

## Jonathan Clayden — Publications (to Dec 2025)

328. *De novo designed 3-helix bundle peptides and proteins with controlled topology and stability*  
Xiyue Leng, Katherine I. Albanese, Lia R. Golub, Arthur A. Norman, Jonathan Clayden, and Derek N. Woolfson  
*Chemical Science* 2025, **16**, 18632-18641
327. *Redox-powered autonomous directional C–C bond rotation under enzyme control*  
Jordan Berreur, Olivia F. B. Watts, Theo H. N. Bulless, Nicholas T. O'Donoghue, Ashley J. Winter, Jonathan Clayden, and Beatrice S. L. Collins  
*Nature*, 2025, **644**, 96-101
326. *Asymmetric Intramolecular alpha-Arylation of Polar Amino Acids Bearing beta Leaving Groups*  
Ömer Taşpınar, Daniel J. Leonard, Nathan Picois, Cornelia Göcke, Matej Žabka, Hazel A. Sparkes, and Jonathan Clayden  
*Angew. Chemie Int. Ed.* 2025, e202507713
325. *Using Colour to Control Conformation in a Chemical System Containing Multiple Tricyanofuran Photoacids*  
Matthew M. Wootten, Sofja Tshepelevitsh, Ivo Leito and Jonathan Clayden  
*Angew. Chemie Int. Ed.* 2025, e202502437
324. *Intramolecular Nucleophilic Vinylic Substitution (S<sub>N</sub>V) by Carbon Nucleophiles: Conformationally Directed Formation of Dienes from N,N'-Diallyl Ureas*  
Branca C. van Veen and Jonathan Clayden  
*Chem. Eur. J.* 2024, e202402352.
323. *Selective defluorination of trifluoromethyl substituents by conformationally induced remote substitution*  
Mehul H. Jesani, Maria Schwarz, Shiwhu Kim, Finlay L. Evans, Alexander White, Alex Browning, Roman Abrams and Jonathan Clayden  
*Angew. Chemie Int. Ed.* 2024, e202403477
322. *Benzo-fused Nitrogen Heterocycles by Asymmetric Ring Expansion and Stereochemically Retentive Re-contraction of Cyclic Ureas*  
Rajendra K. Mallick, Matej Žabka, and Jonathan Clayden  
*Angew. Chem. Int. Ed.* 2024, e202318417
321. *Anion-Dependent Hydrogen-Bond Polarity Switching in Ethylene-bridged Urea Oligomers*  
David P. Tilly, David T. J. Morris and Jonathan Clayden  
*Chem. Eur. J.* 2023, e202302210
320. *Dynamic and Persistent Cyclochirality in Hydrogen-Bonded Derivatives of Medium-Ring Triamines*  
David T. J. Morris, Steven M. Wales, Javier Echavarren, Matej Žabka, Giulia Marsico, John W. Ward, Natalie E. Pridmore and Jonathan Clayden  
*J. Am. Chem. Soc.* 2023, **145**, 19030–19041
319. *Electrochemical Synthesis of Biaryls by Reductive Extrusion from N,N'-Diarylureas*  
Ellie Stammers, Chris D. Parsons, Alastair J. J. Lennox, and Jonathan Clayden  
*Nature Communications*, 2023, **14**, 4561
318. *Conformational Preference in Difluoroacetamide Oligomers: Probing the Potential for Foldamers with C-H...O Hydrogen Bonds*  
Matej Žabka and Jonathan Clayden  
*Org. Biomol. Chem.*, 2023, **21**, 5939-5943
317. *Interrogating the configurational stability of atropisomers*  
Jean-Paul Heeb, Jonathan Clayden, Martin D. Smith, Roly J. Armstrong  
*Nature Protocols*, 2023, **18**, 2745–2771
316. *Switching imidazole reactivity by dynamic control of tautomer state in an allosteric foldamer*  
David P. Tilly, Jean-Paul Heeb, Simon J. Webb and Jonathan Clayden  
*Nature Communications*, 2023, **14**, 2647
315. *Screw Sense and Screw Sensibility: Communicating Information by Conformational Switching in Helical Oligomers*  
David T. J. Morris and Jonathan Clayden

