

David William Lupton, PhD

Professor

Co-Director and Theme Leader (Organocatalysis) of Monash Catalysis Centre (MonCat)

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Member Royal Society of Chemistry (mRSC)

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gScholar: <https://scholar.google.com.au/citations?user=XjLa6JgAAAAJ&hl=en>



## APPOINTMENTS AND QUALIFICATIONS

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- 2018-            **Professor**, Monash University, Victoria, Australia
- 2017            Director-Monash Analytical Platform
- 2016-2018     Associate Dean Research—*declined*.
- 2016-            Associate Head (Research).
- 2015-            **Associate Professor**, Monash University, Victoria, Australia
- 2015-            Co-founder and director of the Monash Catalysis Centre (MonCat) (with Prof. Cameron Jones)
- *School of Chemistry (Monash) and Research School of Chemistry (ANU) supported centre for Elementally sustainable Catalysis (Biocatalysis, Organocatalysis, Main group catalysis).*
- 2012-2015     Australian Research Council Future Fellow.
- 2012-            **Senior Lecturer**, Monash University, Victoria, Australia.
- 2007-2011     **Lecturer**, Monash University, Victoria, Australia.
- 2005-2007     Post-doctoral Research Fellow.
- Supervisor: *Professor Barry M. Trost*, Stanford University, Palo Alto California, USA.
- 2001-2005     Doctor of Philosophy.
- Supervisor: *Professor Martin G. Banwell* Australian National University, ACT, Australia.
- 2001            Bachelor of Science (Honours).
- Supervisor: *Professor Dennis K. Taylor* University of Adelaide, SA, Australia.

## MAJOR AWARDS AND INTERNATIONAL LECTURESHIPS

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- 2018            Tarrant visiting lectureship, University of Florida, **USA**
- 2015-2017     Alexander von Humboldt Ludwig-Leichardt Awardee (with *Professor Herbert Mayr*; LMU, Muenchen, Germany)
- 2013            Rennie Memorial Medallist of the RACI.
- 2012-            Editorial Advisory Board-*Organic and Biomolecular Chemistry*.
- 2012            Lectureship, Colorado State University, **USA**.

- 2012 Beckwith lectureship of the RACI.
- 2012 Thieme Chemistry Journals Award.
- *Award of the Thieme editorial board to “outstanding Assistant Professors near the beginning of their careers.”*
- 2005 Sir Keith Murdoch fellow of the American Australian Association.
- *Postdoctoral fellowships.*

#### MAJOR COMPETITIVE RESEARCH FUNDING

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- 2017-2019 Australian Research Council Discovery Project (DP170101522—3 year).
- *Sole CI: 316K*
- 2015-2018 Australian Research Council Discovery Project (DP150101522—4 year).
- *Sole CI: 420K*
- 2014-2017 CSIRO OCE postdoctoral fellowship with T. Polyzos (*awarded to Dr Milena Czyz*)
- **490K**
- 2012-2015 Australian Research Council Future Fellowship (FT110100319).
- **712K**
- 2012-2014 Australian Research Council Discovery Project (DP120101315).
- *Lead CI: 380K*
- 2008-2010 Australian Research Council Discovery Project (DP0881137).
- *Sole CI: 330K*

#### MONASH AWARDS AND GRANTS

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- 2015 Faculty of Science *Award for Excellence in Postgraduate Supervision*
- 2014 Faculty of Science *Award for Excellence from a Mid-Career Researcher.*

#### Internal Grants

- 2015 MonCat establishment fund
- **60K** (Jones, Lupton)
- 2013 Monash Science Equipment Grant (*Microfluidics*).
- **64K**
- 2012 Monash Early Career Equipment Grant (*High throughput reaction discovery*).
- **120K**
- 2011-2012 Monash University Research Accelerator (*Award for outstanding B and C academic*).
- **90K**

## MAJOR COMMUNITY ACTIVITY

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- 2019 President RACI Organic Chemistry Division
- 2017 Organic Chemistry organising committee *Royal Australian Chemical Institute (RACI) National Congress*, Melbourne.
- 2014 Catalysis Symposium Chair *Royal Australian Chemical Institute (RACI) National Congress*, Adelaide.
- 2012- Secretary of the RACI Victorian Branch-*Organic Division*.
- 2013-2014 President of the RACI Victorian Branch-*Bioactive Division*.
- 2007-2009 Secretary of the RACI Victorian Branch-*Bioactive Division*.

