

Prof. Dr. Anja-Verena Mudring FRSC

Head of Physical Materials Chemistry, Stockholm University
Adjunct Professor, The University of Alabama, Tuscaloosa, USA
Honorary Professor, University of KwaZulu Natal, Pietermaritzburg, South Africa
Associate Editor, *Crystal Growth & Design* (American Chemical Society)
Associate Editor, *Green Chemistry Reviews and Letters* (Taylor & Francis)

Research Profile:

Research motto: Theory with Practice - Understanding fundamental structure-property relationships with the aim to design new materials for energy related applications.

<http://www.mudring.org>

<http://www.researcherid.com/rid/C-4739-2014>

<http://orcid.org/0000-0002-2800-1684>

<https://scholar.google.com/citations?user=1wofyBoAAAAJ&hl=en>

Date of Birth: February 14, 1971

Education and Qualifications:

- 2003-2006: Habilitation, *venia legendi*, Priv.-Doz., Mathematisch-naturwissenschaftliche Fakultät, Universität zu Köln, Germany
- 1995-2001: Dr. rer. nat. (*summa cum laude, with distinction*), Max-Planck-Institut für Festkörperforschung, Stuttgart, Germany and as the degree granting institution: Mathematisch-naturwissenschaftliche Fakultät, Rheinische Friedrich-Wilhelms-Universität, Bonn, Germany, Graduate Advisor: Prof. Dr. Martin Jansen
- 1990-1995: Diplom-Chemiker (Dipl.-Chem.) (*with distinction*), Mathematisch-naturwissenschaftliche Fakultät, Rheinische Friedrich-Wilhelms-Universität Bonn, Germany

Appointments and Positions:

- 2016- Professor and Head of Physical Materials Chemistry, Stockholm University, Sweden
- 2013-2017: Faculty Scientist, Ames Laboratory, U.S. Department of Energy, Ames, IA, USA
- 2013-2017: Glenn Murphy Professor of Materials Science and Engineering (tenured Full Professor, named chair), Iowa State University, Ames, IA, USA
- 2006-2014: Tenured Professor of Inorganic and Materials Chemistry (W2, tenured Associate Professor equivalent and W3, Chair, Full Professor equivalent), Fakultät für Chemie und Biochemie, Ruhr-Universität Bochum, Germany
- 2003-2006: Scientific Assistant (C1, Assistant Professor equivalent) and Liebig Fellow of the Fonds der Chemischen Industrie, Mathematisch-naturwissenschaftliche Fakultät, Universität zu Köln, Germany,
- 2001-2003: Postdoctoral Researcher, Iowa State University and Ames Laboratory, Ames, IA, USA and Feodor Lynen Fellow, Alexander von Humboldt-Foundation
- 1995-2001: Graduate Research Assistant and Fellow of the Fonds der Chemischen Industrie and Ev. Studienwerk Villigst e.V., Rheinische Friedrich-Wilhelms-Universität Bonn, Germany and Max-Planck-Institute for Solid State Research, Stuttgart, Germany
- 1992-1995: Research Assistant, Rheinische Friedrich-Wilhelms-Universität, Bonn, Germany

Adjunct, Honorary, and Visiting Positions:

- 2019 Honorary Professor, School of Engineering, University of KwaZulu Natal, Pietermaritzburg, South Africa
- 2018 Visiting Professor, Université d'Orléans and CNRS CBM (Centre de biophysique moléculaire), Orléans, France
- 2018 Visiting Scholar, SERP+, University of Genova, Italy
- 2020 Visiting Professor, Department of Chemistry, University of Genova, Italy
- 2008-2014 Adjunct Professor, The University of Alabama, Tuscaloosa, AL, USA
- & 2017- :
2006-2007: Affiliate Professor, Iowa State University, Ames, IA, USA

Memberships in Learnt Societies:

- American Chemical Society (ACS), USA
- The American Ceramics Society (ACerS), USA
- Deutsche Physikalische Gesellschaft (DPG), D
- Gesellschaft Deutscher Chemiker (GDCh), D
- Gesellschaft Deutscher Naturforscher und Ärzte (GdNÄ), D
- European Rare Earth Society (ERES), Vice-President, EU
- Kemisk Forening – The Danish Chemical Society, DK
- Materials Research Society (MRS), USA
- Royal Society of Chemistry (RSC), Fellow, UK
- Sigma Xi, USA
- Svenska Kemisamfundet, SWE

Services (University and National Laboratory):

- 2019 University Commission on Circular Economy, Stockholm University, Sweden
- 2018- Department Board, Department of Materials and Environmental Chemistry, Stockholm University, Sweden
- 2018- Strategy Commission, Department of Materials and Environmental Chemistry, Stockholm University, Sweden
- 2017- Infrastructure Commission, Department of Materials and Environmental Chemistry, Stockholm University, Sweden
- 2015-2016 Research Director, Department of Materials Science & Engineering, Iowa State University, Ames, USA
- 2015-2016 Director of Graduate Education, Department of Materials Science & Engineering, Iowa State University, Ames, USA
- 2015-2016 Vice-Chair, Department of Materials Science & Engineering, Iowa State University, Ames, USA
- 2013-2014 Board of the DFG Cluster of Excellence RESOLV, Ruhr-Universität Bochum, Germany
- 2011-2014 Chair of the Research Department Interfacial Systems Chemistry, Ruhr-Universität Bochum, Germany
- 2011-2014 Equality Commission, Ruhr-Universität Bochum, Germany
- 2008-2014 Teaching Commission, Fakultät für Chemie und Biochemie, Ruhr-Universität Bochum, Germany
- Served on various faculty search committees
 - Member of various national and international PhD committees

Services (other):

- 2019- Board Member, Svenska Kemisamfundet (Swedish Chemical Society), Inorganic Chemistry Division, Sweden
- 2019- Board Member, Molecular Frontiers, Sweden
- 2019 Panel Member, Severo Ochoa and María de Maeztu Programme, Spain
- 2019 External Expert, Evaluation of DTU's Chemistry Department, Denmark
- 2018- Panel Member, Materials Science Academy of Finland, Finland
- 2018- Board Member of the Independent Research Fund Denmark (DFR, Danmarks Frie Forskningsfond), Denmark
- 2018 Panel Member, Evaluation of the Energy Excellence Centers, Helmholtz Society, Germany
- 2018 Panel Member, Female Professor Program, Helmholtz Society, Germany
- 2018 Chair-Past of the Iowa Section, American Chemical Society, USA
- 2018 Evaluation Board, Chemical and Materials Science, Foundation for Polish Research (FNP), Poland
- 2017- Expert to the European Commission on Critical Materials, EU
- 2017- Panel Member, Materials Science, Vetenskapsrådet, Sweden
- 2017 Evaluator, Petroleum Research Fund, USA
- 2017 Chair of the Iowa Section, American Chemical Society, USA
- 2016 Chair-Elect of the Iowa Section, American Chemical Society, USA
- 2015 Panel Member, Career Grants, National Science Foundation (NSF), USA
- 2014- Advisory Board, FIRST Energy Center, Oak Ridge National Laboratory, US
- 2012-2014 Founding Chair of the Marie Curie Initial Training Network LUMINET, European Commission
- 2013-2014 Founding Chair of the COST Action CM1206 (EXIL – Exchange on Ionic Liquids), European Commission
- 2011-2015 Advisory Board, Evangelisches Studienwerk Villigst e.V., Germany
- 2009- German Science Foundation (DFG), Germany
- 2008- Vice-President of the European Rare Earth Society (ERES), Geneva, Switzerland
- 2008-2015 Scientific Advisory Board of the Evangelischer Hochschulbeirat (EKD), Germany
- 2005 Advisory Board and Judge of the International Chemistry Olympics, Kiel, Germany
- 1991-2006 Training of the German Team for the International Chemistry Olympiad
- Remote evaluator for various funding agencies such as 2019 Basic Energy Research, US Department of Energy, USA • 2015 Research Foundation Flanders (FWO), Belgium • 2015 Czech Academy of Science S • Der Wissenschaftsfond FWF, Austria • 2014 FCT – Fundação para a Ciência e a Tecnologia; Portugal • 2011 International Center for Frontier Research in Chemistry (FRC), France • 2010 IWT, Belgium • 2010- US Department of Energy 2009- German Science Foundation

