

PROFESSOR REBECCA LUCY MELEN

PUBLICATIONS

Total 112 publications. Independent publications are listed below:

112. Pramanik, M. **Melen,* R.L.**, "Metal-Free Routes From Carbon Monoxide to Ketenes", *Chem*, 2023, *accepted*.
111. Alharbi, A., van Ingen, Y., Roldan, A., Kaehler,* T., **Melen,* R.L.**, "Synthesis and Lewis Acidity of Fluorinated Triaryl Borates", *Dalton Trans.*, 2023, DOI: 10.1039/D2DT04095F.
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110. Stefkova, K., Guerzoni, M.G., van Ingen, Y., Richards,* E., **Melen,* R.L.**, "B(C₆F₅)₃ Catalyzed Diastereoselective and Divergent Reactions of Vinyldiazo Esters with Nitrones: Synthesis of Highly Functionalized Diazo Compounds", *Org. Lett.*, 2023, **25**, DOI: 10.1021/acs.orglett.2c04198.
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109. Richards,* E., **Melen,* R.L.**, "Carbenium catalysis toward β -carbolines", *Chem Catalysis*, 2023, *accepted*.
108. Kustiana, B.A., **Melen, R.L.**, Morrill,* L.C., "One-pot synthesis of styrene derivatives from allyl silanes via B(C₆F₅)₃-catalyzed isomerization-Hiyama coupling", *Org. Lett.*, 2022, **24**, 8694.
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107. Inoue,* S., **Melen,* R.L.**, Harder,* S., "Main Group Catalysis", *Eur. J. Inorg. Chem.*, 2022, e202200414.
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106. Guerzoni, M.G., Dasgupta, A., Richards, E., **Melen,* R.L.**, "Enantioselective applications of frustrated Lewis pairs in organic synthesis", *Chem Catalysis*, 2022, **2**, 2865.
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105. Kustiana, B.A., Elsherbeni, S.A., Linford-Wood, T.G., **Melen, R.L.**, Grayson, M.N., Morrill,* L.C., "B(C₆F₅)₃-Catalyzed *E*-selective isomerization of alkenes", *Chem. Eur. J.*, 2022, **28**, e202202454.
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104. Dasgupta, A. Guerzoni, M.G., Alotaibi, N., van Ingen, Y., Farshadfar, K., Richards,* E., Ariaifard,* A., **Melen,* R.L.**, "Chemo- and regio-selective amidation of indoles with isocyanates using borane Lewis acids", *Catal. Sci. Technol.*, 2022, **12**, 5982.
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103. Kuveke,* R.E.H., Barwise, L., van Ingen, Y., Vashisth, K., Roberts, N., Chitnis,* S.S., Dutton,* J.L., Martin,* C.D., **Melen,* R.L.**, "An International Study Evaluating Elemental Analysis", *ACS Cent. Sci.*, 2022, **8**, 855.
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101. Dasgupta, A., van Ingen, Y., Guerzoni, M., Farshadfar, K., Rawson, J.M., Richards,* E., Ariaifard,* A., **Melen,* R.L.**, "Lewis Acid Assisted Brønsted Acid Catalysed Decarbonylation of Isocyanates: A Combined DFT and Experimental Study", *Chem. Eur. J.*, 2022, **28**, e202201422.
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96. Dasgupta, A., Richards, E., **Melen,* R.L.**, "Triarylborane catalyzed carbene transfer reactions using diazo precursors", *ACS Catalysis*, 2022, **12**, 442.
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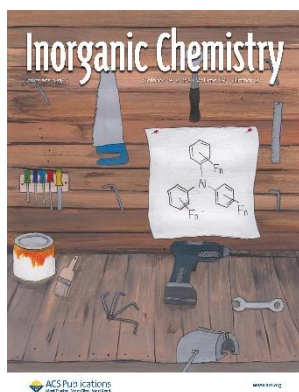
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Downloading research from Doctor Rebecca Melen's laboratory, School of Chemistry, Cardiff University, Wales, United Kingdom

Hydrogenated boron Lewis acids: synthesis, properties and applications in catalysis

Herein, we have used the popular (hydrogenated) Lewis acids (H₂LA) to the other hydrogenated Lewis acids. To this end, we have used the Lewis acidity of boranes to catalyze the hydrogenation of Lewis acidic substrates, borane synthesis and their catalytic applications.

As featured in:



See Melen, R. et al., Chem Soc Rev, 2020, 48, 7000.