## PUBLICATION LIST (AS OF 23<sup>RD</sup> JULY 2018)

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### Summary of Citation Metrics, see GScholar:

[https://scholar.google.com.au/citations?hl=en&user=XjLa6JgAAAAJ&view\\_op=list\\_works&sortby=pubdate](https://scholar.google.com.au/citations?hl=en&user=XjLa6JgAAAAJ&view_op=list_works&sortby=pubdate)

### Books and Book Chapters (B1)

2. Zhang, C.; Lupton, D. W. N-Heterocyclic Carbene Catalysis via the  $\alpha,\beta$ -Unsaturated Acyl Azolium. In *N-Heterocyclic carbenes and Organocatalysis*; Biju, A. K., Ed.; Wiley **2018** (*in press*)
1. Candish, L.; Lupton, D. W. Total Synthesis of (-)-7-Deoxyloganin exploiting N-Heterocyclic Carbene Catalysis with  $\alpha,\beta$ -Unsaturated Enol Esters. In *Strategies and Tactic in Organic Synthesis, Volume 11*; Harmata, M., Ed.; Elsevier **2015**, pg. 309-334

### Peer Reviewed Publications (C1)

83. Enantioselective N-heterocyclic carbene catalyzed bis(enoate) Rauhut-Currier reaction  
Song Bae, Changhe Zhang, Rachel M. Gillard, David W. Lupton\* *Angew. Chem. Int. Ed.* **2019**, DOI: 10.1002/anie.201907111
82. N-Heterocyclic carbene catalyzed (5+1) annulations exploiting a vinyl dianion synthon strategy  
Xuan B. Nguyen, Yuji Nakano, Nisharnthi M. Duggan, Lydia Scott, Martin Breugst, David W. Lupton\* *Angew. Chem. Int. Ed.* **2019**, DOI: 10.1002/anie.201905475
81. Enantioselective N-heterocyclic carbene catalysis that exploits imine umpolung  
Jared E. M. Fernando, Yuji Nakano, Changhe Zhang, David W. Lupton\* *Angew. Chem. Int. Ed.* **2019**, 58, 4007
81. Rhodium catalyzed template-assisted distal para- C-H olefination  
Uttam Dutta, Sudip Maiti, Sandeep Pimparkar,<sup>a</sup> Siddhartha Maiti, Lawrence R. Gahan, Elizabeth H. Krenske,\* David W. Lupton,\* Debabrata Maiti\* *Chem. Sci.* **2019**, DOI: 10.1039/c9sc01824g
80. Enantioselective Total Synthesis of (-)- $\Delta^9$ -Tetrahydrocannabinol via N-Heterocyclic Carbene Catalysis  
Adam Ametovski, David W. Lupton\* *Org. Lett.* **2019**, 21, 1212.

79. cryoEM-Guided Development of Antibiotics for Drug-Resistant Bacteria  
Matthew J. Belousoff, Hari Venugopal, Alexander Wright, Sameuel Seoner, Isabella Stuart, Chris Stubenrauch, Rebecca S. Bamert, David W. Lupton,\* Trevor Lithgow\* *ChemMedChem*. **2019**, 14, 527.
78. Enantioselective N-heterocyclic carbene catalyzed cyclopentene synthesis via the b-azolium ylide  
Lydia Scott, Yuji Nakano, Changhe Zhang, David W. Lupton\* *Angew. Chem. Int. Ed.* **2018**, 57, 10299
77. Enantioselective N-heterocyclic carbene (NHC) catalysis via the dienyl acyl azolium  
Rachel Gillard, Jared Fernando, David W. Lupton\* *Angew. Chem. Int. Ed.* **2018**, 57, 10299
76. RAFT polymer cross-coupling with boronic acids  
Hartwig Golf, Riley O'Shea, Carl Braybrook, Oliver E. Hutt, David W. Lupton,\* Joel Hooper\* *Chem. Sci.* **2018**, 9, 7370
75. Hydrogel-Immobilized Supercharged Proteins  
Eleanor C. Campbell, Jacob Grant, Yi Wang, Mahakaran Sandhu, Richard J. Williams, David R. Nisbet, Adam W. Perriman,\* David W. Lupton,\* Colin J. Jackson\* *Adv. Biosys.* **2018**, 2, 1700240
74. *Quantification of the Michael-Acceptor Reactivity of  $\alpha$ ,  $\beta$ -Unsaturated Acyl Azolium Ions.*  
Alison Levens, Feng An, Jared E. M. Fernando, Armin R. Ofial, David W. Lupton,\* Herbert Mayr\* *Topics in Catalysis* **2018**, 61, 585
- Special issue: *Dedicated to the memory of George A. Olah, creator of a new access to organic reactivity.*
73. *Oxidative Cross-Coupling of Boron and Antimony Nucleophiles via Palladium(I).*  
Quillon Simpson, Matthew J. G. Sinclair, David W. Lupton, Adrian B. Chaplin, Joel F. Hooper\* *Org. Lett.* **2018**, 20, 5537
72. *Oxidative Cross-Coupling of Boron and Antimony Nucleophiles via Palladium(I).*  
Ian A. Gass,\* Jinzhen Lu, Mousa Asadi, David W. Lupton, Craig M. Forsyth, Blaise L. Geoghegan, Boujemaa Moubaraki, John D. Cashion, Lisandra L. Martin, Alan M. Bond, Keith S. Murray\* *ChemPlusChem* **2018**, 83, 658
- Special issue: *In memory of Leone Spiccia.*
71. *Enantioselective N-Heterocyclic Carbene Catalyzed Synthesis of Functionalized Indenes.*  
Changhe Zhang, David W. Lupton\* *Org. Lett.* **2017**, 19, 4456
70. *N-Heterocyclic Carbene Catalysis via the  $\alpha,\beta$ -Unsaturated Acyl Azolium.*  
Changhe Zhang, Joel F. Hooper, David W. Lupton\* *ACS Catal.* **2017**, 7, 2583
70. *Phosphine catalysed (5 + 1) annulation of ynone/cinnamates with primary amines*  
Jhi Ametovki, Uttam Dutta, Laura Burchill, Debabrata Maiti, David W. Lupton,\* Joel F. Hooper\* *Chem. Commun.* **2017**, 53, 13071
69. *Auxiliary-Directed C(sp<sup>3</sup>)-H Arylation by Synergistic Photoredox and Palladium Catalysis.*  
Milena L. Czyz, David W. Lupton, Anastasios Polyzos\* *Chem.-A Eur. J.* **2017**,  
DOI:10.1002/chem.201704045