Editorial Boards and Editorships:

- 2020- Associate Editor, *Green Chemistry Letters and Reviews* (Taylor & Francis)
- 2010- Associate Editor, *Crystal Growth & Design* (American Chemical Society)
- 2010-2015 Editorial Board, *Crystals* (MDPI)
- 2015- Guest Editor, *Inorganic Chemistry* (American Chemical Society), John Corbett Memorial Issue
- Referee for various journals in general, inorganic, physical and materials chemistry

Fellowships:

- 2018 SERP+ Scholar, Department of Chemistry, University Genova, Italy
2013-2017 Glenn Murphy Professor of Materials Science and Engineering, Iowa State University, Ames, IA, USA
2011 Alexander von Humboldt Honorary Research Fellowship, Foundation for Polish Science (FNP)
2010 Academia-Industry Fellowship, BASF AG, Germany
2007 Dozentenstipendium (Young Faculty Excellence Fellowship),
Fonds der Chemischen Industrie, Frankfurt, Germany
2003-2005 Liebig Fellow, Fonds der Chemischen Industrie, Frankfurt, Germany
2001-2003; Feodor-Lynen Fellow, Alexander-von Humboldt Foundation, Bonn, Germany
2006
1997-2001 Graduate Fellowship, Eangelisches Studienwerk Villigst e.V., Germany
1995-1997 Graduate Fellowship, Fonds der Chemischen Industrie, Frankfurt, Germany
1995 Graduate Fellowship, Studienstiftung des Deutschen Volkes, Bonn, Germany,
declined by AVM
1995 Graduation Fellowship, Hoechst AG, Germany
1992-1995 Undergraduate Fellowship, Evangelisches Studienwerk Villigst e.V., Germany
1992-1995 Fritz-ter-Meer Fellowship, Bayer Foundation, Germany

Awards:

- 2019 Techconnect Innovation Award, USA
2019; 2018; Ames Laboratory Inventor Incentive Award, Ames Laboratory U.S. DOE, Ames IA,
2017; 2016 USA
2018 R&D 100 Award & Special Recognition Winner; Double award, USA
2018 Green Technology Award, USA
2018 Notable Technology Development Award, Federal Laboratories Consortium, USA
2017 Göran Gustafsson Prize in Chemistry, Gorän Gustafsson Stiftelse/Kungl.
Vetenskapsakademien/Royals Swedish Academy of Science, Sweden
2013 Germany at its best – Inventor Award, State of Northrhine-Westphalia, Germany
2013 Inventor Award, Ruhr-Universität Bochum, Germany
2011 ERC-PoC
2009 ERC-StG
2008 Elected Fellow of the Royal Society of Chemistry, London, UK
2007 QUILL Lecture, Queen’s Ionic Liquid Laboratories, Belfast, UK
2005 High Potential Young Scientist, Noble Symposium, Noble Foundation, Stockholm,
Sweden
2002 GEF RUB Dissertation Award, Rheinische Friedrich-Wilhelms-Universität, Bonn,
Germany
2002 H.C. Starck Award, Division of Solid State and Materials Chemistry, German
Chemical Society
2001 Award of the Wilhelm Klemm Foundation, Münster, Germany
1998 Dr. Heinrich und Else Heraeus-Förderpreis, Deutsche Gesellschaft der
Naturforscher und Ärzte, Germany
1996 Lindau Noble Laureate Meeting, Lindau, Germany
1995 Heinrich Hörlein Memorial Award, Bayer Foundation, Germany
1990 Best Chemistry Student, Fonds der Chemischen Industrie, Frankfurt, Germany

Meetings, Conferences, Symposia organized:

- 2020 • 29th RERC (Rare Earth Research Conference), Pittsburgh, PA, USA; Advisory Board
- 2019 • 8th International Congress on Ionic Liquids, COIL-8, Beijing, China; International Advisory Board
 - Terrae Rarae, Conference on Rare Earth, Stockholm, Sweden; Organizer and Chair
- 2017 • 28th RERC (Rare Earth Research Conference), Ames IA, USA; Co-Chair
 - 41th International Conference and Expo on Advanced Ceramics Composites; USA; Symposium Co-Organizer
- 2016 • Gordon Research Conference on Ionic Liquids, Newry ME, USA; Chair
 - ESTE (Excited States of Transition Metals) Polanica Zdroj, Poland; International Advisory Board
 - 40th International Conference and Expo on Advanced Ceramics Composites; Symposium Co-Organizer
 - Toronto, Canada, Symposium Co-Organizer, G10: Energy-efficient lighting and power devices: Materials, technologies, and applications
- 2015 • COIL 2015 (International Conference on Ionic Liquids), Jeju City, South Korea; International Advisory Board
 - 11th ICfE 2015 (International Conference on f Elements), Oxford, UK; International Advisory Board
- 2014 • Gordon Research Conference on Ionic Liquids, Newry ME, USA; Co-Chair
 - 27th RERC 2014 (Rare Earth Research Conference), Squaw Valley CA, USA; International Advisory Board & Program Committee
 - EUCHEM 2014, Tallinn, Estonia; Scientific Advisory Board
 - CIMTEC 2014, Montecatini Terme, Italy; International Advisory Board
- 2013 • COIL 2013 (International Conference on Ionic Liquids), Vilamoura, Portugal; Scientific Advisory Board
- 2012 • ACS Spring Meeting 2012, San Diego CA, USA; Session Organizer: “Nanomaterials in Ionic Liquids”
 - APCIL 2012 (Asian Pacific Conference on Ionic Liquids), Beijing, China; Scientific Advisory Board
- 2011 • ISEC 2011 (International Solvent Extraction Conference), Beijing, China; Scientific Advisory Board
 - 26th RERC 2011 (Rare Earth Research Conference), Albuquerque NM, USA; Scientific Advisory Board & Ionic Liquid Session Organizer
 - COIL 2011 (International Conference on Ionic Liquids), Washington DC, USA; Scientific Advisory Board
- 2010 • APCIL 2010 (Asian Pacific Conference on Ionic Liquids), Beijing, China; Scientific Advisory Board
 - ESTE 2010 (Excited States of Transition Metals), Santiago de Chile; Scientific Advisory Board
- 2009 • COIL 2009 (International Conference on Ionic Liquids), Cairns, Australia; Scientific Advisory Board
 - 9th ICfE 2009 (International Conference on f-Elements), Köln, Germany, Session Organizer
- 2008 • 25th RERC 2008 (Rare Earth Research Conference), Tuscaloosa AL, USA; Scientific Advisory Board & Ionic Liquid Session Organizer

- ACS Fall Meeting 2008, Philadelphia, USA; Session Organizer “Ionic Liquid Materials“
- MSE 2008 (Materials Science and Engineering), Nürnberg, Germany; Session Organizer
- Terrae Rarae 2008, Bochum, Germany; Conference Organizer

Research Grants:

- 2020
- Grön kylning – Magneto-kaloriska effekter i nya intermetalliska faser och dubbel perovskitoxider (Energimyndigheten, Sweden, single PI)
 - Access to potent medical drugs (Knut and Alice Wallenberg Foundation, Sweden, Multi-PI, Consortium Head and Project Lead)
 - Ge en grundläggande förståelse för lusemitterande elektrokemiska celler (Vetenskapsrådet, Sweden, Multi-PI, Consortium Head and Project Lead)
- 2019
- Ljusemitterande elektrokemiska celler som energieffektiva ljuskällor (Energimyndigheten, Sweden, single PI)
 - Improved thermoelectric materials for a sustainable society (Energimyndigheten, Sweden, single PI)
 - Development of instrumentation and competence for *in-situ* studies using thermal analysis in neutron scattering (Vetenskapsrådet, Sweden, co-PI)
 - Relativistic Effects in Chemistry (Carl Tryggers Stiftelse, Sweden, single PI)
- 2018
- REFIT - Minskad friktion genom jonteknologi (SSF - Swedish Foundation for Strategic Research, Sweden, co-PI)
- 2017
- Self-sterilizing surfaces (Carl Tryggers Stiftelse, Sweden, single PI)
 - SwedNESS – Swedish Neutron Education for Science & Society (SSF - Swedish Foundation for Strategic Research, Sweden, co-PI)
 - Smart Materials from Ionic Liquids for Energy Applications (Göran Gustafsson Stiftelse, Kungl. Vetenskapsakademien, Sweden, single PI)
- 2016
- MRI: Acquisition of Small/Ultra Small/Wide Angle X-ray Scattering for Materials Research, National Science Foundation, MRI, Co-PI
 - Nya oorganiska öppna nätverksstrukturer möjliggjorda genom syntes i jonvätskor (Vetenskapsrådet, Sweden, single PI)
- 2014
- Electrodeposition of Rare Earth Elements from Ionic Liquids (Critical Materials Institute, Ames Laboratory, US DOE, USA)
- 2015
- Luminescent and Magnetic Ionic Liquids (single PI, NSF, USA)
 - Light Emitting Electrochemical Cells (Ames Laboratory, US DOE, USA)
- 2013
- Rare Earth Materials in Ionic Liquids (Critical Materials Institute, Ames Laboratory, US DOE, USA)
- 2012
- LUMINET (Coordinator, Marie Curie Initial Training Network, 7th Framework Program of the EU)
 - EXIL (Coordinator, COST, EU)

- 2011
- Luminescent properties of functional materials made from ionic liquids investigated by VUV excitation (Hasylab, DESY; beamtime and travel allowance)
 - Mesophase determination of Ionic Liquid Crystals – The effect of the anion (Hasylab, DESY; beamtime and travel allowance)
 - EXAFS – Structure determination of nanoparticles in Ionic Liquids (Hasylab, DESY; beamtime and travel allowance)
 - Bright EMIL (ERC, Proof-of-Concept Grant)
- 2010
- Ionic Liquid Mesophases (DFG, SPP 1191)
 - Transition Metals in Ionic Liquids (DFG, SPP 1191)
 - Chemical Industry
 - Alexander von Humboldt Foundation
 - Mesophase Determination of Ionic Liquid Crystals (Hasylab, DESY; beamtime and travel allowance)
- 2009
- SorenHyBio (NRW – Ziel 2; Desulfurization of Biogas; Chemical Industry & German Federal Ministry of Science and Education)
 - Nanoparticles for Catalysis (DFG, SFB 558)
 - Improved UV light conversion phosphors from task specific ionic liquids (Hasylab, DESY; beamtime and travel allowance)
- 2008
- Fonds of the Chemical Industry (“Dozentenstipendium”)
 - Lanthanide based Ionic Liquids (DFG, SPP 1166)
 - Ionic Liquid Crystals (DFG, SPP 1191)
 - Transition Metals in Ionic Liquids (DFG, SPP 1191)
 - EMIL – Nanophosphors (ERC Starting Grant, 7th EU-FP)
- 2007
- Royal Chemical Society of New Zealand
 - German Israeli Science Foundation (GIF)
 - U.S. Department of Energy (DOE)
 - Chemistry with Relativity (DFG)
 - Nanoparticles for Catalysis (DFG, SFB 558)

Academic Collaborations:

Academic (sorted by country, then institution):

- Stuart Batten, Glen Deacon, School of Chemistry Faculty of Science, Monash University, Australia
- Koen Binnemans, Laboratory of Inorganic Chemistry, University of Leuven, Belgium
- Ladislav Havela, Department of Condensed Matter Physics, Charles University, Prague, Czech Republic
- Sifu Tang, Qingdao Institute of Bioenergy and Bioprocessing, Chinese Academy of Sciences, China
- Georges Boulon, Yannick Guyot, Institut Lumière Matière, University Lyon, France
- Paul-Henri Haumesser, Pierre and Marie Curie University, Lyon, France
- Svetlana Eliseeva and Stephané Petoud, CNRS CBM, Orléans, France
- Catherine Santini, C2P2 (Chemistry, Catalysis, Polymers and Processes), CNRS Lyon, France
- Wilfried Assenmacher, Institut für Anorganische Chemie, Universität Bonn, Germany
- Helmut Eckert, Institut für Physikalische Chemie, Universität Münster, Germany
- Wolfgang Grünert, Martina Havenith, Fakultät für Chemie, Ruhr-Universität Bochum, Germany
- Alfred Ludwig, Institute of Materials, Faculty of Mechanical Engineering, Ruhr-Universität Bochum, Germany
- Sabine Kareth, Marcus Petermann, Lehrstuhl für Feststoffverfahrenstechnik, Ruhr-Universität Bochum, Germany
- Axel Klein, Uwe Ruschewitz, Institut für Anorganische Chemie, Universität zu Köln, Germany
- Ekatarina Nannen, Werkstoffe der Elektrotechnik, Universität Duisburg-Essen, Germany
- Simon Steinberg, Solid State and Quantum Chemistry, RWTH Aachen, Germany
- Gabi Schierning, IFW Dresden, Germany
- Thomas Schleid, Institut für Anorganische Chemie, Universität Stuttgart, Germany
- Stephan Schulz, Institut für Anorganische Chemie, Universität Duisburg-Essen, Germany
- Martin Valldor, MPI Cpfs, Dresden, Germany
- Michael Wark, Institut für Technische Chemie, Universität Oldenburg, Germany
- Karsten Meyer, Institut für Anorganische Chemie, Universität Nürnberg-Erlangen, Germany
- Peter Wasserscheid, Institut für Technische Chemie, Universität Nürnberg-Erlangen, Germany
- Birgit Weber, Institut für Anorganische Chemie, Universität Bayreuth, Germany
- Pushpal Gosh, Department of Chemistry, Dr. Harisingh Gour University, India
- Sudesh K. Dhar, Department of Condensed Matter Physics & Materials Science, Tata Institute of Fundamental Research, Mumbai, India
- Alessia Provino, Pietro Manfrinetti, Department of Chemistry and Industrial Chemistry, Università degli Studi di Genova, Italy
- Andries Meijerink, Chemistry, University Utrecht, Netherlands
- Joanna Cybinska, Malgorzata Guzik, Eugeniusz Zych, Optical Materials Group, Department of Chemistry, University Wroclaw, Poland
- Osama Shekhah, King Abdullah University of Science and Technology, Saudi Arabia
- Henk Bolink, Instituto de Ciencia Molecular, University of Valencia, Spain
- Kenneth R. Seddon (deceased), Department of Chemistry, Queen's University, Belfast, UK
- Anne Stark, University of KwaZulu-Natal, Durban, South Africa
- Oleg Antzutikin, Chemical Engineering, Luleå University, Sweden
- Sergei Glavaskih, Machine Elements, Royal Institute of Technology, Sweden
- Lars Kloo, Chemical Engineering, Royal Institute of Technology, Sweden
- Mark Rutland, Chemical Engineering, Royal Institute of Technology, Sweden
- Shi Tang, Chemical Engineering, Chalmers, Sweden
- Ludvig Edman, Physics, Umeå University, Sweden

