cl$ Oxonitridosilicate Halides with a New Layered Structure Type

A. Lieb, W. Schnick
J. Solid State Chem. **2005**, 178, 3323

Crystal Structure of Guanylurea Sulphate Hydrate $[H_2NC(=O)NHC(NH_2)_2]_2SO_4 \cdot 2H_2O$

B.V. Lotsch, W. Schnick
Z. Anorg. Allg. Chem. **2005**, 631, 2967

Synthesis, Crystal Structures and Properties of the Trimetaphosphimates $NaBa(PO_2NH)_3$, $KSr(PO_2NH)_3 \cdot 4H_2O$, and $NH_4Sr(PO_2NH)_3 \cdot 4H_2O$

S. Correll, S. Sedlmaier, W. Schnick
Solid State Sci. **2005**, 7, 1261

Darstellung und Kristallstruktur von Cadmiumazid $Cd(N_3)_2$

F. Karau, W. Schnick
Z. Anorg. Allg. Chem. **2005**, 631, 2315

Thermal Conversion of Guanylurea Dicyanamide into Graphitic Carbon Nitride via Prototype CN_x Precursors

B.V. Lotsch, W. Schnick
Chem. Mater. **2005**, 17, 3976

Synthesis and Crystal Structure Determination by X-ray Powder Diffraction of Nickel Tetrametaphosphimate Octahydrate $Ni_2(PO_2NH)_4 \cdot 8H_2O$

S.R. Römer, W. Schnick
Z. Anorg. Allg. Chem. **2005**, 631, 1749

Synthese, Kristallstruktur und Festkörper-NMR-spektroskopische Untersuchung des Oxonitridosilicates $BaSi_6N_8O$

F. Stadler, R. Kraut, O. Oeckler, S. Schmid, W. Schnick
Z. Anorg. Allg. Chem. **2005**, 631, 1773

Highly Efficient All-Nitride Phosphor-Converted White Light Emitting Diode

R. Mueller-Mach, G. Mueller, M.R. Krames, H.A. Höpfe, F. Stadler, W. Schnick, T. Juestel, P. Schmidt
Phys. Status Solidi (a) **2005**, 202, 1727

Synthesen, Kristallstrukturen und spektroskopische Eigenschaften des Melem-Adduktes $C_6N_7(NH_2)_3 \cdot H_3PO_4$ sowie der Melemium-Salze $(H_2C_6N_7(NH_2)_3)SO_4 \cdot 2H_2O$ und $(HC_6N_7(NH_2)_3)ClO_4 \cdot H_2O$

A. Sattler, L. Seyfarth, J. Senker, W. Schnick
Z. Anorg. Allg. Chem. **2005**, 631, 2545

Synthese, Kristallstruktur und Eigenschaften von Chrom(III)-trimetaphosphimat-Heptahydrat, $Cr(PO_2NH)_3 \cdot 7 H_2O$

S. Correll, S. Sedlmaier, W. Schnick
Z. Anorg. Allg. Chem. **2005**, 631, 1359

Synthesis, Crystal Structure Determination from X-Ray Powder Diffractometry and Vibrational Spectroscopic Properties of $Mg[N(CN)_2]_2 \cdot 4H_2O$

E. Irran, B. Jürgens, S. Schmid, W. Schnick
Z. Anorg. Allg. Chem. **2005**, 631, 1512

Catalytic Formation and Crystal Structure of Cyanoguanlylurea $\text{H}_2\text{NC(=O)NHC(NH}_2\text{)NCN}$

B.V. Lotsch, W. Schnick
Z. Naturforsch. **2005**, 60b, 377

Crystal Structure and Mechanical Properties of $\text{SrSi}_7\text{N}_{10}$

G. Pilet, H.A. Höpfe, W. Schnick, S. Esmaeilzadeh
Solid State Sci. **2005**, 7, 391

Synthese, Kristallstruktur und spektroskopische Untersuchungen von $\text{Ba}_5[\text{BO}_3]_3\text{CN}$

S. Schmid, W. Schnick
Z. Anorg. Allg. Chem. **2005**, 631, 1139

High-Pressure Synthesis and X-ray Powder Structure Determination of the Nitridophosphate BaP_2N_4

F. W. Karau, W. Schnick
J. Solid State Chem. **2005**, 178, 135

Synthesis and Characterization of the Rare-Earth Dicyanamides $\text{Ln}[\text{N}(\text{CN})_2]_3$ with $\text{Ln} = \text{La, Ce, Pr, Nd, Sm, and Eu}$

B. Jürgens, E. Irran, W. Schnick
J. Solid State Chem. **2005**, 178, 72

Oxonitridosilicate Chlorides – Synthesis, Single-Crystal X-ray and Neutron Powder Diffraction, Chemical Analysis and Properties of $\text{Ln}_4[\text{Si}_4\text{O}_{3+x}\text{N}_{7-x}]\text{Cl}_{1-x}\text{O}_x$ with $\text{Ln} = \text{Ce, Pr, Nd}$ and $x \approx 0.2$

A. Lieb, M.T. Weller, P.F. Henry, R. Niewa, R. Pöttgen, R.-D. Hoffmann, H.E. Höfer, W. Schnick
J. Solid State Chem. **2005**, 178, 976

SrSi_6N_8 – A Reduced Nitridosilicate with a Si-Si Bond

F. Stadler, O. Oeckler, J. Senker, H. A. Höpfe, P. Kroll, W. Schnick
Angew. Chem. **2005**, 117, 573; *Angew. Chem. Int. Ed.* **2005**, 44, 567

Syntheses, Crystal Structures and Properties of the Tetrametaphosphimates $\text{M}^{\text{II}}_2(\text{PO}_2\text{NH})_4 \cdot 8\text{H}_2\text{O}$ with $\text{M}^{\text{II}} = \text{Mg, Mn, Co}$ and Zn

S.R. Römer, W. Schnick
Z. Anorg. Allg. Chem. **2005**, 631, 31

High-Pressure Phase Transition of the Oxonitridosilicate Chloride $\text{Ce}_4[\text{Si}_4\text{O}_{3+x}\text{N}_{7-x}]\text{Cl}_{1-x}\text{O}_x$ with $x = 0.12$ and 0.18

A. Friedrich, K. Knorr, A. Lieb, S. Rath, M. Hanfland, B. Winkler, W. Schnick
Z. Kristallogr. **2005**, 220, 245

Crystal Structure and Thermal Solid-State Reactivity of Ammonium Cyanoureate $\text{NH}_4[\text{H}_2\text{NC(=O)NCN}]$

B.V. Lotsch, W. Schnick
Z. Naturforsch. **2004**, 59b, 1229

Illumination System Comprising a Radiation Source and a Fluorescent Lanthanide-Doped Metal Oxide Nitride Silicate Phosphor

T. Jüstel, P. Schmidt, H. Hoeppe, W. Schnick, W. Mayr
PCT Int. Appl. **2004**, WO 2004055910 A1, 24 pp., Philips Intellectual Property & Standards GmbH, Germany; Koninklijke Philips Electronics N.V.; Lumileds Lighting U.S. Llc.