68. *The redesign of oxazolidinone antibiotics in response to Staphylococcus aureus.*  
David W. Lupton, Matthew J Belousoff\* *Future Microbiology* **2017**, DOI:10.2217/fmb-2017-0126
67. *N-Heterocyclic Carbene Catalyzed Transformylation.*  
Jared E. M. Fernando, Alison Levens, Daniel Mook, David W. Lupton\* *Synthesis* **2017**, 55, 16136
66. *Catalytic Arene meta-C–H Functionalization Exploiting a Quinoline Based Template.*  
Uttam Dutta, Atanu Modak, Bangaru Bhaskararao, Milan Bera, Sukdev Bag, Anirban Mondal, David W. Lupton,\* Raghavan B. Sunoj,\* Debabrata Maiti\* *ACS Catal.* **2017**, 7, 3162.
65. *Hexahalorhenate(IV) salts of metal oxazolidine nitroxides.*  
Anders H. Pedersen, Blaise L. Geoghegan, Gary S. Nichol, David W. Lupton, Keith S. Murray, Jose Martinez-Lillo, Ian A. Gass, Euan K. Brechin *Dalton Trans.* **2017**, 46, 5250
64. *Enantioselective (4+2) Annulation of Donor–Acceptor Cyclobutanes by N-Heterocyclic Carbene Catalysis.*  
Kim Nguyen, David W. Lupton\* *Aust. J. Chem.* **2017**, 70, 436
63. *All carbon (4 + 2) annulations catalyzed by N-Heterocyclic Carbene.*  
Alison Levens, David W. Lupton\* *Synlett* **2017**, 28, 415
- Invited contribution.
62. *Enantioselective N-Heterocyclic Carbene Catalyzed (4 + 2) Annulation of Donor-Acceptor Cyclobutanes.*  
Alison Levens, Adam Ametovski, David W. Lupton\* *Angew. Chem. Int. Ed.* **2016**, 55, 16136
61. *Influence of the N-Substituents on the Nucleophilicity and Lewis Basicity of N-Heterocyclic Carbenes.*  
Alison Levens, Feng An, Martin Breugst, Herbert Mayr, David W. Lupton\* *Org. Lett.* **2016**, 18, 3566
60. *Enantioselective N-Heterocyclic Carbene Catalysis by the Umpolung of Unsaturated Ketones.*  
Yuji Nakano, David W. Lupton\* *Angew. Chem. Int. Ed.* **2016**, 55, 11780
59. *All-carbon N-Heterocyclic Carbene Catalyzed (3 + 2) Annulations using Donor-Acceptor Cyclopropanes.*  
Lisa Candish, Rachel M. Gillard, Jared E. M. Fernando, Alison Levens, David W. Lupton\* *Isr. J. Chem.* **2016**, 56, 522.
- Invited contribution on Donor Acceptor cyclopropanes and butanes. *Prof.'s H.-U. Reissig and D. Werz.*
58. *Aryl Nitriles from Alkynes Using tert.-Butyl Nitrite: Metal-Free Approach to alkyne cleavage.*  
Uttam Dutta, David W. Lupton,\* Debabrata Maiti\* *Org. Lett.* **2016**, 18, 860
- Highlighted in C and E news.
57. *Biodiesel synthesis using integrated acid and base catalysis in continuous flow.*  
Mousa Asadi, Joel F. Hooper, David W. Lupton,\* *Tetrahedron.* **2016**, 72, 3729
- Invited contribution to celebrate the award of the Elsevier prize to Prof. Neil Garg.
56. *Enantioselective N-heterocyclic carbene (NHC) catalyzed diene regenerative (4 + 2) annulation.*  
Alison Levens, Changhe Zhang, Lisa Candish, Craig Forsyth, David W. Lupton\* *Org. Lett.* **2015**, 17, 5332
55. *The Regioselective Iodination of Quinolines, Quinolones, Pyridones, Pyridines and Uracil.*  
Uttam Dutta, Arghya Deb, David W. Lupton,\* Debabrata Maiti\* *Chem. Commun.* **2015** 51, 17744