*Chem. Soc. Rev.* 2023, **52**, 2480-2496

314. *Enantioselective intramolecular  $\alpha$ -arylation of benzylamine derivatives: synthesis of a precursor to levocetirizine*  
Rakesh K. Saunthwal, Maria Schwarz, Rajendra K. Mallick, William Terry-Wright, Jonathan Clayden  
*Angew. Chemie Int. Ed.* 2023, e202216758

313. *Dynamic Kinetic Resolution and Dynamic Kinetic Asymmetric Transformation of Atropisomers*  
Jordan Berreur, Beatrice S. L. Collins and Jonathan Clayden  
in *Science of Synthesis: Dynamic Kinetic Resolution (DKR) and Dynamic Kinetic Asymmetric Transformations (DYKAT)*, Bäckvall, J.-E., Ed.; Thieme: Stuttgart 2023, *1*, 441–483

312. *Supramolecular interactions between ethylene-bridged oligoureas: nanorings and chains formed by cooperative positive allostery*  
David P. Tilly, Matej Žabka, Inigo Vitorica-Yrezabal, Hazel A. Sparkes, Natalie Pridmore and Jonathan Clayden  
*Chem. Sci.* 2022, **13**, 13153-13159

311. *Biocatalytic Enantioselective Synthesis of Atropisomers*  
Olivia F. B. Watts, Jordan Berreur, Beatrice S. L. Collins and Jonathan Clayden  
*Acc. Chem. Res.* 2022, **55**, 3362–3375

310. *De novo design of discrete, stable  $3_{10}$ -helix peptide assemblies*  
Prasun Kumar, Neil G. Paterson, Jonathan Clayden and Derek N. Woolfson,  
*Nature* 2022, **607**, 387-392

309. *A Chemically Fuelled Molecular Automaton Displaying Programmed Migration of  $Zn^{2+}$  Between Alternative Binding Sites*  
Matthew M. Wootten, Sofja Tshepelevitsh, Ivo Leito and Jonathan Clayden,  
*Chem. Eur. J.* 2022, **28**, e202203347

308. *Hydrogen Bond Chains in Foldamers and Dynamic Foldamers*  
David T. J. Morris, Jonathan Clayden,  
in *Spectroscopy and Computation of Hydrogen-Bonded Systems*, ed M. J. Wojcik and Y. Ozaki, Wiley-VCH, 2022

307.  *$C(sp^3)$ -Arylation by Conformationally Accelerated Intramolecular Nucleophilic Aromatic Substitution ( $S_NAr$ )*  
Steven M. Wales, Rakesh K. Saunthwal, and Jonathan Clayden,  
*Acc. Chem. Res.* 2022, **55**, 1731-1747

306. *Reversible capture and release of a ligand mediated by a long-range relayed polarity switch in a urea oligomer*  
Steven M. Wales, David T. J. Morris and Jonathan Clayden  
*J. Am. Chem. Soc.* 2022, **144**, 2841-2846

305. *Inducing a pH-dependent conformational response by competitive binding to  $Zn^{2+}$  of a series of chiral ligands of disparate basicity*  
Matthew M. Wootten, Bryden A. F. Le Bailly, Sofja Tshepelevitsh, Ivo Leito and Jonathan Clayden,  
*Chem. Sci.* 2022, **13**, 2258-2269

304. *Enantioselective one-carbon expansion of aromatic rings by simultaneous formation and chromoselective irradiation of a transient coloured enolate*  
Rakesh K. Saunthwal, James Mortimer, Andrew J. Orr-Ewing and Jonathan Clayden,  
*Chem. Sci.* 2022, **13**, 2079-2085