$\text{Li}_{12-x}\text{H}_{x-y+z}[\text{P}_{12}\text{O}_y\text{N}_{24-y}]\text{X}_z$ ($\text{X} = \text{Cl, Br}$) – Oxonitridophosphate mit NPO-Zeolithstruktur

S. Correll, N. Stock, O. Oeckler, J. Senker, T. Nilges, W. Schnick
Z. Anorg. Allg. Chem. **2004**, 630, 2205

Plasma Display Screen with Blue-Emitting Phosphor

T. Jüstel, W. Mayr, P.J. Schmidt, W. Schnick
PCT Int. Appl. **2004**, WO 2004047138 A2, 10 pp., Philips Intellectual Property & Standards GmbH, Germany; Koninklijke Philips Electronics NV.

Illumination System Comprising a Radiation Source and a Fluorescent Material

P. Schmidt, T. Juestel, H. Hoeppe, W. Schnick, W. Mayr
PCT Int. Appl. **2005**, WO 2005116163 A1, 35 pp, Philips Intellectual Property & Standards GmbH, Germany;
Koninklijke Philips Electronics NV; Lumileds Lighting US, Llc.

Ca[Si₂O₂N₂] – A Novel Layer Silicate

H.A. Höpfe, F. Stadler, O. Oeckler, W. Schnick
Angew. Chem. **2004**, *116*, 5656; *Angew. Chem. Int. Ed.* **2004**, *43*, 5540

Towards Novel C-N Materials: Crystal Structures of Two Polymorphs of Guanidinium Dicyanamide and Their Thermal Conversion into Melamine

B.V. Lotsch, W. Schnick
New J. Chem. **2004**, *28*, 1129

Europium-Activated Alkaline Earth Silicon Nitride Oxide Phosphors and Luminescent Screens and Light-Emitting Devices Employing the Phosphors

P. Schmidt, T. Juestel, W. Mayr, H.-D. Bausen, W. Schnick, H. Hoeppe
PCT Int. Appl. **2004**, WO 2004036962 A1, 25 pp., Philips Intellectual Property & Standards GmbH, Germany;
Koninklijke Philips Electronics NV; Lumileds Lighting US, Llc.

Rubidium Metaborate, Rb₃B₃O₆

S. Schmid, W. Schnick
Acta Crystallogr. **2004**, *C60*, i69

Synthesis, Crystal Structures and Properties of the Bis-(trimetaphosphimato)-metallates

Na₄{Co[(PO₂NH)₃]₂} · 12H₂O and Na₄{Ni[(PO₂NH)₃]₂} · 12H₂O

S. Correll, N. Stock, W. Schnick
Solid State Sci. **2004**, *6*, 953

Nonlinear Optical Susceptibilities $\chi^{(2)}$ of Nitridosilicate Powders

H. Lutz, S. Joosten, J. Hoffmann, P. Lehmeier, A. Seilmeier, H. A. Höpfe, W. Schnick
J. Phys. Chem. Solids **2004**, *65*, 1285

Magnetic Investigations and ¹⁵¹Eu Mössbauer Spectroscopy of MYbSi₄N₇ with M = Sr, Ba, Eu

H.A. Höpfe, H. Trill, G. Kotzyba, B.D. Mosel, R. Pöttgen, W. Schnick
Z. Anorg. Allg. Chem. **2004**, *630*, 224

Phase Transition of a Dicyanamide with Rutile-Like Structure: Syntheses and Crystal Structures of α - and β -Cd[N(CN)₂]₂

B. Jürgens, E. Irran, H.A. Höpfe, W. Schnick
Z. Anorg. Allg. Chem. **2004**, *630*, 219

Characterization of the Thermally Induced Topochemical Solid-State Transformation of NH₄[N(CN)₂] into NCN=C(NH₂)₂ by Means of X-ray and Neutron Diffraction as well as Raman and Solid-State NMR Spectroscopy

B.V. Lotsch, J. Senker, W. Schnick
Inorg. Chem. **2004**, *43*, 895

Synthesis, Crystal Structure and Properties of Rubidium Dihydrogentricyanomelaminat Semihydrate Rb[H₂C₆N₉] · ½H₂O

B. Jürgens, H.A. Höpfe, W. Schnick
Z. Anorg. Allg. Chem. **2004**, *630*, 35

Synthese und Kristallstruktur von bis-1,3-Dimethoxyethan-trichloro-samarium(III) und tris-N,N-Diisopropylcarbamato-samarium(III)

U. Baisch, W. Schnick
Z. Anorg. Allg. Chem. **2003**, *629*, 2073

Investigation of Structural and Dynamic Properties of $\text{NH}_4[\text{N}(\text{CN})_2]$ by Means of X-ray and Neutron Powder Diffraction as well as Vibrational and Solid-State NMR Spectroscopy

B.V. Lotsch, J. Senker, W. Kockelmann, W. Schnick
J. Solid State Chem. **2003**, 176, 180

Melem (2,5,8-Triamino-tri-s-triazine), an Important Intermediate During Condensation of Melamine Rings to Graphitic Carbon Nitride: Synthesis, Structure Determination by X-ray Powder Diffractometry, Solid-State NMR, and Theoretical Studies

B. Jürgens, E. Irran, J. Senker, P. Kroll, H. Müller, W. Schnick
J. Am. Chem. Soc. **2003**, 125, 10288

Synthesis, Spectroscopic Properties, and Crystal Structure of the Oxonium Acid $[\text{H}(\text{OEt}_2)_2]^+ [\text{Ti}_2\text{Cl}_9]^-$

S. Rannabauer, T. Habereeder, H. Nöth, W. Schnick
Z. Naturforsch. **2003**, 58b, 745

$\text{Li}_x\text{H}_{12-x-y+z}[\text{P}_{12}\text{O}_y\text{N}_{24-y}]\text{Cl}_z$ – An Oxonitridophosphate with a Zeolitelike Framework Structure Composed of 3-Rings