54. *N-Heterocyclic carbene catalyzed synthesis of  $\delta$ -sultones via  $\alpha,\beta$ -unsaturated sulfonyl azolium Intermediates.*  
Andrei Ungureanu, Alison Levens, Lisa Candish, David W. Lupton\* *Angew. Chem. Int. Ed.* **2015**, *54*, 11780
53. *N-Heterocyclic carbene catalyzed redox isomerization of esters to functionalised benzaldehydes.*  
Lisa Candish, Alison Levens, David W. Lupton\* *Chem. Sci.* **2015**, *6*, 2366
52. *Evaluation of reversible interconversion in comprehensive two-dimensional gas chromatography using enantioselective columns in first and second dimensions.*  
Sabrina Kroger, Yong Foo Wong, Sung-Tong Chin, Jacob Grant, David W. Lupton, Philip J. Marriott\* *J. Chromatogr. A* **2015**, *1404*, 104
51. *Electrosynthesis of Highly Transparent Cobalt Oxide Water Oxidation Catalyst Films from Cobalt Aminopolycarboxylate Complexes.*  
Shannon A. Bonke, Mathias Wiechen, Rosalie K. Hocking, Xi-Ya Fang, David W. Lupton, Douglas R. MacFarlane, Leone Spiccia\* *ChemSusChem* **2015**, *8*, 1394
50. *Enantioselective All-Carbon (4+2) Annulation by N-Heterocyclic Carbene Catalysis.*  
Lisa Candish, Alison Levens, David W. Lupton\* *J. Am. Chem. Soc.* **2014**, *136*, 14397
49. *The Fukuyama reduction and integrated thioesterification/Fukuyama reduction of thioesters and acyl chlorides using continuous flow.*  
Mousa Asadi, Shannon Bonke, Anastasios Polyzos,\* David W. Lupton\* *ACS Catal.* **2014**, *4*, 2070
48. *Lewis base catalysis of three  $n-\pi^*$  mediated reaction with N-heterocyclic carbenes (NHCs), isothioureas, bicyclic tertiary amines, and electron rich pyridyls.*  
Lisa Candish, Yuji Nakano, David W. Lupton\* *Synthesis.* **2014**, *46*, 1823
47. *Enantioselective Pd-Catalysed Deallylative  $\gamma$ -Lactonisation of Propargyl Carbazolone Allyl Carbonates: Mechanistic Insight into their Decarboxylative Allylation.*  
Quillon Simpson, Robert Konrath, David W. Lupton\* *Aus. J. Chem.* **2014**, *67*, 1353
- Special issue for *Professor Roger Brown.*
46. *Manganese(II) Oxazolidine Nitroxide Chelates: Structure, Magnetism, and Redox Properties.*  
Ian A. Gass, Mousa Asadi, David W. Lupton, Boujema Moubaraki, Alan M. Bond, Si-Xuan Guo Keith S. Murray\* *Aus. J. Chem.* **2014**, *67*, 1618
45. *N-Heterocyclic Carbene (NHC) Catalysed Cascade Olefin Isomerisation Intramolecular Diels-Alder Reaction.*  
Marcin Kowalczyk, David W. Lupton\* *Angew. Chem. Int. Ed.* **2014**, *53*, 5314.
- Highlighted in *Chemistry in Australia.*
44. *Solvate Dependent Spin-crossover and Exchange in Cobalt Nitronyl Nitroxides.*  
Ian A. Gass, Subrata Tewary, Goplan Rajaraman, Mousa Asadi, David W. Lupton, Boujema Moubaraki, Keith S. Murray\* *Inorg. Chem.* **2014**, *53*, 5055