303. *Identifying palladium culprits in amine catalysis*  
Mickaël Avanthay, Robin B. Bedford, Callum S. Begg, Dietrich Böse, Jonathan Clayden, Sean A. Davis, Jean-Charles Eloi, Georgy P. Goryunov, Ingo V. Hartung, Joseph Heeley, Kirill A. Khaikin, Matthew O. Kitching, Johannes Krieger, Pavel S. Kulyabin, Alastair J. J. Lennox, Roberto Nolla-Saltiel, Natalie E. Pridmore, Benjamin J. S. Rowsell, Hazel A. Sparkes, Dmitry V. Uborsky, Alexander Z. Voskoboynikov, Mark P. Walsh and Harry J. Wilkinson,  
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302. *Binding of L-kynurenine to X. campestris tryptophan 2,3-dioxygenase*  
Jaswir Basran, Elizabeth S. Booth, Laura P. Campbell, Sarah J. Thackray, Mehul H. Jesani, Jonathan Clayden, Peter C. E. Moody, Christopher G. Mowat, Hanna Kwon, Emma L. Raven  
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301. 'Reverse Biomimetic' Synthesis of *L*-Arogonate and its Stabilized Analogues from *L*-Tyrosine  
Louise Eagling, Daniel J. Leonard, Maria Schwarz, Iñaki Urruzuno, Grace Boden, J. Steven Wailes, John W. Ward, and Jonathan Clayden,  
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300. A Molecular Communication Channel Consisting of a Single Reversible Chain of Hydrogen Bonds in a Conformationally Flexible Oligomer  
David T. J. Morris, Steven M. Wales, David Tilly, Elliot H. E. Farrar, Matthew N. Grayson, John W. Ward, Jonathan Clayden,  
*Chem.* 2021, **7**, 2460-2472.
299. Scalable synthesis and coupling of quaternary  $\alpha$ -arylated amino acids:  $\alpha$ -aryl substituents are tolerated in  $\alpha$ -helical peptides  
Daniel J. Leonard, Francis Zieleniewski, Isabelle Wellhöfer, Emily G. Baker, John W. Ward, Derek N. Woolfson, and Jonathan Clayden,  
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298. *N*-Methyl Allylic Amines from Allylic Alcohols by Mitsunobu Substitution using *N*-Boc Ethyl Oxamate  
Branca C. van Veen, Steven M. Wales, and Jonathan Clayden,  
*J. Org. Chem.* 2021, **86**, 8538-8543
297. Triarylmethanes and their Medium-Ring Analogues by Unactivated Truce-Smiles Rearrangement of Benzanilides  
Roman Abrams, Mehul H. Jesani, Alex Browning and Jonathan Clayden,  
*Angew. Chem. Int. Ed.* 2021, **60**, 11272-11277.
296. Light-mediated control of activity in a photosensitive foldamer that mimics an esterase  
Matteo Pollastrini, Giulia Marafon, Jonathan Clayden, and Alessandro Moretto  
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295. Insight into mechanism of action and peptide-membrane interactions of Aib-rich peptides: multi-technique experimental and theoretical analysis  
Maria Giovanna Lizio, Mario Campana, Matteo De Poli, Damien F. Jefferies, William Cullen, Valery Andrushchenko, Nikola P. Chmel, Petr Bouř, Syma Khalid, Jonathan Clayden, Ewan Blanch, Alison Rodger, and Simon J. Webb,  
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294. Hydantoin-bridged medium ring scaffolds by migratory insertion of urea-tethered nitrile anions into aromatic C–N bonds  
Makenzie J. arogen, Emily Ellis, John W. Ward and Jonathan Clayden,  
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293. Automated solid-phase concatenation of Aib residues to form long, water-soluble, helical peptides  
Francis Zieleniewski, Derek N. Woolfson and Jonathan Clayden,  
*Chem. Commun.* 2020, **56**, 12049-12052.
292. Atropisomerism in diarylamines: structural requirements and mechanisms of conformational interconversion  
Romain Costil, Alistair J. Sterling, Fernanda Duarte and Jonathan Clayden,  
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291. Switchable foldamer ion channels with antibacterial activity  
Anna D. Peters, Stefan Borsley, Flavio della Sala, Dominic F. Cairns-Gibson, Marios Leonidou, Jonathan Clayden, George F. S. Whitehead, Inigo Vitorica-Yrzebal, Eriko Takano, John Burthem, Scott L. Cockroft and Simon J. Webb,  
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Roman Abrams and Jonathan Clayden,  
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289. Molecular Recognition by Zn(II)-Capped Dynamic Foldamers  
Natasha Eccles, Flavio della Sala, Bryden A. F. Le Bailly, George F. S. Whitehead, Jonathan Clayden and Simon J. Webb,  
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288. *An Aliphatic Bischler-Napieralski reaction: Dihydropyridones by Cyclocarbonylation of 3-Allylimidazolidin-4-ones*  
Mostafa M. Amer, Olatz Olaizola, Jennifer Carter, Hossay Abas, and Jonathan Clayden,  
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287. *Stuart Warren: 24 Dec 1938 – 22 Mar 2020*  
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*Org. Biomol. Chem.* 2020, **18**, 7236-7237 [Obituary]
286. *Fluorine and amide groups together at last*  
Jonathan Clayden  
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285. *Remote conformational responses to enantiomeric excess in carboxylate-binding dynamic foldamers*  
Natasha Eccles, Bryden A. F. Le Bailly, Flavio della Sala, Iñigo J. Vitorica-Yrezabal, Jonathan Clayden and Simon J. Webb,  
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284. *Amino acid-derived trans-N-chloroformylimidazolidinones: scalable, stereoselective synthesis, structure, and utility*  
Mostafa M. Amer, Hossay Abas, Daniel J. Leonard, John W. Ward and Jonathan Clayden  
*J. Org. Chem.* 2019, **84**, 7199-7206.
283. *Extended diethylglycine homopeptides formed by desulfurization of their tetrahydrothiopyran analogues*  
Marta De Zotti and Jonathan Clayden,  
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282. *N-Chloroformylimidazolidinone Enolates as 1,3-Dipolar Reagents for the Stereoselective Synthesis of 3,4-Dihydroisoquinolones*  
Hossay Abas, Mostafa M. Amer, Olatz Olaizola and Jonathan Clayden,  
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281. *Connective Synthesis of 5,5-Disubstituted Hydantoins by Tandem  $\alpha$ -Amination and  $\alpha$ -Arylation of Silyl Ketene Acetals*  
Rakesh K. Saunthwal, Matthew T. Cornall, Roman Abrams, John W. Ward and Jonathan Clayden,  
*Chem. Sci.* 2019, **10**, 3408-3412.
280. *Asymmetric and Geometry-selective  $\alpha$ -Alkenylation of  $\alpha$ -Amino Acids*  
Hossay Abas, Josep Mas-Roselló, Mostafa M. Amer, Derek J. Durand, Robin R. Groleau, Natalie Fey and Jonathan Clayden,  
*Angew. Chem. Int. Ed.* 2019, **58**, 2418-2422.
279. *Chemoenzymatic synthesis of substituted azepanes by sequential biocatalytic reduction and organolithium-mediated rearrangement*  
Wojciech Zawodny, Sarah L. Montgomery, James R. Marshall, James D. Finnigan, Nicholas J. Turner and Jonathan Clayden,  
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278. *Substituted dihydroisoquinolinones by iodide-promoted cyclocarbonylation of aromatic  $\alpha$ -amino acids*  
Mostafa M. Amer, Ana C. Carrasco, Daniel J. Leonard, John W. Ward and Jonathan Clayden,  
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277. *Enantioselectively functionalised phenytoin derivatives by diastereoselective intramolecular arylation of lithiated  $\alpha$ -amino nitriles*  
Josep Mas-Roselló, Mary Okoh and Jonathan Clayden,  
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Edwin C. Davison, Arun K. Ghosh, Nagaswamy Kumaragurubaran, David T. J. Morris, Jonathan Clayden,  
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275. *Asymmetric  $\alpha$ -Arylation of Amino Acids*