S. Correll, N. Stock, O. Oeckler, W. Schnick
Angew. Chem. **2003**, 115, 3674; *Angew. Chem. Int. Ed.* **2003**, 42, 3549

High-Temperature Synthesis, Single-Crystal X-ray Structure Determination and Solid-State NMR Investigations of $\text{Ba}_7[\text{SiO}_4][\text{BO}_3]_3\text{CN}$ and $\text{Sr}_7[\text{SiO}_4][\text{BO}_3]_3\text{CN}$

S. Schmid, J. Senker, W. Schnick
J. Solid State Chem. **2003**, 174, 221

Synthese, Kristallstruktur und spektroskopische Charakterisierung von Bis(dimethylammonium)hexachlorotitanat $[\text{Me}_2\text{NH}_2]_2[\text{TiCl}_6]$

S. Rannabauer, W. Schnick
Z. Naturforsch. **2003**, 58b, 410

Synthesis and Structural Investigation of $\text{La}_{13}\text{Si}_{18}\text{Al}_{12}\text{O}_{15}\text{N}_{39}$

S. Esmailzadeh, W. Schnick
Solid State Sci. **2003**, 5, 503

Oligonary Nitrides and Oxonitrides of Si, P, Al, and B in Combination with Rare Earth or Transition Metals as well as Molecular Precursor Compounds with Nitrido Bridges M-N-Si (M = Ti, Zr, Hf, W, Sn)

W. Schnick, R. Bettenhausen, B. Götze, H.A. Höpfe, H. Huppertz, E. Irran, K. Köllisch, R. Lauterbach, M. Orth, S. Rannabauer, T. Schlieper, B. Schwarze, F. Wester
Z. Anorg. Allg. Chem. **2003**, 629, 902

Synthesis, Crystal Structure Determination from X-ray Powder Diffractometry and Vibrational Spectroscopy of the Tricyanomelaminates $\text{M}_3[\text{C}_6\text{N}_9]\cdot\text{H}_2\text{O}$ (M = K, Rb)

E. Irran, B. Jürgens, W. Schnick
Solid State Sci. **2002**, 4, 1305

Transformation of Ammonium Dicyanamide into Dicyandiamide in the Solid

B. Jürgens, H.A. Höpfe, E. Irran, W. Schnick
Inorg. Chem. **2002**, 41, 4849

A Density Functional Study of Phosphorus Nitride P_3N_5 : Refined Geometries, Properties, and Relative Stability of $\alpha\text{-P}_3\text{N}_5$ and $\gamma\text{-P}_3\text{N}_5$ and a Further Possible High-Pressure Phase $\delta\text{-P}_3\text{N}_5$ with Kyanite-Type Structure

P. Kroll, W. Schnick
Chem. Eur. J. **2002**, 8, 3530

Synthesis, Crystal Structure, Magnetism, and Optical Properties of $\text{Gd}_3[\text{SiON}_3]\text{O}$ - An Oxonitridosilicate Oxide with Noncondensed SiON_3 Tetrahedra

H.A. Höpfe, G. Kotzyba, R. Pöttgen, W. Schnick
J. Solid State Chem. **2002**, 167, 393

Synthese und Kristallstruktur des ersten Oxonitridoborates - $\text{Sr}_3[\text{B}_3\text{O}_3\text{N}_3]$

S. Schmid, W. Schnick
Z. Anorg. Allg. Chem. **2002**, 628, 1192

Synthesis, Crystal Structure, Vibrational Spectroscopy, and Thermal Behaviour of Lead Dicyanamide $\text{Pb}[\text{N}(\text{CN})_2]_2$

B. Jürgens, H.A. Höpfe, W. Schnick
Solid State Sci. **2002**, 4, 821

Multianvil-Synthese, Pulver-Röntgenstrukturanalyse, ^{31}P -MAS-NMR- und FTIR-Spektroskopie sowie Materialeigenschaften von $\gamma\text{-P}_3\text{N}_5$, einer Hochdruckphase von binärem Phosphor(V)-nitrid mit verzerrt quadratischen PN_5 -Pyramiden und PN_4 -Tetraedern

K. Landskron, H. Huppertz, J. Senker, W. Schnick
Z. Anorg. Allg. Chem. **2002**, 628, 1465

Reaktion von Bis(trimethylsilylamino)dichlorsilan mit Titan-tetrachlorid – Synthese und Kristallstruktur von $[\mu\text{-ClTiCl}_2\text{N}(\text{SiMe}_3)\text{SiCl}_2\text{NH}_2]_2$

S. Rannabauer, R. Bettenhausen, W. Schnick
Z. Anorg. Allg. Chem. **2002**, 628, 373

Hyperfine Interactions in the 13 K Ferromagnet $\text{Eu}_2\text{Si}_5\text{N}_8$

H.A. Höpfe, H. Trill, B.D. Mosel, H. Eckert, G. Kotzyba, R. Pöttgen, W. Schnick
J. Phys. Chem. Solids **2002**, 63, 853

Systematic Investigation of Tri- and Tetrametaphosphimates

S. Correll, N. Stock, W. Schnick
Phosphorus Sulfur Silicon Relat. Elem. **2001**, 168/169, 321

High-Temperature Synthesis, Crystal Structure, Optical Properties, and Magnetism of the Carbidonitridosilicates $\text{Ho}_2[\text{Si}_4\text{N}_6\text{C}]$ and $\text{Tb}_2[\text{Si}_4\text{N}_6\text{C}]$

H.A. Höpfe, G. Kotzyba, R. Pöttgen, W. Schnick
J. Mater. Chem. **2001**, 11, 3300

Vibrational Analysis of $\text{Ag}_3(\text{PO}_2\text{NH})_3$, $\text{Na}_3(\text{PO}_2\text{NH})_3 \cdot \text{H}_2\text{O}$, $\text{Na}_3(\text{PO}_2\text{NH})_3 \cdot 4\text{H}_2\text{O}$, $[\text{C}(\text{NH}_2)_3]_3(\text{PO}_2\text{NH})_3 \cdot \text{H}_2\text{O}$ and $(\text{NH}_4)_4(\text{PO}_2\text{NH})_4 \cdot 4\text{H}_2\text{O}$