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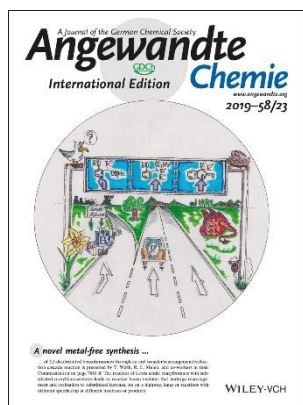
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INDEPENDENT CONFERENCE PRESENTATIONS AND INVITED LECTURES

My significant contributions to the field of synthetic chemistry have been reflected in a series of talks and presentations since becoming independent (154). This includes invited departmental seminars in the UK, USA, Australia, Germany, Canada, France, India, Japan, Netherlands, Spain, and Switzerland, as well as invited talks at national and international conferences. Independent presentations are listed below.

Presentations since independent (154):

- 2023** Invited talk, International Conference on Organometallics and Catalysis, 30th October – 2nd November 2023, Goa, India.
- 2023** RSC award lecture, 23rd June 2023, University of Manchester, Manchester, UK.
- 2023** Invited talk, Canadian Chemistry Conference and Exhibition, Adventures in Modern Molecular Catalysis Symposium, 4th–8th June 2023, Vancouver, Canada.
- 2023** Invited talk, ACS National Meeting, Harry Gray Award for Creative Work in Inorganic Chemistry by a Young Investigator: Symposium in Honor of Robert Gilliard, 26th–30th March 2023, Indianapolis, USA.
- 2023** Invited plenary speaker, International Conference On Phosphorus, Boron and Silicon – PBSi, 22nd–24th March 2023, Berlin, Germany.
- 2023** RSC award lecture, 16th March 2023, Trinity College Dublin, Dublin, Ireland.
- 2023** Invited lecture, 1st March 2023, University of Liverpool, Liverpool, UK.
- 2023** Invited talk, International Conference on Main Group Synthesis and Catalysis (ICMGSC) 2023, 9th–12th February 2023, IISER Thiruvananthapuram, India.
- 2023** Invited virtual lecture, 13th January 2023, Lancaster University, Lancaster, UK.
- 2022** Invited talk, Singapore International Chemistry Conference (SICC-11), 11th–14th December 2022, Singapore.
- 2022** Invited University Seminar, 25th November 2022, Aix-Marseille Université, Marseille, France.
- 2022** Invited virtual lecture, 22nd November 2022, Adam Mickiewicz University, Poznan, Poland.
- 2022** Invited talk, Southeast Regional Meeting of the American Chemical Society on Unusual Structure and Reactivity of Inorganic Molecules, 19th–22nd October 2022, San Juan, Puerto Rico.
- 2022** Invited talk, ACS National Meeting, F. Albert Cotton Award in Synthetic Inorganic Chemistry: Symposium in honour of Douglas Stephan, 21st–25th August 2022, Chicago, USA.
- 2022** Virtual talk, Cardiff University - Nanjing Tech University 2022 Chemistry Summer School, 28th–21st July, Cardiff University, Cardiff, UK.
- 2022** Invited talk, TECS CDT Summer Conference 2022, 20th–21st July 2022, Bristol, UK.
- 2022** Talk, Canadian Chemistry Conference and Exhibition, 13th–17th June 2022, Calgary, Canada.
- 2022** Invited talk, Canada - UK Joint Symposium on Coordination Chemistry, 30th May–1st June 2022, St Andrews, UK.
- 2022** Invited talk, 4th Small Molecule Activation Conference, 16th–19th May 2022, Cancun, Mexico.
- 2022** Invited talk, RSC – IISER Desktop Seminar with Dalton Transactions, 11th–12th May 2022, Online.
- 2022** Invited poster, 55th Bürgenstock Conference, 1st–5th May 2022, Brunnen, Switzerland.
- 2022** Invited talk, stereoselective alkene functionalizations, Beilstein Organic Chemistry Symposium, 26th–28th April 2022, Rüdeshheim, Germany.
- 2022** Invited lecture, 12th April 2022, University of Alicante, Spain.
- 2022** Keynote speaker, 29th–31st March 2022, Cutting-edge in Homogeneous Catalysis conference Leipzig, Germany.
- 2022** Invited speaker, 14th–16th March, CRC 1349 winter school 2022, Berlin, Germany.
- 2022** Invited virtual lecture, 13th March 2022, Tel Aviv University, Israel.
- 2022** Invited talk, 10th March 2022, *Chem. Eur. J.* Early Career Advisory Board Virtual Event.
- 2022** Invited virtual lecture, 17th February 2022, Indian Institute of Technology Guwahati, India.
- 2022** Invited lecture, 10th February 2022, Adam Mickiewicz University, Poznan, Poland.
- 2022** Keynote lecture, The 8th UK Catalysis Conference, 5th–7th January 2022, Loughborough, UK.
- 2021** Invited virtual lecture, unusual structure and reactivity in the main group: from fundamental to functional materials, The International Chemical Congress of Pacific Basin Societies 2021, 15th–21st December 2021.
- 2021** Invited virtual lecture, new challenges in energy chemistry symposium, The International Chemical Congress of Pacific Basin Societies 2021, 15th–21st December 2021.
- 2021** University Seminar, 1st November 2021, University of Amsterdam, Netherlands.
- 2021** Invited speaker, Joliot-Curie Conference, 8th–9th September 2021, Virtual Conference.