- Karl Krämer, Department of Chemistry, Universität Bern, Switzerland
- Michele Parinello, ETH Zürich, Switzerland
- Yaroslav Kalychak, Department of Analytical Chemistry,
Ivan Franko National University of L'viv, Ukraine
- Robin D. Rogers, Department of Chemistry, University of Alabama, U.S.
- Jim Anderegg, Gordon Miller, Vitalij Pecharsky, Yaroslav Mudryk, Shalabh Gupta
and Igor Slowing, U.S. DOE Ames Laboratory, USA

Past and Current Industry Collaborations:

- Merck KG, Darmstadt, Germany
- KSB, Frankenthal, Germany
- Siemens AG, Erlangen, Germany
- RUBOTHERM GmbH, Bochum, Germany
- Osram AG/ Osram OLED GmbH, Augsburg, München, Germany
- Chematronics, Eindhoven, NL
- Supercis Solar, Eindhoven, NL
- Philips, Eindhoven, NL
- Lediko, Wroclaw, Poland
- ABB, Sweden
- Nynas AB, Sweden
- US Rare Earth, USA
- Molycorp, USA
- Rare Elements, USA

Theses and Dissertations Directed:

Bachelor Theses:

1. Chantal Lorbeer, "Darstellung und Charakterisierung von lumineszierenden Materialien in ionischen Flüssigkeiten", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2008.
2. Kathrin Stappert, "Synthese und Untersuchung von ionischen Flüssigkristallen", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2009.
3. Agnes Schimitzek, "Funktionalisierte Ionische Flüssigkeiten", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2010.
4. Anna Kupka, "Synthese und Charakterisierung polymerisierbarer Ionischer Flüssigkeiten", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2010.
5. Holger Rabuske, "Ionische Flüssigkristalle: Synthese, Analyse und Dotierung", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2010.
6. Nadine Gösser, "Synthese und Charakterisierung einer hydroxy-funktionalisierten Ionischen Flüssigkeit und Darstellung von Kuper-Nanopartikeln", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2010.
7. Thomas Brüggemann, "Zur Chemie des Holmiums in Ionischen Flüssigkeiten", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2010.
8. Yvon Gothe, "Optische Basizitäten funktionalisierter Ionischer Flüssigkeiten", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2010.
9. Christian Berges, "Darstellung von porösen Netzwerkstrukturen mittels Ionothermalsynthese", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2011.
10. Kai Elsner, "Synthese und Charakterisierung von metallbasierten Ionischen Flüssigkeiten", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2011.
11. Kirsten Grübel, "Nanophosphore aus Ionischen Flüssigkeiten", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2011.
12. Marian Sturm, "Synthese von Alumophosphaten aus Ionischen Flüssigkeiten", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2011.
13. Maximilian Gebhardt, "Scandiumcluster in Ionischen Flüssigkeiten", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2011.
14. Alnaz Teshnehkam, "Iod-halogenid in 18-Krone-6: Experimentelle und Theoretische Untersuchungen", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2012.
15. Anastasia Lackmann, "Samariumhalogenide in Ionischen Flüssigkeiten", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2012.

16. Eva Geske, "Oberflächenmodifikation und Extraktion von Goldpartikeln synthetisiert durch physikalische Gasphasenabscheidung in Ionischen Flüssigkeiten", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2012.
17. Gabriel Kopiec, "Ytterbiumhalogenide aus Ionischen Flüssigkeiten", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2012.
18. Marco Rehosek, "Ionische Flüssigkeiten auf Basis von Metall-Cyanat-Komplexen", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2012.
19. Margarete Johanna Roskosz, "Azide der Lanthanide in ionischen Flüssigkeiten", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2012.
20. Sarah Birkenkamp, "Lumineszierende Ionische Flüssigkeiten", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2012.
21. Stefanie Macherski, "Cerhalogenide in Ionischen Flüssigkeiten", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2012.
22. Viktoria Grasmik, "Chemie der zweiwertigen Lanthanoide und Erdalkalimetalle in Ionischen Flüssigkeiten", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2012.
23. Wiebke Appels, "Ionische Flüssigkeiten zur Darstellung von Metallaten", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2013.
24. Artjom Beresin, "Versuche zur Darstellung von Antimontellurid-Thermoelektrika in Ionischen Flüssigkeiten mit verschiedenen Konzentrationen", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2013.
25. Christine Heitkamp, "Ionothermal Synthesis and Characterization of New Iron Phosphates ", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2013.
26. Manuel Loor, "Synthese und Charakterisierung eines neuen Flüssigkristalltyps ", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2013.
27. Kevin Pappert, "Darstellung von Antimon-Tellur-Funktionsnanopartikeln in Ionischen Flüssigkeiten", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2013.
28. Olga Kirschmann, "Synthese, optische und Redoxeeigenschaften von Salzen sulfonatsubstituierter Triphenylamine", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2013.
29. Raimund Kroeber, "Synthese und Charakterisierung von lumineszierenden 3-Phenylpyridinium-Ionischen Flüssigkeiten", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2013.
30. Ina Strauß, "Versuche zur Darstellung von Antimontellurid-Nanopartikeln in Ionischen Flüssigkeiten", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2014.

31. Alexander Kroll, " Die Chemie des zweiwertigen Samariums in Ionischen Flüssigkeiten", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2014.
32. Lukas Mai, "Lumineszente Ionische Flüssigkeiten basierend auf ein- und zweikernigen Mangankomplexen", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2014.
33. Maximilian Glöckeler, "Die Chemie des zweiwertigen Thuliums in Ionischen Flüssigkeiten", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2014.
34. Robin Kentsch, "Die Verwendung von Ionischen Flüssigkeiten in Solarzellen", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2014.
35. Tobias Jan Löffler, "Synthese und Charakterisierung von Eisen-Nanopartikeln in der Ionischen Flüssigkeit 1-Butyl-3-methylimidazolium-4,5-dicyanomidazolid", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2014.
36. Gregor T. Lipinski, "Ionische Flüssigkristalle: Stabilisierung der Mesophase durch Einführung von stäbchenförmigen Anionen?", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2014.
37. Joanna Muthmann, "UV/Vis-Studien Azobenzol basierter photochromischer ionischer Flüssigkeiten", Bachelor Thesis, Ruhr-Universität Bochum, Germany, 2014.

Master and Diploma Theses:

1. Arash Babai, "Seltenerd-Verbindungen in Ionischen Flüssigkeiten", Diploma Thesis, Universität zu Köln, Germany, 2004.
2. Anna Getsis, "Untersuchungen an Bromiden der Seltenerdelemente in Ionischen Flüssigkeiten", Diploma Thesis, Universität zu Köln, Germany, 2005.
3. Slawomir Pitula, "Optische Basizitäten von Ionischen Flüssigkeiten – Spektroskopische Untersuchungen an Eu^{III} und Mn^{II} in Ionischen Flüssigkeiten", Diploma Thesis, Universität zu Köln, Germany, 2007.
4. Bert Mallick, "Ferrofluide auf Basis Ionischer Flüssigkeiten", Diploma Thesis, Universität zu Köln, Germany, 2007.
5. Tarek Alammari, "Synthese von ZnO-Nanokristallen in Ionischen Flüssigkeiten", Master Thesis, Ruhr-Universität Bochum, Germany, 2008.
6. Tobias Bäcker, "Darstellung von Münzmetallnanopartikeln aus reaktiven Ionischen Flüssigkeiten", Master Thesis, Ruhr-Universität Bochum, Germany, 2008.
7. Joanna Bartosik, "Übergangsmetallkomplexe in Ionischen Flüssigkeiten", Master Thesis, Ruhr-Universität Bochum, Germany, 2008.