A. John, D. Philip, N. Stock, W. Schnick, S. Devanarayanan
Spectrochimica Acta **2001**, A57, 959

Synthesis and Crystal Structure of $(\text{dmaaH})_2(\text{dmaH})_2[\text{P}_{12}\text{S}_{12}\text{N}_{12}(\text{NH})_2] \cdot 4 \text{ dmaa}$, $\text{dmaa} = \text{N,N-Dimethylacetamide}$, $\text{dma} = \text{Dimethylamine}$, an Anhydrous Example of the $\text{P}_{12}\text{N}_{14}$ Cage

S. Roth, W. Schnick
Z. Naturforsch. **2001**, 56b, 1020

Trimerization of Alkali Dicyanamides $\text{M}[\text{N}(\text{CN})_2]$ and Formation of Tricyanomelaminates $\text{M}_3[\text{C}_6\text{N}_9]$ ($\text{M} = \text{K}, \text{Rb}$) in the Melt: Crystal Structure Determination of Three Polymorphs of $\text{K}[\text{N}(\text{CN})_2]$, Two of $\text{Rb}[\text{N}(\text{CN})_2]$, and One of $\text{K}_3[\text{C}_6\text{N}_9]$ and $\text{Rb}_3[\text{C}_6\text{N}_9]$ from X-ray Powder Diffractometry

E. Irran, B. Jürgens, W. Schnick
Chem. Eur. J. **2001**, 7, 5372

Hochdruck-Synthese, Kristallstruktur und Eigenschaften von NaPN_2

K. Landskron, S. Schmid, W. Schnick
Z. Anorg. Allg. Chem. **2001**, 627, 2469

High-Pressure Synthesis of $\gamma\text{-P}_3\text{N}_5$ at 11 GPa and 1500 °C in a Multianvil Assembly: A Binary Phosphorus(V) Nitride with a Three-Dimensional Network Structure from PN_4 Tetrahedra and Tetragonal PN_5 Pyramids

K. Landskron, H. Huppertz, J. Senker, W. Schnick
Angew. Chem. **2001**, 113, 2713; *Angew. Chem. Int. Ed.* **2001**, 40, 2643

Characterisation of the Tetrahalophosphonium Cations $\text{PBr}_n\text{I}_{4-n}^+$ ($0 \leq n \leq 4$) by ^{31}P MAS NMR, IR and Raman Spectroscopy and the Crystal Structures of $\text{PI}_4^+\text{AlCl}_4^-$, $\text{PI}_4^+\text{AlBr}_4^-$ and $\text{PI}_4^+\text{Ga}_4^-$

C. Aubauer, M. Kaupp, T.M. Klapötke, H. Nöth, H. Piotrowski, W. Schnick, J. Senker, M. Suter
J. Chem. Soc., Dalton Trans. **2001**, 1880

Orthonitridoborate Ions $[\text{BN}_3]^{6-}$ in Oxonitridosilicate Cages: Synthesis, Crystal Structure, and Magnetic Properties of $\text{Ba}_4\text{Pr}_7[\text{Si}_{12}\text{N}_{23}\text{O}][\text{BN}_3]$, $\text{Ba}_4\text{Nd}_7[\text{Si}_{12}\text{N}_{23}\text{O}][\text{BN}_3]$, and $\text{Ba}_4\text{Sm}_7[\text{Si}_{12}\text{N}_{23}\text{O}][\text{BN}_3]$

M. Orth, R.-D. Hoffmann, R. Pöttgen, W. Schnick
Chem. Eur. J. **2001**, 7, 2791

A Theoretical and Experimental Study on the Lewis Acid-Base Adducts $(\text{P}_4\text{E}_3) \cdot (\text{BX}_3)$ ($\text{E} = \text{S}, \text{Se}; \text{X} = \text{Br}, \text{I}$) and $(\text{P}_4\text{E}_3) \cdot (\text{NbCl}_5)$

C. Aubauer, E. Irran, T.M. Klapötke, W. Schnick, A. Schulz, J. Senker
Inorg. Chem. **2001**, 40, 4956

Synthese, Kristallstrukturen und Eigenschaften der käfigartigen, sechsbasigen Säure $\text{P}_{12}\text{S}_{12}\text{N}_8(\text{NH})_6 \cdot 14\text{H}_2\text{O}$ sowie ihrer Salze $\text{Li}_6[\text{P}_{12}\text{S}_{12}\text{N}_{14}] \cdot 26\text{H}_2\text{O}$ und $(\text{NH}_4)_6[\text{P}_{12}\text{S}_{12}\text{N}_{14}] \cdot 10\text{H}_2\text{O}$ und $\text{K}_6[\text{P}_{12}\text{S}_{12}\text{N}_{14}] \cdot 8\text{H}_2\text{O}$

S. Roth, W. Schnick
Z. Anorg. Allg. Chem. **2001**, 627, 1165

Neue Vertreter des $\text{Er}_6[\text{Si}_{11}\text{N}_{20}]\text{O}$ -Strukturtyps – Hochtemperatur-Synthesen und Kristallstrukturen von $\text{Ln}_{(6+x/3)}[\text{Si}_{(11-y)}\text{Al}_y\text{N}_{(20+x-y)}]\text{O}_{(1-x+y)}$ mit $\text{Ln} = \text{Nd}, \text{Er}, \text{Yb}, \text{Dy}$ und $0 \leq x \leq 3$, $0 \leq y \leq 3$

K. Köllisch, H.A. Höpfe, H. Huppertz, M. Orth, W. Schnick
Z. Anorg. Allg. Chem. **2001**, 627, 1371

$\text{Rb}_3\text{P}_6\text{N}_{11}$ and $\text{Cs}_3\text{P}_6\text{N}_{11}$ – New Highly Condensed Nitridophosphates by High-Pressure High-Temperature Synthesis

K. Landskron, W. Schnick
J. Solid State Chem. **2001**, 156, 390

Synthesis, Vibrational Spectroscopy, and Crystal Structure Determination from X-ray Powder Diffraction Data of Alkaline Earth Dicyanamides $M[\text{N}(\text{CN})_2]_2$ with $M = \text{Mg}, \text{Ca}, \text{Sr},$ and Ba

B. Jürgens, E. Irran, W. Schnick
J. Solid State Chem. **2001**, 157, 241

Nitridosilicates, Oxonitridosilicates (Sions), and Oxonitridoaluminosilicates (Sialons) – New Materials with Promising Properties

W. Schnick
Int. J. Inorg. Mater. **2001**, 3, 1267

Synthese, Kristallstruktur und Eigenschaften von Tetranatrium-bis(trimetaphosphimato)cuprat(II)-Decahydrat, $\text{Na}_4\{\text{Cu}[(\text{PO}_2\text{NH})_3]_2\} \cdot 10\text{H}_2\text{O}$