Daniel J. Leonard, John W. Ward and Jonathan Clayden,  
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Roman Abrams, Quentin Lefebvre and Jonathan Clayden,  
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Jessica E. Hill, Quentin Lefebvre, Laura A. Fraser and Jonathan Clayden,  
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Francis G. A. Lister, Natasha Eccles, Sarah J. Pike, Robert A. Brown, George F. S. Whitehead, James Raftery, Simon J. Webb and Jonathan Clayden,  
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Maria Giovanna Lizio, Valery Andrushchenko, Sarah J. Pike, Anna D. Peters, George F. S. Whitehead, Iñigo J. Vitórica-Yrezábal, Shaun T. Mutter, Jonathan Clayden, Petr Bouř, Ewan W. Blanch, and Simon J. Webb,  
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269. *Ring expansion and re-contraction for the synthesis of 1-aryl tetrahydroisoquinolines and tetrahydrobenzazepines from readily available heterocyclic precursors*

Jessica E. Hill, Johnathan V. Matlock, Quentin Lefebvre, Katie G. Cooper and Jonathan Clayden,  
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Catherine Adam, Anna D. Peters, M. Giovanna Lizio, George F. S. Whitehead, James Cooper, Scott L. Cockroft, Jonathan Clayden and Simon J. Webb,  
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265. *Dibenzazepinyl ureas as dual NMR and CD probes of helical screw-sense preference in conformationally equilibrating dynamic foldamers*

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