8. Kai Richter, "Synthese von Nanopartikeln in Ionischen Flüssigkeiten via Physical Vapour Deposition", Master Thesis, Ruhr-Universität Bochum, Germany, 2008.
9. Mei Kappels, "Synthese und Untersuchungen von Ionischen Flüssigkristallen", Master Thesis, Ruhr-Universität Bochum, Germany, 2009.
10. Chantal Pia Lorbeer, "Synthese und Untersuchung von Ionischen Flüssigkristallen", Master Thesis, Ruhr-Universität Bochum, Germany, 2010.
11. Kathrin Stappert, "Strukturuntersuchung an Ionischen Flüssigkeiten mit mesogenen Funktionalitäten", Master Thesis, Ruhr-Universität Bochum, Germany, 2011.
12. Demian Pitz, "Lumineszente Polymere auf Basis Ionischer Flüssigkeiten," Diploma Thesis, Universität zu Köln, Germany, 2011.
13. Fabian Hoffmann, "Thermische und spektroskopische Eigenschaften geladener Übergangsmetallkomplexe auf der Basis eines Salicylideniminliganden", Master Thesis, Ruhr-Universität Bochum, Germany, 2013.
14. Jörn Thomas Brüggemann, "Structure property relationships in ionic liquids", Master Thesis, Ruhr-Universität Bochum, Germany, 2013.
15. Mike Broxtermann, "Luminescent Main Group and Transition Metal Doped Ionic Polymers", Master Thesis, Ruhr-Universität Bochum, Germany, 2013.
16. Anastasia Lackmann, "Lanthanide Chemistry in Ionic Liquids", Master Thesis, Ruhr-Universität Bochum, Germany, 2014.
17. Gabriel Kopiec, "Lanthanide Chemistry in Ionic Liquids", Master Thesis, Ruhr-Universität Bochum, Germany, 2014.
18. Meike Leu, "Metal containing ionic liquids", Master Thesis, Ruhr-Universität Bochum, Germany, 2013.
19. Derya Ünal, "Design of Antimony Telluride in Imidazolium and Triazolium based Ionic Liquids", Master Thesis, Ruhr-Universität Bochum, Germany, 2013.
20. Damla Yaprak, "Extraktion von Uranyl-Komplexen in wässriger Lösung mit Ionischen Flüssigkeiten", Master Thesis, Ruhr-Universität Bochum, Germany, 2013.
21. Marina Sturm, "Synthese und Charakterisierung von Metallmesogenen mit disubstituierten Bipyridin-Liganden", Master Thesis, Ruhr-Universität Bochum, Germany, 2013.

Doctoral Dissertations:

1. Arash Babai, "Rare-Earth Complexes in Ionic Liquids – Structures, Electrochemical and Optical Properties", Dr. rer. nat. Thesis, Universität zu Köln, Germany, 2006.
2. Franziska Rieger, "Thallium als Pseudoalkalimetall in Verbindungen mit Makrocyclen und mit Chalkogenen in den Systemen Tl-Te-O und Tl-Te-S", Dr. rer. nat. Thesis, Universität zu Köln, Germany, 2006.
3. Anna Getsis, "Ionische Flüssigkristalle – Thermische, Optische und Strukturelle Eigenschaften ", Dr. rer. nat. Thesis, Universität zu Köln, Germany, 2008.
4. Tudor Lucian Timofte, "Structural and Physical Properties of Salts Containing Tetrahedral Anions with Group 13 Metals (Aluminates and Halogenido-gallates)", Dr. rer. nat. Thesis, Universität zu Köln, Germany, 2008.
5. Bert Mallick, "Ionische Flüssigkeiten auf Basis von komplexen Übergangsmetallhalogeniden", Dr. rer. nat. Thesis, Universität zu Köln, Germany, 2009.
6. Slawomir Pitula, "Luminescent Ionic Liquids", Dr. rer. nat. Thesis, Universität zu Köln, Germany, 2010.
7. Tarek Alamar, "Sonochemical Synthesis and Characterization of Metal Oxide Nanoparticles in Ionic Liquids", Dr. rer. nat. Thesis, Ruhr-Universität Bochum, Germany, 2011.
8. Tobias Bäcker, "Funktionelle Ionische Flüssigkeiten", Dr. rer. nat. Thesis, Ruhr-Universität Bochum, Germany, 2012.
9. Nina von Prondzinski, "Ionische Flüssigkeiten zur Darstellung von Funktionsmaterialien – Ionic liquids for the synthesis of functional materials", Dr. rer. nat. Thesis, Ruhr-Universität Bochum, Germany, 2012.
10. Chantal Pia Lorbeer, "Light converting materials from ionic liquids", Dr. rer. nat. Thesis, Ruhr-Universität Bochum, Germany, 2012.
11. Joanna Bäcker, "Übergangsmetalle in Ionischen Flüssigkeiten", Dr. rer. nat. Thesis, Ruhr-Universität Bochum, Germany, 2013.
12. Kai Richter, "Eigenschaften funktioneller Nanopartikel hergestellt durch physikalische Gasphasenabscheidung in ionischen Flüssigkeiten", Dr. rer. nat. Thesis, Ruhr-Universität Bochum, Germany, 2013.
13. Mei Yang, "Mesophase Formation of Imidazolium Based Ionic Liquids", Dr. rer. nat. Thesis, Ruhr-Universität Bochum, Germany, 2013.
14. Kathrin Stappert, "Structure-Property Relationships of Ionic Liquids", Dr. rer. nat. Thesis, Ruhr-Universität Bochum, Germany, 2014.

15. Mark Richter, "Structure-Property Relationships of Ionic Liquids ", Dr. rer. nat. Thesis, Ruhr-Universität Bochum, Germany, 2015.
16. Demian Pitz, "Structure-Property Relationships of Luminescent Ionic Polymers: Towards new Phosphors for Lighting Applications", Dr. rer. nat. Thesis, Ruhr-Universität Bochum, Germany, 2015.
17. Julian Schaumann, "Ionische Flüssigkeiten zur Synthese von Funktions-Nanomaterialien", Dr. rer. nat. Thesis, Universität Duisburg-Essen, Germany, co-supervised with Prof. Dr. St. Schulz, 2015.
18. Jude Namanga, "Structural Modification of Light-Emitting Iridium-based Ionic Transition Metal Complexes and Their Uses in Light-Emitting Electrochemical Cells (LECs)", Dr. rer. nat. Thesis, Ruhr-Universität Bochum, Germany, 2015.
19. Gabriella Tessitore, "New Synthesis of Luminescent Materials from Ionic Liquids", Bern, 2017, co-supervised with Priv.-Doz. Dr. Karl Krämer, Universität Bern, Switzerland.
20. Christopher Ranger Celania, "Novel gold intermetallics with unique properties and bonding patterns", Iowa State University, 2017.