S. Correll, W. Schnick
Z. Anorg. Allg. Chem. **2000**, 626, 2347

A Comparison of the Enamino Carbonyl Conjugation Efficiency for Hydrogen Bonding Formation in Pyridone and Dihydropyridone Systems

T. Borowiak, I. Wolska, A. Korzanski, W. Milius, W. Schnick, W. Antkowiak
Z. Naturforsch. **2000**, 55b, 5

High-Temperature Synthesis and Single-Crystal X-ray Structure Determination of $\text{Sr}_{10}\text{Sm}_6\text{Si}_{30}\text{Al}_6\text{O}_7\text{N}_{54}$ – A Layered Sialon with an Ordered Distribution of Si, Al, O, and N

R. Lauterbach, W. Schnick
Solid State Sci. **2000**, 2, 463

1,2-Bis(trimethylsilyl)hydrazido Titanium Complexes

B. Goetze, J. Knizek, H. Nöth, W. Schnick
Eur. J. Inorg. Chem. **2000**, 1849

Luminescence in Eu²⁺-doped Ba₂Si₅N₈: Fluorescence, Thermoluminescence, and Upconversion

H.A. Höpfe, H. Lutz, P. Morys, W. Schnick, A. Seilmeyer
J. Phys. Chem. Solids **2000**, 61, 2001

High-Temperature Synthesis, Single-Crystal X-ray and Neutron Powder Diffraction, and Materials Properties of Sr₃Ln₁₀Si₁₈Al₁₂O₁₈N₃₆ (Ln = Ce, Pr, Nd) - Novel Sialons with an Ordered Distribution of Si, Al, O, and N

R. Lauterbach, E. Irran, P.F. Henry, M.T. Weller, W. Schnick
J. Mater. Chem. **2000**, 10, 1357

Ce₄[Si₄O₄N₆]O – A Hyperbolically Layered Oxonitridosilicate Oxide with an Ordered Distribution of Oxygen and Nitrogen

E. Irran, K. Köllisch, S. Leoni, R. Nesper, P.F. Henry, M.T. Weller, W. Schnick
Chem. Eur. J. **2000**, 6, 2714

Trimerization of NaC₂N₃ to Na₃C₆N₉ in the Solid: Ab Initio Crystal Structure Determination of Two Polymorphs of NaC₂N₃ and of Na₃C₆N₉ from X-ray Powder Diffractometry

B. Jürgens, E. Irran, J. Schneider, W. Schnick
Inorg. Chem. **2000**, 39, 665

Single-Crystalline Hexagonal Sr-Er- and Sr-Dy-Sialon Microtubes

R. Lauterbach, W. Schnick
J. Mater. Sci. **2000**, 35, 3793

Nd₃Si₅AlON₁₀ – Synthese, Kristallstruktur und Eigenschaften eines Sialons im La₃Si₆N₁₁-Strukturtyp

R. Lauterbach, W. Schnick
Z. Anorg. Allg. Chem. **2000**, 626, 56

Molecular, Complex Ionic, and Solid State PON Compounds

R. Marchand, W. Schnick, N. Stock
Adv. Inorg. Chem. **2000**, 50, 193

The First Nitride Spinels – New Synthetic Approaches to Binary Group 14 Nitrides

W. Schnick
Angew. Chem. **1999**, 111, 3511; *Angew. Chem. Int. Ed.* **1999**, 38, 3309

Synthese und Kristallstruktur neuer 1,1,1,3,3,3-Hexaamino-1λ⁵, 3λ⁵-diphosphazanium-Salze

K. Landskron, W. Schnick
Z. Naturforsch. **1999**, 54b, 1363

Neue Tetraaminophosphonium-Salze durch Anionenaustausch in flüssigem Ammoniak

K. Landskron, S. Horstmann, W. Schnick
Z. Naturforsch. **1999**, 54b, 1019

Zur Kenntnis von Tripraseodym-hexanitridotriborat LiSi₂N₃:

Synthese und Verfeinerung der Kristallstruktur

M. Orth, W. Schnick
Z. Anorg. Allg. Chem. **1999**, 625, 1426

β-SrNH und β-SrND - Synthese und Kristallstrukturbestimmung mittels Röntgen- und Neutronenbeugung an Pulvern

V. Schultz-Coulon, E. Irran, B. Putz, W. Schnick
Z. Anorg. Allg. Chem. **1999**, 625, 1086

High-Temperature High-Pressure Synthesis of the Highly Condensed Nitridophosphates NaP₄N₇, KP₄N₇, RbP₄N₇, and CsP₄N₇ and Their Crystal-Structure Determinations by X-ray Powder Diffraction

K. Landskron, E. Irran, W. Schnick
Chem. Eur. J. **1999**, 5, 2548

Synthese und Kristallstruktur der Übergangsmetalltrimetaphosphimate Zn₃[(PO₂NH)₃]₂· 14H₂O und Co₃[(PO₂NH)₃]₂· 14H₂O

N. Stock, E. Irran, W. Schnick
Z. Anorg. Allg. Chem. **1999**, 625, 555

**Zur Kenntnis von Tripraseodym-hexanitridotriborat Pr₃B₃N₆:
Neue Synthese und Verfeinerung der Kristallstruktur**

M. Orth, W. Schnick
Z. Anorg. Allg. Chem. **1999**, 625, 551

Sm₂Si₃O₃N₄ und Ln₂Si_{2,5}Al_{0,5}O_{3,5}N_{3,5} (Ln = Ce, Pr, Nd, Sm, Gd) - neuer synthetischer Zugang zu N-haltigen Melilith-Phasen und deren Einkristall-Röntgenstrukturanalyse

R. Lauterbach, W. Schnick
Z. Anorg. Allg. Chem. **1999**, 625, 429

Ce₁₆Si₁₅O₆N₃₂ – An Oxonitridosilicate with Silicon Octahedrally Coordinated by Nitrogen

K. Köllisch, W. Schnick
Angew. Chem. **1999**, 111, 368; *Angew. Chem. Int. Ed.* **1999**, 38, 357

High Temperature Syntheses of Novel Nitrido- and Oxonitrido-Silicates and Sialons Using RF Furnaces

W. Schnick, H. Huppertz, R. Lauterbach
J. Mater. Chem. **1999**, 9, 289

Synthese, Struktur und Eigenschaften von drei Tetranatrium-tetrametaphosphimat-Hydraten