43. *Palladium[II] Catalysed C(sp<sup>3</sup>)-H Oxidation of Dimethyl Carbamoyl Tetrahydrocarbazoles.*  
Yuji Nakano, David W. Lupton\* *Chem. Commun.* **2014**, 50, 1757.
42. *Iodobenzene-Catalyzed Oxabicyclo[3.2.1]Octane and [4.2.1]Nonane Synthesis via Cascade C–O/C–C Formation.*  
Marsewi Ngatimin, Raphael Frey, Alision Levens, Yuji Nakano, Marcin Kowalczyk, Kristina Konstas, Oliver Hutt,\* David W. Lupton\* *Org. Lett.* **2013**, 15, 5858.
41. *N-tert-Butyl-Triazolylidenes: Electron Rich Catalysts for the Enantioselective (3 + 2) Annulation of  $\alpha,\beta$ -Unsaturated Acyl Azoliums.*  
Lisa Candish, Craig M. Forsyth, David. W. Lupton\* *Angew. Chem. Int. Ed.* **2013**, 52, 9149.  
Highlighted in *Chemistry in Australia*.
40. *C–C Bond Fragmentation by Grob/Eschenmoser reactions, Applications in Dendrimer Synthesis.*  
Judith Hierold, David W. Lupton\* *Org. Biomol. Chem.* **2013**, 11, 6140.
39. *Studies on the Enantioselective Synthesis of Carbazolones as Intermediates in *Aspidosperma* and *Kopsia* Alkaloid synthesis.*  
Christopher J. Gartshore, David W. Lupton\* *Aust. J. Chem* **2013**, 66, 882
- Invited *SynthCon2* contribution.
38. *SynthCon2: A Forum for Australian Organic Chemists.*  
David W. Lupton\* *Aust. J. Chem.* **2013**, 66, 843
37. *Observation of Ferromagnetic Exchange, Spin-crossover, Reductively Induced Oxidation and Field Induced Slow Magnetic Relaxation in Monomeric Cobalt Nitroxides.*  
Ian A. Gass, Subrata Tiwari, Ayman Nafady, Nicholas. F. Chilton, Christopher J. Gartshore, Mousa Asadi, David W. Lupton, Boujemaa Moubaraki, Alan M. Bond, John F. Boas, Gopalan Rajaraman, Keith S. Murray\* *Inorg. Chem.* **2013**, 53, 7557
36. *1,3-Dihydro-4,5-dimethyl-1,3-bis(1-methylethyl)-2H-imidazol-2-ylidene.*  
Alison Levens, Marcin Kowalczyk, David. W. Lupton\* *eEROS* **2013**
35. *Enantioselective Palladium Catalyzed Decarboxylative Allylation of Carbazolones and Indolones: Formal Synthesis of (-)-Kopsihainanine A.*  
Christopher J. Gartshore, David W. Lupton\* *Angew. Chem. Int. Ed.* **2013**, 52, 4113
- Highlighted in *Synfacts* (2013, 9, 752).
  - Highlighted in *Chemistry in Australia*.
34. *N-Heterocyclic Carbene Catalyzed Ireland-Coates Claisen rearrangement: Synthesis of functionalized  $\beta$ -lactones.*  
Lisa Candish, David W. Lupton\* *J. Am. Chem. Soc.* **2013**, 135, 58
- Highlighted in *Chemistry in Australia*.
  - ISI highly cited (*top 1% in the field of chemistry*)
33. *Acyl Anion Free N-heterocyclic Carbene Catalysis.*  
Sarah, J. Ryan, Lisa Candish, David. W. Lupton\* *Chem. Soc. Rev.* **2013**, 42, 4906  
ISI highly cited (*top 1% in the field of chemistry*)