- 2021** Invited speaker, ACS Fall 2021 National Meeting & Exposition, 22nd–26th August 2021, virtual seminar as part of the Organometallics Distinguished Author Award Lectureship symposium.
- 2021** Invited virtual speaker, UK Catalysis Hub Summer Conference, EDI Event, 20th–21st July 2021, Harwell Campus, Oxfordshire, UK.
- 2021** Plenary lecture, Dalton 2021 Virtual Meeting, June 29th–1st July.
- 2021** JSP fellowship, e-Bürgenstock conference, May 6th 2021 (Poster).
- 2021** Invited virtual lecture, 14th April 2021, University of Potsdam, Germany.
- 2020** Invited virtual lecture, 11th Phosphorus chemistry seminar, 29st October 2020.
- 2020** Invited virtual lecture, 21st October 2020, University of Central Florida, USA.
- 2020** ZDSC, DUT and Cardiff CCI virtual symposium, 20th October 2020.
- 2020** Invited lecture, virtual Chem/Reaxys symposium on organic synthesis, 17th–18th October 2020.
- 2020** Invited virtual lecture, 15th October 2020, Imperial College London, UK.
- 2020** Invited lecture, 7th October 2020, University of Münster, Germany.
- 2020** Virtual Conference on Chemistry and its Applications (VCCA-2020), 1st–31st August 2020.
- 2020** LOGIC 2020, online symposium, 18th–24th May 2020.
- 2020** Main Group Seminar Series, Online symposium, 2nd April, UK.
- 2020** Invited lecture, 29th January 2020, University of Kent, UK.
- 2020** Invited lecture, PARACAT Winter School on Catalysis, 13th–17th January 2020, Cardiff, UK.
- 2019** Invited lecture, keynote speaker, IC19, December 15th–19th 2019, Wollongong, Australia.
- 2019** Invited lecture, 20th National Organic Symposium Trust Organic Chemistry Conference (NOST-OCC), 4th–7th December 2019, Ananta, Udaipur, India.
- 2019** Invited lecture, 5th November 2019, University of Birmingham, UK.
- 2019** Invited lecture, 30th October 2019, University of Leeds, UK.
- 2019** RSC award lecture, 16th October 2019, University of Nottingham, UK.
- 2019** Invited lecture, 25th September 2019, University of St Andrews, UK.
- 2019** Invited lecture, RSC Southern Dalton Meeting, 18th September 2019, University of Oxford, UK.
- 2019** Lecture, 20th August 2019, University of Toronto, Canada.
- 2019** Lecture, 15th August 2019, Laval University, Canada.
- 2019** Invited lecture, 6th EOC Symposium, July 13th–14th 2019, Nankai University, Tianjin, China.
- 2019** Invited lecture, keynote speaker, Euroboron Conference, 24th–27th July 2019, Montpellier, France.
- 2019** Invited lecture, 21st June 2019, University of Toulouse, France.
- 2019** Invited lecture, CASE 2019, April 14th–16th 2019, X'ian, China.
- 2019** Invited lecture, 29th March 2019, University of Sheffield, UK.
- 2019** Invited lecture, 5th March 2019, Evotec, Abingdon, Oxfordshire, UK.
- 2019** Invited lecture, Advances in Organocatalysis Symposium, 25th February 2019, London, UK.
- 2019** Invited lecture, 8th February 2019, University of Madras, Chennai, India.
- 2019** Invited lecture, 13th RSC-CRSI joint Symposium, 7th February 2019, CSIR Central Leather Research Institute, Chennai, Raipur, India.
- 2019** Invited lecture, VIT-RSC joint symposium, 5th February 2019, Vellore Institute of Technology, India.
- 2019** Invited lecture, 1st February 2019, IIT Ropar, India.
- 2019** Invited lecture, 31st January 2019, Deenbandhu Chhotu Ram University of Science and Technology, Murthal, India.
- 2019** Invited lecture, 30th January 2019, Dyal Singh College, Karnal, India.
- 2019** Invited lecture, 16th January 2019, University of Leicester, UK.
- 2019** Invited lecture, Heterocyclic and Synthesis Group's annual January Meeting, 11th January 2019, Institute of Cancer Research, London, UK.
- 2018** International Conference On Phosphorus, Boron and Silicon (PBSi), December 10th–12th 2018, Barcelona, Spain.
- 2018** Invited lecture, 6th December 2018, University of Amsterdam, Netherlands.
- 2018** Invited lecture, CHAINS Conference, 5th December 2018, Eindhoven, Netherlands.
- 2018** Invited Lecture, GSK Emerging Academics Symposium, 25th October 2018, Stevenage, UK.
- 2018** Invited lecture, RSC-India Symposium, 26th September 2018, Manchester, UK.