N. Stock, H. Schmalz, W. Schnick
Z. Anorg. Allg. Chem. **1998**, 624, 1777

Synthese, Kristallstruktur und Eigenschaften von Triguanidinium-tri-μ-imido-cyclotriphosphat-monohydrat und Tetraguanidinium-tetra-μ-imidocyclotetraphosphat-tetrahydrat, [C(NH₂)₃]₃(PO₂NH)₃· H₂O und [C(NH₂)₃]₄(PO₂NH)₄· 4H₂O

N. Stock, B. Jürgens, W. Schnick
Z. Naturforsch. **1998**, 53b, 1115

Phosphorus Oxonitridosodalites: Synthesis Using a Molecular Precursor and Structural Investigation by X-ray and Neutron Powder Diffraction and ³¹P MAS NMR Spectroscopy

N. Stock, E. Irran, W. Schnick
Chem. Eur. J. **1998**, 4, 1822

Synthese, Kristallstruktur und Eigenschaften eines neuen Sialons - SrSiAl₂O₃N₂

R. Lauterbach, W. Schnick
Z. Anorg. Allg. Chem. **1998**, 624, 1154

Synthese und Kristallstruktur von [H₂NMe₂]⁺[(Me₂NH)₂TiCl₄]⁻

R. Bettenhausen, W. Milius, W. Schnick
Z. Naturforsch. **1998**, 53b, 239

The Synthesis and Structure of Trimetaphosphimato Complexes of Hafnium and Zirconium

N. Stock, W. Herrendorf, J. Beck, W. Schnick
Eur. J. Inorg. Chem. **1998**, 469

Synthese, Kristallstruktur und Eigenschaften von Phosphor(V)-nitridimid HP₄N₇

S. Horstmann, E. Irran, W. Schnick
Z. Anorg. Allg. Chem. **1998**, 624, 221

Phosphor(V)-nitrid α -P₃N₅: Synthese ausgehend von Tetraaminophosphoniumiodid und Kristallstrukturaufklärung mittels Synchrotron-Pulver-Röntgenbeugung

S. Horstmann, E. Irran, W. Schnick
Z. Anorg. Allg. Chem. **1998**, 624, 620

Tetraammonium Tetrametaphosphimate Tetrahydrate

N. Stock, W. Schnick
Acta Crystallogr. **1998**, C54, 171

Synthese und Kristallstruktur von BaEu(Ba_{0,5}Eu_{0,5})YbSi₆N₁₁

H. Huppertz, W. Schnick
Z. Anorg. Allg. Chem. **1998**, 624, 371

Trimerisierung von Dicyanamid-Ionen C₂N₃⁻ im Festkörper - Synthesen, Kristallstrukturen und Eigenschaften von NaCs₂(C₂N₃)₃ und Na₃C₆N₉ · 3H₂O

B. Jürgens, W. Milius, P. Morys, W. Schnick
Z. Anorg. Allg. Chem. **1998**, 624, 91

Synthese, Kristallstruktur und Festkörper-NMR-spektroskopische Untersuchungen von K₅H(CN₂)₃

M. Becker, M. Jansen, A. Lieb, W. Milius, W. Schnick
Z. Anorg. Allg. Chem. **1998**, 624, 113

Ba₂Nd₇Si₁₁N₂₃ – A Nitridosilicate with a Zeolite-Analogous Si-N Structure

H. Huppertz, W. Schnick
Angew. Chem. **1997**, 109, 2765; *Angew. Chem. Int. Ed. Engl.* **1997**, 36, 2651

Eu₂Si₅N₈ and EuYbSi₄N₇. The First Nitridosilicates with a Divalent Rare Earth Metal

H. Huppertz, W. Schnick
Acta Crystallogr. **1997**, C53, 1751

Synthese und Kristallstruktur von [(Cl₃Si)₂N]₂TiCl₂ - ein perchloriertes N-Silyl-titanimid

B. Schwarze, W. Milius, W. Schnick
Z. Naturforsch. **1997**, 52b, 819

Phosphorus(V) Nitride Imide HP₄N₇: Synthesis from a Molecular Precursor and Structure Determination with Synchrotron Powder Diffraction

S. Horstmann, E. Irran, W. Schnick
Angew. Chem. **1997**, 109, 2085; *Angew. Chem. Int. Ed. Engl.* **1997**, 36, 1992

Bis(trimethylsilyl)ammonium Salts Obtained by Reaction of Hexamethyldisilazane with TiCl₄, ZrCl₄, or SnCl₄

R. Bettenhausen, W. Milius, W. Schnick
Chem. Eur. J. **1997**, 3, 1337

Synthesis and Crystal Structure of Phosphorus(V) Nitride α -P₃N₅

S. Horstmann, E. Irran, W. Schnick
Angew. Chem. **1997**, 109, 1938; *Angew. Chem. Int. Ed. Engl.* **1997**, 36, 1873

Synthese, Kristallstruktur und Eigenschaften von 1,1,3,3,3-Pentaamino-1-thio-1 λ ⁵,3 λ ⁵-diphosphaz-2-en (NH₂)₂P(S)N=P(NH₂)₃

S. Horstmann, W. Schnick
Z. Naturforsch. **1997**, 52b, 490

Nitridosilicates - A Significant Extension of Silicate Chemistry

W. Schnick, H. Huppertz
Chem. Eur. J. **1997**, 3, 679

Synthesen, Kristallstrukturen und Eigenschaften von Trisilber- und Trikalium-tri- μ -imido-cyclotriphosphat, $\text{Ag}_3(\text{PO}_2\text{NH})_3$ und $\text{K}_3(\text{PO}_2\text{NH})_3$

N. Stock, W. Schnick
Z. Naturforsch. **1997**, 52b, 251

Trisodium Trimetaphosphate Monohydrate

N. Stock, W. Schnick
Acta Crystallogr. **1997**, C53, 532

Fully Chlorinated N-Silyl-Amides of Titanium and Tungsten - Crystal Structure of $\text{Cl}_3\text{SiNW}(\text{Cl}_3)\text{N}(\text{SiCl}_3)_2$

B. Schwarze, W. Milius, W. Schnick
Chem. Ber. **1997**, 130, 701

Edge Sharing SiN_4 Tetrahedra in the Highly Condensed Nitridosilicate $\text{BaSi}_7\text{N}_{10}$

H. Huppertz, W. Schnick
Chem. Eur. J. **1997**, 3, 249

Nitrido-Sodalite $\text{Zn}_6[\text{P}_{12}\text{N}_{24}]$ as a Material for Reversible Hydrogen Encapsulation