Current PhD Candidates:

- Stefanie Siebeneichler, Stockholm University, Sweden (2017-)
- Brando Adranno, Stockholm University, Sweden (2017-)
- Olivier Renner, Stockholm University, Sweden (2017-)

Honors and Undergraduate Students Mentored:

- Stefanie Winkler, Ruhr-Universität Bochum, Germany (2008)
- Lars Tuscher, Ruhr-Universität Bochum, Germany (2009)
- Kathrin Klein, Ruhr-Universität Bochum, Germany (2010)
- Frederik von Zedlitz, Ruhr-Universität Bochum, Germany (2011)
- Milena Hölter, Ruhr-Universität Bochum, Germany (2011)
- Nathan Card, Iowa State University, Ames IA, USA (2014-2015)
- Jacob Birke, Iowa State University, Ames IA, USA (2015)
- Matthew Klocke, Iowa State University, Ames IA, USA (2015-2016)
- Wade DeGraff, Iowa State University, Ames IA, USA (2016)
- Tyler Prasut, Iowa State University, Ames IA, USA (2016)

Foreign Exchange Students:

- Lev Trusov, from Moscow State University, Russia, hosted at Ruhr-Universität Bochum, Germany, 2007
- Anthony Chesman, from Monash University, Australia, hosted at Ruhr-Universität Bochum, Germany, 2009
- Egorova Bayirta, from Moscow State University, Russia, hosted at Ruhr-Universität Bochum,

- Germany, 2010
- T. Gannon Parker, from The University of Alabama, AL, USA, hosted at Ruhr-Universität Bochum, Germany, 2010
- Kaila Matson, from University of South Alabama, AL, USA, hosted at Ruhr-Universität Bochum, Germany, 2010
- Marina Onishchenko, from Moscow State University, Russia, hosted at Ruhr-Universität Bochum, Germany, 2011
- Kit Chow, from Cardiff University, United Kingdom, hosted at Ruhr-Universität Bochum, Germany, 2013
- Constatin Jaschke, Gymnasium Kiel, German, hosted at Stockholm University, Sweden, 2018
- Elnaz Tahavori, Iran, hosted at Stockholm University, Sweden, 2018-2019
- Nicolas Scaglione, France, hosted at Stockholm University, Sweden, 2019

Guest Researchers:

- Dr. Tilo Söhnel, from University of Aukland, New Zealand, hosted at Ruhr-Universität Bochum, Germany, 2007
- Dr. Oliver Janka, from University of California, Davis, USA, hosted at Ruhr-Universität Bochum, Germany, 2012
- Dr. Alessia Provino, from Università degli Studi di Genova, Italy hosted at Ames Laboratory, Ames IA, USA, 2014-2017
- Prof. Dr. Pietro Manfrinetti, from Università degli Studi di Genova, Italy, hosted at Ames Laboratory, Ames IA, USA, 2014-2017
- Dr. Cordula Braun, Technische Universität Darmstadt, German, FG Strukturforschung, hosted at Stockholm University, Sweden, 2017
- Prof. Dr. Robin D. Rogers, University of Alabama, USA, hosted at Stockholm University, Sweden, 2019-2020
- Prof. Dr. Paul T. Anastas, Yale, USA, FG Strukturforschung, hosted at Stockholm University, Sweden, 2019-2020
- Prof. Julie Zimmerman, School of Engineering & Applied Science, Yale, USA hosted at Stockholm University, Sweden, 2020

Postdoctoral Researchers Mentored:

- Dr. Franziska Rieger, Ruhr-Universität Bochum, Germany (2006-2007)
- Dr. Anna Getsis Ruhr-Universität Bochum, Germany (2008-2009)
- Dr. Sifu Tang, Ruhr-Universität Bochum, Germany (2008-2010)
- Dr. Joanna Cybinska, Ruhr-Universität Bochum, Germany (2009-2012)
- Dr. Bert Mallick, Ruhr-Universität Bochum, Germany (2012, permanent scientific staff since 2013)
- Dr. Jennyfer Sierau, Ruhr-Universität Bochum, Germany (2010)
- Dr. Pushpal Ghosh, Alexander-von-Humboldt Fellow, Ruhr-Universität Bochum, Germany (2011-2013)
- Dr. Paul Campbell, Alexander-von-Humboldt Fellow, Ruhr-Universität Bochum, Germany (2012-2014)
- Dr. Qian Ju, Ruhr-Universität Bochum, Germany (2012-2014)
- Dr. Mei Yang, Ruhr-Universität Bochum, Germany (2014)

- Dr. Sergui Anghel, Ruhr-Universität Bochum, Germany (2014)
- Dr. Eike Spielberg, DFG Postdoctoral Fellow, Ruhr-Universität Bochum, Germany (2013-2014)
- Dr. Simon Steinberg, Iowa State University and Ames Laboratory, Ames IA, USA (2014-2015)
- Dr. Denis Prodius, Ames Laboratory, Ames IA, USA (2013-2017)
- Dr. Tarek Alammar, Ruhr-Universität Bochum, Germany (2011-2015) and Iowa State University, Ames IA, USA (2015-2017)
- Dr. Jude Namanga, Ames Laboratory, Ames IA, USA (2016-2017)
- Dr. Deepak Chand, Ames Laboratory, Ames IA, USA (2016-2017)
- Dr. Anne Willert, Ames Laboratory, Ames IA, USA (2016-2017), Stockholm University (2017-),
- Dr. Magdalena Wilk-Kozubek, Ames IA, USA (2016-2017), Stockholm University (2016-),
- Dr. Guillaume Bousrez, Stockholm University, (2017-)
- Dr. Volodymyr Smetana, Stockholm University (2017-)
(2013-2015, 2016-2017 permanent scientific staff (assistant scientist III) at Ames Laboratory,
2017- researcher, Stockholm University)
- Dr. Chris Celania, Stockholm University (2017-)
- Dr. Gabrielle Tessitore, Stockholm University (2018)
- Dr. Alexander Ovchinnikov, Stockholm University (2018-)
- Dr. Katharina Dorn, Stockholm University (2019-)
- Dr. Pei Hanwen, Stockholm University (2019-)
- Dr. Siméon Ponou, Stockholm University (2019-)
- Dr. Veronica Paterlini, Stockholm University (2019-)

Student and Postdoc Awards:

- Anna Getsis, Graduate Fellowship, Fonds der Chemischen Industrie, Frankfurt, Germany (2006)
- Chantal Lorbeer, Graduate Fellowship, Fonds der Chemischen Industrie, Frankfurt, Germany (2010)
- Mark Richter, Graduate Fellowship, Evangelisches Studienwerk Villigst e.V., Germany (2011)
- Chantal Lorbeer, Postdoctoral Fellowship (2014)
- Arash Babai, Poster Award, Terae Rarae, Bonn, Germany (2005)
- Joanna Cybinska, Poster Award, Excited States of Transition Elements (ESTE), Poland (2010)
- Sebastian Golbert and Sergiu Anghel, Poster Award, International Conference on Luminescence, Wroclaw, Poland (2014)
- Denis Prodius, Ames Laboratory Postdoc Award, Ames Laboratory (2017)

Publications, Prof. Dr. Anja-Verena Mudring

<http://www.researcherid.com/rid/C-4739-2014>

<http://orcid.org/0000-0002-2800-1684>

<https://scholar.google.com/citations?user=1wofyBoAAAAJ&hl=en>

Peer-reviewed original articles

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226. S.P. Kelley, V. Smetana, S. D. Emerson, A.-V. Mudring, R.D. Rogers, Benchtop Access to Anhydrous Actinide N-donor Coordination Complexes using Ionic Liquids, *Chem. Commun.* **2020**, *accepted*, xxx-xxx. DOI: xxx.