- 2018** Meeting of Inorganic Chemists Recently Appointed (MICRA), September 10th–12th 2018, Cardiff, UK.
- 2018** Invited lecture, ICC2018: Post-Conference, August 7th–8th 2018, Oita, Japan.
- 2018** Invited lecture, ICC2018: Post-Conference in Fukuoka, August 5th–7th 2018, Fukuoka, Japan.
- 2018** Invited lecture, 43rd International Conference on Coordination Chemistry, July 30th–August 4th 2018, Sendai, Japan.
- 2018** 26th July 2018, Nagoya University, Japan.
- 2018** Invited lecture, 5th July 2018, Laval University, Canada.
- 2018** Invited lecture, Organometallics Gordon Research Conference, June 8th–13th 2018, Newport, RI, USA.
- 2018** Invited lecture, Boron in the Americas (BORAM), June 26th–30th 2018, Boston College, Boston, USA.
- 2018** Invited lecture, Early Career Investigators Symposium, 101st Canadian Chemistry Conference and Exhibition, June 2018, Edmonton, Canada.
- 2018** 23rd May 2018, University of Calgary, Canada.
- 2018** Invited lecture, April 30th–May 1st 2018, 3rd Japan/UK joint symposium in coordination chemistry, University of St. Andrews, UK.
- 2018** Invited lecture, 20th April 2018, Imperial College London, UK.
- 2018** Humboldt Colloquium, April 15th–17th 2018, University of Oxford, UK.
- 2018** Invited lecture, 23rd January 2018, University of Birmingham, UK.
- 2018** Invited lecture, 12th January 2018, Queen Mary University of London, UK.
- 2017** Invited lecture, 29th November 2017, University College London, UK.
- 2017** Invited lecture, High Achievers Dinner, Keynote speaker, 23rd September 2017, Trent College, UK.
- 2017** Invited plenary lecture, Dalton Younger Members Event, September 2017, Bath, UK.
- 2017** Invited lecture, 15th August 2017, University of Bern, Switzerland.
- 2017** Invited lecture, Main Group Transformations and Catalysis Symposium, 100th Canadian Chemistry Conference and Exhibition, June 2017, Toronto, Canada.
- 2017** Boron in Modern Organic Synthesis and Catalysis Symposium, 100th Canadian Chemistry Conference and Exhibition, June 2017, Toronto, Canada.
- 2017** Invited lecture, 12th April 2017, University of East Anglia, UK.
- 2017** Invited lecture, 21st March 2017, RWTH Aachen University, Germany.
- 2017** Invited lecture, 21st February 2017, Bath University, UK.
- 2017** Invited lecture, McCamley Lecture, 1st February 2017, University of York, UK.
- 2017** Invited lecture, 24th January 2017, York University, Toronto, Canada.
- 2016** Invited lecture, SCI Review lecture, 1st December 2016, London, UK.
- 2016** Invited lecture, 11th October 2016, University of Oxford, UK.
- 2016** Invited lecture, 25th August 2016, TU Berlin, Germany.
- 2016** Invited lecture, 21st July 2016, Bielefeld, Germany.
- 2016** Boron in the Americas (BORAM), June 25th–28th 2016, Queen's University, Kingston, Canada.
- 2016** Invited lecture, main group symposium, 24th June 2016, University of Toronto, Canada.
- 2016** Invited lecture, 99th Canadian Chemistry Conference and Exhibition, Advances in Main Group Chemistry Symposium, June 5th–9th 2016, Halifax, Canada.
- 2016** 99th Canadian Chemistry Conference and Exhibition, General Organic Symposium, June 5th–9th 2016, Halifax, Canada.
- 2016** Invited lecture, 8th March 2016, Humboldt University Berlin.
- 2016** Clara Immerwahr Award lecture, 12th February 2016, Berlin, Germany.
- 2016** Invited lecture, 3rd February 2016, University of Leicester, UK.
- 2016** Invited lecture, 27th January 2016, Belfast University, UK.
- 2016** Invited lecture, RSC Organic Division South-West Regional Meeting, 13th January 2016, University of Southampton, UK.
- 2015** Invited lecture, The International Chemical Congress of Pacific Basin Societies, Lewis Acid/Base Pair Chemistry in Molecular Transformations Symposium, December 15th–20th 2015, Honolulu, Hawaii, USA.