J. Weitkamp, S. Ernst, F. Cubero, F. Wester, W. Schnick
Adv. Mater. **1997**, 9, 247

Synthese, Kristallstruktur und Eigenschaften der Nitridosilicate $\text{SrYbSi}_4\text{N}_7$ und $\text{BaYbSi}_4\text{N}_7$

H. Huppertz, W. Schnick
Z. Anorg. Allg. Chem. **1997**, 623, 212

Mg_2PN_3 und Ca_2PN_3 - Phosphor(V)-nitride mit eindimensional unendlichen Ketten eckenverknüpfter PN_4 -Tetraeder

V. Schultz-Coulon, W. Schnick
Z. Anorg. Allg. Chem. **1997**, 623, 69

Synthese, Kristallstruktur und Eigenschaften von 1,1,1,3,3,3-Hexaamino-1 λ^5 ,3 λ^5 -diphosphazenumchlorid $[(\text{NH}_2)_3\text{PNP}(\text{NH}_2)_3]\text{Cl}$

S. Horstmann, W. Schnick
Z. Naturforsch. **1996**, 51b, 1732

The First Crystalline Hexagonal Si_3N_4 Microtubes

H. Huppertz, N. Stock, W. Schnick
Adv. Mater. **1996**, 8, 844

$\text{BaYbSi}_4\text{N}_7$ – Unexpected Structural Possibilities in Nitridosilicates

H. Huppertz, W. Schnick
Angew. Chem. **1996**, 108, 2115; *Angew. Chem. Int. Ed. Engl.* **1996**, 35, 1983

Triammonium Trimetaphosphate Monohydrate

N. Stock, W. Schnick
Acta Crystallogr. **1996**, C52, 2645

Synthese und Kristallstruktur von $\text{Cl}_3\text{Ti}[\text{N}(\text{SiMe}_2\text{Cl})(\text{SiMe}_2\text{NH}_2)]$

R. Buheitel, W. Milius, W. Schnick
Z. Naturforsch. **1996**, 51b, 1141

Nitrido-Sodalithe. III: Synthese, Struktur und Eigenschaften von $\text{Zn}_8[\text{P}_{12}\text{N}_{24}]\text{X}_2$ mit X = O, S, Se, Te

F. Wester, W. Schnick
Z. Anorg. Allg. Chem. **1996**, 622, 1281

Synthese, Kristallstruktur und Eigenschaften von 1,1,3,3,3-Pentaamino-1-oxo-1 λ^5 , 3 λ^5 -diphosphaz-2-en, $(\text{NH}_2)_2(\text{O})\text{P}=\text{N}=\text{P}(\text{NH}_2)_3$

N. Stock, W. Schnick
Z. Naturforsch. **1996**, 51b, 1079

Phosphorus Nitride P₃N₅: Synthesis, Spectroscopic, and Electron Microscopical Investigations

W. Schnick, J. Lücke, F. Krumeich
Chem. Mater. **1996**, 8, 281

The Novel Tetraaminophosphonium Ion - Structure, Chemical Bonding, and Reactions

W. Schnick, S. Horstmann, M. Häser
Phosphorus Sulfur Silicon Relat. Elem. **1996**, 109/110, 93

Ba₂Na(CN₂)(CN)₃, ein neues Cyanamid-cyanid mit interpenetrierenden Teilstrukturen

U. Berger, W. Schnick
Z. Naturforsch. **1996**, 51b, 1

Crystal Structure of Tripraseodymium Hexasiliconundecanitrider, Pr₃Si₆N₁₁

T. Schlieper, W. Schnick
Z. Kristallogr. **1996**, 211, 254

Synthese, Kristallstruktur und Eigenschaften von Tetraaminophosphonium-chlorid [P(NH₂)₄]Cl

S. Horstmann, W. Schnick
Z. Naturforsch. **1996**, 51b, 127

Darstellung, Kristallstruktur und Eigenschaften von Kaliumhydrogencyanamid

W. Schnick, H. Huppertz
Z. Anorg. Allg. Chem. **1995**, 621, 1703

Ba₂(CN₂)(CN)₂ und Sr₂(CN₂)(CN)₂- die ersten gemischten Cyanamid-cyanide

U. Berger, W. Milius, W. Schnick
Z. Anorg. Allg. Chem. **1995**, 621, 2075

Nitrido-silicate.III: Hochtemperatur-Synthese, Kristallstruktur und magnetische Eigenschaften von Ce₃[Si₆N₁₁]

T. Schlieper, W. Schnick
Z. Anorg. Allg. Chem. **1995**, 621, 1535

Nitrido-silicate.II: Hochtemperatur-Synthesen und Kristallstrukturen von Sr₂Si₅N₈ und Ba₂Si₅N₈

T. Schlieper, W. Milius, W. Schnick
Z. Anorg. Allg. Chem. **1995**, 621, 1380

From Molecules to Solids: Novel Nitrido Compounds

W. Schnick
Comments Inorg. Chem. **1995**, 17, 189

Nitrido-Silicate.I: Hochtemperatur-Synthese und Kristallstruktur von Ca₂Si₅N₈

T. Schlieper, W. Schnick
Z. Anorg. Allg. Chem. **1995**, 621, 1037

Nitrido-Sodalithe. II: Synthese, Struktur und Eigenschaften von M_{(6+(y/2)-x)}H_{2x}[P₁₂N₂₄]Z_y mit M = Fe, Co, Ni, Mn; Z = Cl, Br, I; 0 ≤ x ≤ 4; y ≤ 2

W. Schnick, N. Stock, J. Lücke, M. Volkmann, M. Jansen
Z. Anorg. Allg. Chem. **1995**, 621, 987

Ca₂Sr[WN₄], das erste gemischte Erdalkalimetall-nitridowolfram

U. Berger, V. Schultz-Coulon, W. Schnick
Z. Naturforsch. **1995**, 50b, 213

CaMg₂N₂ - ein gemischtes Erdalkalimetallnitrid mit anti-La₂O₃-Struktur

V. Schultz-Coulon, W. Schnick
Z. Naturforsch. **1995**, 50b, 619

P-N-Compounds: From the Single Tetrahedral Cation to Framework Structures

S. Horstmann, W. Schnick, A. Schmidpeter
Main Group Chemistry News **1994**, 2, 8

Nitrido-Sodalithe.I: Synthese, Struktur und Eigenschaften von $Zn_{7-x}H_{2x}[P_{12}N_{24}]Cl_2$ mit $0 \leq x \leq 3$