225. J. Namanga, V. Smetana, N. Gerlitzki, **A.-V. Mudring**, Efficient and long lived green light emitting electrochemical cells, *Adv. Func. Mat.*, **2020**, *accepted*. DOI: xxx.

224. S. P. Kelley, V. Smetana, J.S. Nuss, D. A. Dixon, M. Vasiliu, **A.-V. Mudring**, R. D. Rogers, Dehydration of $\text{UO}_2\text{Cl}_2 \cdot 3\text{H}_2\text{O}$ and $\text{Nd}(\text{NO}_3)_3 \cdot 6\text{H}_2\text{O}$ with a Soft Donor Ligand and Comparison of Their Interactions through X-ray Diffraction and Theoretical Investigation, *Inorg. Chem.*, **2020**, 59, 2861-2869. DOI: 10.1021/acs.inorgchem.9b03228.

223. V. Smetana, S. P. Kelley, **A.-V. Mudring**, R.D. Rogers, Using UO_2^{2+} as a Five-Fold Node to Approach Dodecagonal Quasicrystal in a Coordination Polymer, *Science Advances* **2020**, *in press*.

222. S. P. Kelley, V. Smetana, J.S. Nuss, D. A. Dixon, M. Vasiliu, **A.-V. Mudring**, R. D. Rogers, Dehydration of $\text{UO}_2\text{Cl}_2 \cdot 3\text{H}_2\text{O}$ and $\text{Nd}(\text{NO}_3)_3 \cdot 6\text{H}_2\text{O}$ with a Soft Donor Ligand and Comparison of Their Interactions through X-ray Diffraction and Theoretical Investigation, *Inorg. Chem.*, **2020**, xx, xxx-xxx.

221. V. Babizhetskyy, V. Levytskyy, V. Smetana, M. Wilk-Kozubek, O. Tsisar, L. Piskach, O. Parasyuk, **A.-V. Mudring**, New cation-disordered quaternary selenides $\text{Tl}_2\text{Ga}_2\text{TlSe}_6$ ($Tt = \text{Ge}, \text{Sn}$), *Z. Naturforsch. B.*, **2020**, xx, xxx-xxx. DOI: 10.1515/znb-2019-0169.

220. F. Guillou, D. Paudyal, Y. Mudryk, A. K. Pathak, V. Smetana, **A.-V. Mudring**, V. K. Pecharsky, Metamagnetic transition, magnetocaloric effect and electronic structure of the rare-earth antiperovskite SnOEu_3 , *JMMM*, **2020**, xxx, xxx-xxx. DOI: 10.1016/j.jmmm.2020.166405.

219. D. Prodius, K. Gandha, **A.-V. Mudring**, I. Nlebelim, Sustainable Urban Mining of Critical Elements from Magnet and Electronic Wastes, *ACS Sus. Chem. Eng.*, **2020**, xxx, xxx-xxx. DOI: 10.1021/acssuschemeng.9b05741.

218. T. Alammar, I.Z. Hlova, S. Gupta, V.K. Pecharsky, **A.-V. Mudring**, Mechanochemical Synthesis, Characterization and Luminescent Properties of Lanthanide Benzene-1,4-

Dicarboxylate Coordination Polymers (LnGd)(1,4-BDC)₃(H₂O)₄; Ln = Sm, Eu, Tb, *New J. Chem.*, **2020**, *44*, 1054-1062. DOI: 10.1039/C9NJ02583A.

217. V. Smetana, S. P. Kelley, H. M. Titi, X. Hou, S.-F. Tang, **A.-V. Mudring**, R. D. Rogers, Synthesis of Anhydrous Acetates for the Components of Nuclear Fuel Recycling in Dialkylimidazolium Acetate Ionic Liquids, *Inorg. Chem.* **2020**, *59*, 818-828. DOI: 10.1021/acs.inorgchem.9b03077.

216. S. P. Kelley, H. Pei, V. Smetana, **A.-V. Mudring**, R. D. Rogers, Structural Consequences of Halogen Bonding in Dialkylimidazolium: A New Design Strategy for Ionic Liquids Illustrated with the I₂ Co-Crystal and Acetonitrile Solvate of 1,3-Dimethylimidazolium Iodide, *Cryst. Growth Des.*, **2020**, *20*, 498-505. DOI: 10.1021/acs.cgd.9b01454.

215. O. Renier, G. Bousrez, K. Stappert, M. Wilk-Kozubek, B. Adranno, H. Pei, E. T. Spielberg, V. Smetana, **A.-V. Mudring**, Photoisomerization and Mesophase Formation in Azo-Ionic Liquids, *Crystal Growth & Des.*, **2020**, *20*, 214-225. DOI: 10.1021/acs.cgd.9b01018.

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214. G. Tessitore, **A.-V. Mudring**, K. Krämer, Upconversion luminescence in sub-10 nm β-NaGdF₄: Yb³⁺, Er³⁺ nanoparticles: An improved synthesis in anhydrous ionic liquids, *RSC Advances*, **2019**, *9*, 34784-34792. DOI: 10.1039/C9RA05950D.

213. A. Provino, V. Smetana, T. Hackett, D. Paudyal, M. Kashyap, C. Bernini, A. Bhattacharyya, S. Dhar, M. Pani, F. Gatti, **A.-V. Mudring**, P. Manfrinetti, Stability, crystal-chemistry and magnetism of U_{2+x}Ni_{21-x}B₆ and Nb_{3-y}Ni_{20+y}B₆ and the role of U in the formation of the quaternary U_{2-z}Nb_zNi₂₁B₆ and U_δNb_{3-δ}Ni₂₀B₆ systems, *Inorg. Chem.*, **2019**, *58*, 15045-15059. DOI: 10.1021/acs.inorgchem.9b01440.

212. N. S. Sangeetha, L.-L. Wang, A.V. Smirnov, V. Smetana, **A.-V. Mudring**, D.D Johnson, M.A. Tanatar, R. Prozorov, D.C. Johnston, Non-Fermi-liquid behaviors associated with a magnetic quantum-critical point in Sr(Co_{1-x}Ni_{x})₂As₂ single crystals, *Phys. Rev. B*, **2019**, *100*, 094447.

211. N.S. Sangeetha, V Smetana, **A-V Mudring**, DC Johnston, Helical Antiferromagnetic Ordering in EuNi_{1.95}As₂, *Phys. Rev. B*, **2019**, *100*, 094438.

210. G. Wang, M. Valldor, S. Siebeneichler, M. Wilk-Kozubek, V. Smetana, **A.-V. Mudring**, Ionothermal synthesis, structures and magnetism of three new open framework iron halide-phosphates, *Inorg. Chem.* **2019**, *58*, 13203-13212. DOI: 10.1021/acs.inorgchem.9b02028.

209. D. Chand, M. Wilk-Kozubek, V. Smetana, **A.-V. Mudring**, An alternative to the popular imidazolium ionic liquids: 1,2,4-Triazolium ionic liquids with enhanced thermal and chemical stability, *ACS Sus. Chem. Eng.*, **2019**, *7*, 15995-16006. DOI: 10.1021/acssuschemeng.9b02437.

208. G. Wang, M. Valldor, K.V. Dorn, M. Wilk-Kozubek, V. Smetana, **A.-V. Mudring**, Ionothermal Synthesis Enables Access to 3D Open Framework Manganese Phosphates Containing Extra-large 18-Ring Channels with Stunning Optical and Magnetic Properties, *Chem. Mat.*, **2019**, *31*, 7329-7339. DOI: 10.1021/acs.chemmater.9b01935

207. S.-F. Tang, **A.-V. Mudring**, Design of highly luminescent ionic liquids based on lanthanide saccharianates, *Inorg. Chem.*, **2019**, *58*, 11569-11578. DOI: 10.1021/acs.inorgchem.9b01411.