32. *1,3-Dipolar Cycloaddition of Unstabilised Azomethine Ylides by Lewis Base Catalysis.*  
Shveta Pandiancherri, Sarah J. Ryan, David W. Lupton\* *Org. Biomol. Chem* **2012** 10, 7903
31. *Synthesis of spirocyclic  $\gamma$ -lactones by cascade Beckwith-Dowd ring expansion lactonization.*  
Judith Hierold, David W. Lupton\* *Org. Lett.* **2012**, 14, 3412
30. *N-Heterocyclic carbene Cascade Catalysis: Dual Bronsted/Lewis base Rearrangement of Cyclopropyl enol esters to Dihydropyranones.*  
Lisa Candish, David W. Lupton\* *Chem. Sci.* **2012**, 3, 380
- Highlighted in *Chemical Sciences* blog and Chemistry in Australia.
  - 4<sup>th</sup> most accessed *Chemical Science* article in October 2011
29. *Synthetic and Quantum Mechanical Studies into the N-Heterocyclic Carbene Catalyzed (4 + 2) Cycloaddition.*  
Sarah, J. Ryan, Andreas Stasch, Michael Paddon-Row,\* David W. Lupton\* *J. Org. Chem.* **2012**, 77, 8831
28. *Concise formal synthesis of (-)-7-deoxyloganin via N-heterocyclic carbene catalysed rearrangement of  $\alpha,\beta$ -unsaturated enol esters.*  
Lisa Candish, David W. Lupton\* *Org. Biomol. Chem.* **2012**, 9, 8182
27. *Iodobenzene Catalysed Synthesis of Spirofurans and Benzopyrans by Oxidative Cyclisation of Vinylogous esters.*  
Marsewi Ngatimin, Raphael Frey, Cecily Andrews, David W. Lupton,\* Oliver E. Hutt\* *Chem. Commun.* **2011**, 47, 11778
26. *N-Heterocyclic carbene catalyzed (4 + 2) Cycloaddition/ Decarboxylation of Silyl Dienol Ethers with  $\alpha,\beta$ -unsaturated Acid Fluoride.*  
Sarah, J. Ryan, Lisa Candish, David W. Lupton\* *Synlett* **2011**, 2275
- Invited *Synpact* account.
25. *Enabling the Development of N-Heterocyclic carbene catalyzed Reactions: Practical Methods for the Preparation of 1-Acyl-2-Alkylcycloalkenes from Cycloalkanones.*  
Sarah, J. Ryan, Lisa Candish, Ivan Martinez, David W. Lupton\* *Aust. J. Chem.* **2011**, 64, 1148
- Invited contribution to issue on NHCs
24. *Chiral Lanthanoid Dimers Ligated by Carbohydrate-based Diketonates: Catalytic and Luminescent Properties.*  
William J. Gee, Judith Hierold, Jonathan G. MacLellan, Phillip C. Andrews, David W. Lupton, Peter C. Junk\* *Eur. J. Inorg. Chem.* **2011**, 25, 3755
23. *N-Heterocyclic Carbene Catalyzed (4 + 2) Cycloaddition/Decarboxylation of Silyl Dienol Ethers with  $\alpha,\beta$ -Unsaturated Acid Fluorides.*  
Sarah J. Ryan, Lisa Candish, David W. Lupton\* *J. Am. Chem. Soc.* **2011**, 133, 4694
- Highlighted in *Synfacts* (2011, 558).
  - Highlighted in Chemistry in Australia.
22. *Anion Dependent Redox Changes in Iron Bis-terdentate Nitroxide {NNO} Chelates.*  
Ian A. Gass, Christopher J. Gartshore, David W. Lupton, Boujemaa Moubaraki, Ayman Nafady, Alan M.



21. *The Grob/Eschenmoser fragmentation of cycloalkanones bearing  $\beta$ -electron withdrawing groups: A general strategy to acyclic synthetic intermediates.*  
Judith Hierold, Tina Hsia, David W. Lupton\* *Org. Biomol. Chem.* **2011**, *9*, 783
20. *Preparation of 2-azaallyl anions and imines from N-chloroamines and their cycloaddition and allylation.*  
Shveta Pandiancherri, David W. Lupton\* *Tetrahedron Lett.* **2011**, *52*, 671
19. *Readily Accessible Oxazolidine Nitroxyl Radicals: Bifunctional Co-catalysts for Simplified Cu(II) based Aerobic Oxidation.*  
Christopher J. Gartshore, David W. Lupton\* *Adv. Synth. Catal.* **2010**, *352*, 3321
18. *The Total Synthesis of (-)-7-Deoxyloganin via N-Heterocyclic Carbene Catalyzed Rearrangement of  $\alpha,\beta$ -unsaturated Enol Esters.*  
Lisa Candish, David W. Lupton\* *Org. Lett.* **2010**, *12*, 4836
- Highlighted in Organic-Chemistry Portal <http://www.organic-chemistry.org/Highlights/2011/18April.shtm>
17. *A Pd[0]-catalyzed Ullmann cross-coupling/reductive cyclisation approach to C-3 mono-alkylated oxindoles and related compounds.*  
Martin G. Banwell,\* David T. J. Loong, David W. Lupton, David M. Pinkerton, Jayanta K. Ray, Anthony C. Willis *Tetrahedron* **2010**, *47*, 9252
16. *A divergent synthesis of modular dendrimers via sequential C-C fragmentation thio-Michael addition.*  
Judith Hierold, Angus Gray-Weale David W. Lupton\* *Chem. Commun.* **2010**, *46*, 6789
- Highlighted in *Synfacts* (2010, 1246).
15. *The development of catalytic enantioselective polyvalent iodine mediated reactions.*  
Marsewi Ngatimin, David W. Lupton\* *Aus. J. Chem.* **2010**, *63*, 653
14. *N-Heterocyclic Carbene-Catalyzed Generation of  $\alpha,\beta$ -Unsaturated Acyl Imidazoliums: Synthesis of Dihydropyranones by their Reaction with Enolates.*  
Sarah J. Ryan, Lisa Candish, David W. Lupton\* *J. Am. Chem. Soc.* **2009**, *131*, 14176
- Highlighted in the Organic-Chemistry Portal <http://www.organic-chemistry.org/Highlights/2010/12April.shtm>
  - Highlighted in *Synfacts* (2009, 1405).
  - Highlight by Professor Dieter Enders *Angew. Chem. Int. Ed.* **2013**, *53*, 1485
13. *The  $\alpha$ -halogenation of  $\alpha,\beta$ -unsaturated carbonyls and dihalogenation of alkenes using bisacetoxiodobenzene/pyridine hydrohalides.*  
Marsewi Ngatimin, Christopher J. Gartshore, Jeremy Kindler, Sudha Naidu, David W. Lupton\* *Tetrahedron Lett.* **2009**, *50*, 6008
12. *A Synthetic and Computational Investigation into the Direct Synthesis of  $\alpha$ -Hydroxymethylated Enones from  $\beta$ -keto Phosphonates.*  
Sarah, J. Ryan, Christopher D. Thompson, David W. Lupton\* *Aus. J. Chem.* **2009**, *62*, 720