W. Schnick, J. Lücke
Z. Anorg. Allg. Chem. **1994**, 620, 2014

Nitrido Zeolites - A Novel and Promising Class of Compounds

W. Schnick
in: Zeolites and Related Microporous Materials: State of the Art 1994
J. Weitkamp, H.G. Karge, H. Pfeifer, W. Hölderich (Eds.)
Stud. Surf. Sci. Catal. **1994**, 84, 2221

Synthese, Kristallstruktur und Eigenschaften von Tetraaminophosphoniumiodid $[P(NH_2)_4]I$

S. Horstmann, W. Schnick
Z. Naturforsch. **1994**, 49b, 1381

Synthesis and Crystal Structure of the First Tetraaminophosphonium Salt $P(NH_2)_4I$

W. Schnick, S. Horstmann, A. Schmidpeter
Angew. Chem. **1994**, 106, 818; *Angew. Chem. Int. Ed. Engl.* **1994**, 33, 785

Syntheses, Crystal Structures, and Vibrational Spectroscopic Properties of $MgCN_2$, $SrCN_2$, and $BaCN_2$

U. Berger, W. Schnick
J. Alloys Compounds **1994**, 206, 179

Carbon(IV) Nitride C_3N_4 – A New Material Harder than Diamond?

W. Schnick
Angew. Chem. **1993**, 105, 1649; *Angew. Chem. Int. Ed. Engl.* **1993**, 32, 1580

Ca_2PN_3 – A Novel Phosphorus(V) Nitride with One-Dimensional Infinite Chains of Corner-Sharing PN_4 Tetrahedra

W. Schnick, V. Schultz-Coulon
Angew. Chem. **1993**, 105, 308; *Angew. Chem. Int. Ed. Engl.* **1993**, 32, 280

Solid State Chemistry with Nonmetal Nitrides

W. Schnick
Angew. Chem. **1993**, 105, 846; *Angew. Chem. Int. Ed. Engl.* **1993**, 32, 806

Silicon Phosphorus Nitride, the First Ternary Compound in the Silicon-Phosphorus-Nitrogen System

H.-P. Baldus, W. Schnick, J. Lücke, U. Wannagat, G. Bogedain
Chem. Mater. **1993**, 5, 845

Microporous Inorganic Substances Having Tetrahedrons Structure and Their Manufacture

W. Schnick, J. Lücke
patent application, DE/21.01.1992/DE 4201484

Manufacture of Silicon Nitride Low in Acicular and High in α -Modidification

H.P. Baldus, W. Schnick
patent application, DE/15.01.1992/DE 4200787

Darstellung, Kristallstruktur und IR-spektroskopische Untersuchung von Phosphor(V)-nitrid-imid, HPN_2

W. Schnick, J. Lücke
Z. Anorg. Allg. Chem. **1992**, 610, 121

$Zn_7[P_{12}N_{24}]Cl_2$ - A Sodalite with a Phosphorus Nitrogen Framework

W. Schnick, J. Lücke
Angew. Chem. **1992**, 104, 208; *Angew. Chem. Int. Ed. Engl.* **1992**, 31, 213

Li₁₀P₄N₁₀ - A Lithium Phosphorus(V) Nitride with the Novel Complex Anion P₄N₁₀¹⁰⁻

W. Schnick, U. Berger

Angew. Chem. **1991**, *103*, 857; *Angew. Chem. Int. Engl.* **1991**, *30*, 830

Inclusion of Acetonitrile in a Macrobicyclic Host Molecule

F. Vögtle, R. Berscheid, W. Schnick

J. Chem. Soc., Chem. Commun. **1991**, 414

Lithium Ion Conductivity of LiPN₂ and Li₇PN₄

W. Schnick, J. Lücke

Solid State Ionics **1990**, *38*, 271

Zur Kenntnis von Lithium-phosphor(V)-nitrid.

Reindarstellung und Verfeinerung der Kristallstruktur von LiPN₂

W. Schnick, J. Lücke

Z. Anorg. Allg. Chem. **1990**, *588*, 19

Synthesis and Crystal Structure of Lithium Phosphorus Nitride Li₇PN₄:

The First Compound Containing Isolated PN₄-Tetrahedra

W. Schnick, J. Lücke

J. Solid State Chem. **1990**, *87*, 101

Synthese, Struktur und thermisches Verhalten von Thiophosphorsäuretriamid (SP(NH₂)₃)

W. Schnick

Z. Naturforsch. **1989**, *44b*, 942

Darstellung, Kristallstruktur und pyrolytischer Abbau von Thiophosphorsäuretriamid (SP(NH₂)₃)

W. Schnick

Z. Kristallogr. **1989**, *186*, 268

Recent Results in Solid State Chemistry of Ionic Ozonides, Hyperoxides, and Peroxides

W. Hesse, M. Jansen, W. Schnick

Prog. Solid State Chem. **1989**, *19*, 47

Highly Alkylated Cyclohexanes - X-ray Crystal Structures, Force-Field Calculations and Conformations of cis/trans 1,4-Disubstituted Cyclohexane Isomers

W. Hasel, W. Schnick, M. Jansen, H.M.R. Hoffmann

Chem. Ber. **1988**, *121*, 1469

Zum magnetischen Verhalten der Alkalimetallozonide KO₃, RbO₃ und CsO₃

H. Lueken, M. Deussen, M. Jansen, W. Hesse, W. Schnick

Z. Anorg. Allg. Chem. **1987**, *553*, 179

Preparation, Crystal Structure, and Thermal Behaviour of Potassium Ozonide

W. Schnick, M. Jansen

Rev. Chim. Minér. **1987**, *24*, 446

Über Rubidiumozonid. Reindarstellung und Kristallstruktur

W. Schnick, M. Jansen

Z. Anorg. Allg. Chem. **1986**, *532*, 37

Strukturbeziehungen bei Verbindungen des Formeltyps AX

(A = K, Rb, Sr, Ba; X = O₃⁻, NO₂⁻, S₃²⁻)

W. Schnick, M. Jansen

Z. Kristallogr. **1985**, *170*, 167

Crystal Structures of Potassium Ozonide and Rubidium Ozonide

W. Schnick, M. Jansen

Angew. Chem. **1985**, *97*, 48; *Angew. Chem. Int. Ed. Engl.* **1985**, *24*, 54

A Novel Entry to the Taxane Structural Unit

H. Neh, S. Blechert, W. Schnick, M. Jansen

Angew. Chem. **1984**, 96, 903; *Angew. Chem. Int. Ed. Engl.* **1984**, 23, 905