- 2015** The International Chemical Congress of Pacific Basin Societies, Catalysis and Energy Storage symposium, December 15th–20th 2015, Honolulu, Hawaii, USA.
- 2015** Invited lecture, 25th November 2015, Goethe-Universität Frankfurt am Main, Germany.
- 2015** Invited lecture, 24th November 2015, Heidelberg, Germany.
- 2015** Invited lecture, 23rd November 2015, KIT, Karlsruhe, Germany.
- 2015** Gregynog Synthesis Meeting, September 9th–11th 2015, Newtown, Powys, Wales, UK.
- 2015** IRIS 14 meeting, July 26th–31st 2015, Regensburg, Germany.
- 2015** Invited lecture, 26th June 2015, Brock University, St. Catharines, Canada.
- 2015** Invited lecture, 25th June 2015, University of Toronto, Toronto, Canada.
- 2015** invited lecture, 19th June 2015, McGill University, Montreal, Canada.
- 2015** 98th Canadian Chemistry Conference and Exhibition, June 13th–17th 2015, Ottawa, Canada.
- 2015** Invited lecture, 98th Canadian Chemistry Conference and Exhibition, RSC-UK Symposium, June 13th–17th 2015, Ottawa, Canada.
- 2015** EPSRC Dial-a-Molecule and Beyond the Molecule: Directed Assembly Grand Challenge Network Event, May 19th–20th 2015, Leeds, UK.
- 2015** Invited lecture, Cardiff Chemistry Conference, May 11th–12th 2015, Cardiff University, UK.
- 2015** Invited lecture, Southern Dalton Meeting, 20th–21st April 2015, University of Sussex, UK.
- 2015** Dial-a-Molecule Meeting: Catalytic Sustainability in the Future, 13th February 2015, Manchester, UK.
- 2014** Meeting of Inorganic Chemists Recently Appointed (MICRA), 10th–12th September 2014, Huddersfield, UK.
- 2014** Lecture, IMEBORON conference, 24th–28th August 2014, Prague, Czech Republic.
- 2014** Lecture, IMEBORON conference, 24th–28th August 2014, Prague, Czech Republic.
- 2014** Lecture, 23rd June 2014, University of Tübingen, Germany.
- 2014** Award lecture, 21st–26th June 2014, Euroscience Open Forum (ESOF), Copenhagen, Denmark.
- 2014** Lecture, 10th June 2014, University of Guelph, Canada.
- 2014** Lecture, 11th June 2014, University of Windsor, Canada.
- 2014** Invited lecture, 97th Canadian Chemistry Conference and Exhibition, invited lecture (Main Group Symposium), 1st–5th June 2014, Vancouver, Canada.
- 2014** Invited lecture, 16th May 2014, University of St Andrews, UK.
- 2014** Invited lecture, 6th May 2014, University of Cardiff, UK.
- 2014** Award lecture, 24th April 2014, University of Durham, UK.
- 2014** Award lecture, 23rd April 2014, University of Strathclyde, UK.
- 2014** Award lecture, 21st April 2014, University of Bristol, UK.
- 2014** Award lecture, Dalton 2014, 15th –17th April 2014, University of Warwick, UK.
- 2014** Lecture, Network Meeting of the Alexander von Humboldt Foundation, April 2014, Berlin, Germany.
- 2014** Invited lecture, 12th February 2014, University of Heidelberg, Germany.
- 2014** 3 minute presentation, A.T. Kearney Scholarship, Falling Walls Conference, 8th November 2013, Berlin, Germany.
- 2014** Lecture, Annual Meeting of the RSC Main Group Chemistry Interest Group, 27th September 2013, University of Oxford, UK.
- 2014** Invited lecture, 29th August 2013, University of Cambridge, UK.
- 2014** Invited lecture, 22nd August 2013, University of Manchester, UK.