## Publications from supervised studies (1-11 and 17)

11. *The synthesis of compounds related to the indole–indoline core of the vinca alkaloids (+)-vinblastine and (+)-vincristine.*  
Michael J. Harvey, Martin G. Banwell,\* David W. Lupton *Tetrahedron Lett.* **2008**, 49, 4780
10. *Dinuclear Zinc Catalyzed Aza-Henry reaction.*  
Barry M. Trost\* and David W. Lupton *Org. Lett.* **2007**, 9, 2023
9. *Tandem Radical Cyclization reactions, initiated at Nitrogen, as an Approach to the CDE-tricyclic cores of certain post-Secodine Alkaloids.*  
Martin G. Banwell\* and David W. Lupton. *Heterocycles* **2006**, 68, 71
8. *The Application of the Palladium[0]-Catalysed Ullmann Cross–Coupling in the Development of a Total Synthesis of (±)-Aspidospermidine; an Approach to the Lower Hemisphere of the Binary Indole-Indoline Alkaloid Vinblastine.*  
Martin G. Banwell,\* David W. Lupton and Anthony C. Willis *Aus. J. Chem.* **2005**, 58, 722
7. *Application of Pd[0]-Catalysed Ullmann Cross-Coupling in Natural Product Chemistry: A Total Synthesis of (±)-Aspidospermidine.*  
Martin G. Banwell\* and David W. Lupton *Org. Biomol. Chem.* **2005**, 3, 213
6. *Whole-cell Biotransformation of m-Ethyltoluene into 1S,6R-5-Ethyl-1,6-dihydroxycyclohexa-2,4-dienecarboxylic Acid as an Approach to the C-Ring of the Binary Vinca Alkaloid Vinblastine.*  
Martin G. Banwell,\* Alison Edwards, David W. Lupton, Gregg Whited *Aust. J. Chem.* **2005**, 58, 14
5. *Synthesis of Quinolines, 2-Quinolones, Phenanthridines and 6(5H)-Phenanthridinones via Palladium[0]-Mediated Ullmann Cross-Coupling of 1-bromo-3-nitroarenes with β-Halo-enals, -Enones or -Esters.*  
Martin G. Banwell,\* David W. Lupton, Xinghua Ma, Jens Renner, Magne Sydes *Org. Lett.* **2004**, 6, 2741
4. *A Method of Indole Synthesis from o-Halonitroarenes.*  
Martin G. Banwell\* and David W. Lupton. International Patent No. WO 2004096766 A1 **2004**.
3. *Synthesis of Indoles via Palladium[0]-Mediated Ullmann Cross-Coupling of o-Halonitroarenes with α-Halo-enones or -enals.*  
Martin G. Banwell,\* Brian D. Kelly, Okanya J. Kokas, David W. Lupton. *Org. Lett.* **2003**, 5 2497
2. *First Examples of the Catalytic Asymmetric Ring-Opening of meso-1,2-Dioxines Utilising Cobalt(II) Complexes with Optically Active Tetradentate Schiff Base Ligands: Formation of Enantio-enriched Cyclopropanes.*  
Thomas D. Avery, Natalie F. Jenkins, Marc C. Kimber, David W. Lupton, Dennis K. Taylor\* *Chem. Commun.* **2002**, 28
1. *New Mechanistic Aspects on the Catalytic Transformation of Vinylthiiranes to Mono and Disubstituted 3,6-Dihydro-1,2-dithiins by Tungsten Pentacarbonyl Monoacetonitrile.*  
David W. Lupton, Dennis K. Taylor\* *Tetrahedron*, **2002**, 58, 4517