206. H. Nasser Abdelhamid, M. Wilk-Kozubek, A. M. El-Zohry, A. Valiente, A. Bermejo-Gomez, B. Martín-Matute, **A.-V. Mudring**, X. Zou, Luminescence Properties for of a Family of Highly Stable Lanthanide Metal-Organic Frameworks, *Micro. Meso. Mat.*, **2019**, *279*, 400-406. DOI: 10.1016/j.micromeso.2019.01.024.

205. Y. Mudryk, V. Smetana, V. Pecharsky, **A.-V. Mudring**, J. Liu, Anomalous effects of Sc substitution and processing on magnetism and structure of $(\text{Gd}_{1-x}\text{Sc}_x)_5\text{Ge}_4$, *J. Magnet. Magnet. Mat.* **2019**, *474*, 482-492. DOI: 10.1016/j.jmmm.2018.11.004.

2018

204. M. Rhodehouse, T. Bell, V. Smetana, **A.-V. Mudring**, G.H. Meyer, An Obscured or Nonexistent Binary Intermetallic, $\text{Co}_7\text{Pr}_{17}$, its Existent Neighbor Co_2Pr_5 , and Two New Ternaries in the System Co/Sn/Pr, $\text{CoSn}_3\text{Pr}_{1-x}$ and $\text{Co}_{2-x}\text{Sn}_7\text{Pr}_3$, *Cryst. Growth & Des.* **2018**, *18*, 6273-6283. DOI: 10.1021/acs.cgd.8b01141

203. **A.-V. Mudring**, E. Spielberg, B. Mallick, J. Schaumann, P. Campbell, K. Szeto, Sodium Salicylate: An in-depth thermal and photophysical study, *Chem. Eur. J.*, **2018**, *24*, 15638-15648. DOI: 10.1002/chem.201803045.

202. T. Bell, C. Celandia, V. Smetana, **A.-V. Mudring**, G.H. Meyer, Tb_3Pd_2 , Er_3Pd_2 and $\text{Er}_6\text{Co}_{5-x}$: Structural Variations and Bonding in Rare Earth Richer Binary Intermetallics, *Acta Cryst. C*, **2018**, *C74*, 991-996. DOI: 0.1107/S2053229618010549.

201. M. Rhodehouse, T. Bell, V. Smetana **A.-V. Mudring**, G.H. Meyer, From the non-existent polar intermetallic Pt_3Pr_4 via $\text{Pt}_{2-x}\text{Pr}_3$ to novel Pt/Sn/Pr ternaries, *Inorg. Chem*, **2018**, *57*, 9949-9961. DOI: 10.1021/acs.inorgchem.8b01121.

200. T. Alammar, I.Z. Hlova, S. Gupta, V.K. Pecharsky, **A.-V. Mudring**, Luminescent Properties of Mechanochemically Synthesized Rare-Earth Containing MIL-78 MOF, *Dalton Trans.* **2018**, *47*, 7594-7601. DOI: 10.1039/C7DT04771A.

199. D. Prodius, M. Wilk-Kozubek, **A.-V. Mudring**, Synthesis, structural characterization and luminescent properties of 1-carboxymethyl-3-ethylimidazolium chloride, *Acta Cryst. C*, **2018**, *74*, 653-658. DOI: 10.1107/S2053229618005272.

198. N. S. Sangeetha, V.K. Anand, E. Cuervo-Reyes, V. Smetana, **A.-V. Mudring**, D. C. Johnston, Enhanced moments of Eu in single crystals of the metallic helical antiferromagnet $\text{EuCo}_{\{2-y\}}\text{As}_2$, *Phys. Rev. B.* **2018**, *97*, 144403. DOI: <https://doi.org/10.1103/PhysRevB.97.144403>. Editor's suggestion.

197. V. Smetana, Y. Mudryk, V. K. Pecharsky, **A.-V. Mudring**, Controlling Magnetism via Transition Metal Exchange in the Series of Intermetallics $\text{Eu}(T1,T2)_5\text{In}$ ($T = \text{Cu, Ag, Au}$), *J. Mat. Chem. C* **2018**, *6*, 1353-1362. DOI: 10.1039/C7TC04964A. COVER IMAGE

196. C. Celania, V. Smetana, A. Provino, P. Manfrinetti, **A.-V. Mudring**, $R_{14}(\text{Au}, M)_{51}$ ($R = \text{Y, La-Nd, Sm-Tb, Ho, Er, Yb, Lu}$; $M = \text{Al, Ga, Ge, In, Sn, Sb, Bi}$): Stability Ranges and Site Preference in the $\text{Gd}_{14}\text{Ag}_{51}$ Structure Type, *Cryst. Growth & Des.* **2018**, *18*, 993-1001. DOI: 10.1021/acs.cgd.7b01469

195. J.E. Namanga, N. Gerlitzki, V. Smetana, **A.-V. Mudring**, Optimizing green light emitting electrochemical cells: Stability improvement without compromising the efficiency, *ACS Appl. Mat. Interf.* **2018**, *10*, 11026–11036. DOI: 10.1021/acsami.7b18159.

194. C. Celania, V. Smetana, **A.-V. Mudring**, Bringing Order to Large Scale Disordered Complex Metal Alloys: $\text{Gd}_2\text{Au}_{15-x}\text{Sb}_x$ and $\text{BaAu}_x\text{Ga}_{12-x}$, *CrystEngComm* **2018**, *20*, 348-355 DOI: 10.1039/C7CE01865G.

193. G. Tessitore, **A.-V. Mudring**, K. W. Krämer, Luminescence and energy transfer in $\beta\text{-NaGdF}_4\text{:Eu}^{3+},\text{Er}^{3+}$ nanocrystalline samples from a room temperature synthesis, *New J. Chem.* **2018**, *42*, 237-245. DOI: 10.1039/C7NJ03242K.

192. N. S. Sangeetha, V. Smetana, **A.-V. Mudring**, D. C. Johnston, Antiferromagnetism in semiconducting SrMn_2Sb_2 and BaMn_2Sb_2 single crystals, *Phys. Rev. B.* **2018**, *97*, 014402. <https://journals.aps.org/prb/abstract/10.1103/PhysRevB.97.014402>

2017

191. N. S. Sangeetha, V. Smetana, **A.-V. Mudring**, D. C. Johnston, Anomalous Composition-Induced Crossover in the Magnetic Properties of the Itinerant-Electron Antiferromagnet $\text{Ca}_{1-x}\text{Sr}_x\text{Co}_{2-y}\text{As}_2$, *Phys. Rev. Lett.* **2017**, *119*, 257203. DOI: 10.1103/PhysRevLett.119.257203

190. M. Di Marcantonio, J. E. Namanga, N. Gerlitzki, F. Vollkommer, **A.-V. Mudring**, G. Bacher, E. Nannen, Bright and Stable Greenish Hybrid Light Emitting Electrochemical Cells, *J. Mat. Chem. C*, **2017**, *5*, 12062-12068. DOI: 10.1039/C7TC02976D.

189. C. Celania, V. Smetana, **A.-V. Mudring**, Crystal Structures and new perspectives on Y_3Au_4 and $\text{Y}_{15}\text{Au}_{51}$, *Acta Cryst. C* **2017**, *C73*, 692-696, DOI: 10.1107/S2053229617011068.

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