## PRESENTATIONS

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### Invited International presentations

- University of Copenhagen, **Denmark** (May 2019)
- Tsinghua University, Institute of Chemistry, Chinese Academy of Science, Beijing, **China** (2018)
- International Chemical Biology Society (ICBS), Vancouver, **Canada** (September 2018)
- FLOHET-2018 18<sup>th</sup> Florida Heterocyclic and Synthetic Conference, **USA** (March 2018)
- 100th Canadian Chemistry Conference and Exhibition, **Canada** (May 2017)
- 21<sup>st</sup> International Congress on Organic Synthesis, Mumbai, **India** (December 2016)
- Heron7-Reactive Intermediates, Gladstone, Queensland, **Australia** (July 2016)
- PACIFICHEM 2015, Honolulu, **USA** (December 2015)
- 25<sup>th</sup> International Society for Heterocyclic Chemistry Congress Santa Barbara, **USA** (August 2015)
- Gordon Research Conference-Heterocycles, **USA** (June 2015)
- 98<sup>th</sup> Canadian Chemical Society, Ottawa **Canada** (June 2015)
- RWTH Aachen, **Germany** (April 2015)
- École Polytechnique Fédérale de Lausanne, **Switzerland** (March 2015)
- Ludwig-Maximilians-Universität München, **Germany** (March 2015)
- Northwestern University, **USA** (June 2014)
- 15<sup>th</sup> Asian Chemical Congress, **Singapore** (September 2013)
- University of St Andrews, **UK** (August 2013)
- Heron6-Reactive Intermediates, Gladstone, Queensland, **Australia** (July 2013)
- University of Glasgow, **UK** (August 2013)
- Gordon Research Conference-Heterocycles, **USA** (June 2013)
- University of Florida, **USA** (June 2013)
- Emory University, **USA** (June 2013)
- Georgia Institute of Technology, **USA** (June 2013)
- Colorado State University, **USA** (August 2012)
- University of Michigan, Ann Arbor, **USA** (July 2012)
- University of Illinois at Chicago, **USA** (July 2011)
- Northwestern University, **USA** (July 2011)
- University of Alberta, **Canada** (July 2011)
- University of Saskatchewan, **Canada** (July 2011)
- 5<sup>th</sup> Chinese-Australian Symposium of Organic Chemistry, Hefei, **China** (September 2010)
- Heron5-Reactive Intermediates, Gladstone, Queensland, **Australia** (July 2010)

### Invited National Presentations

- Deakin University, Geelong (August 2017)
- Australian National University, Canberra (February 2017)
- University of Melbourne (May 2016)
- University of Sydney (March 2016)
- University of New South Wales (March 2016)
- University of Western Australia, Perth (May 2015)
- Curtin University, Perth (May 2015)
- Australian National University, Canberra (May 2014)
- Southern Highlands Conference on Heterocycles (August 2014)
- CSIRO, Melbourne (April 2013)
- Queensland University of Technology, Brisbane (April 2013)
- SynthCon2, Yarra Valley, Victoria, Australia (April 2013)
- University of New England, Armidale (April 2013)

- Heron6-Reactive Intermediates, Gladstone, Queensland (July 2013)
- RACI South Australia one day synthesis symposia (December 2012)
- Biota International, Melbourne (May 2012)
- University of Sydney, Sydney (November 2012)
- University of New South Wales, Sydney (November 2012)
- James Cook University, Townsville (November 2012)
- University of Melbourne, Melbourne (September 2012)
- University of Western Australia, Perth (June 2012)
- Curtin University, Perth (June 2012)
- University of Tasmania, Hobart (March 2012)
- Australian National University, Canberra (February 2012)
- University of Queensland, Brisbane (June, 2011)
- SynthCon1, Yarra Valley, Victoria, Australia (April 2011)
- University of Wollongong, Wollongong (April 2011)
- Southern Highlands Conference on Heterocycles (August 2011)
- University of Adelaide, Adelaide (February 2011)
- Australian National University, Canberra (June 2009)
- University of Sydney, Sydney (March 2008)

## REFEEREES

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Referees can be made available upon request.