

# Publications and Presentations

## Peer-Reviewed Articles

- [Art1] Woodhouse, J. L., Thompson, J. O., Benda, J., Chapman, R. T., Hockett, P., Makhija, V., Mašín, Z., Reid, K. L., Springate, E., **Wyatt, A. S.**, *Quantitative analysis of aligned-molecule photoelectron angular distributions*. In: *Physical Review A* **111.1** (2025), p. 012815.
- [Art2] Abma, G. L., Parkes, M. A., Razmus, W. O., Zhang, Y., **Wyatt, A. S.**, Springate, E., Chapman, R. T., Horke, D. A., Minns, R. S., *Direct observation of a roaming intermediate and its dynamics*. In: *Journal of the American Chemical Society* **146.18** (2024), pp. 12595–12600.
- [Art3] Majchrzak, P., Zhang, Y., Kuibarov, A., Chapman, R., **Wyatt, A.**, Springate, E., Borisenko, S., Büchner, B., Hofmann, P., Sanders, C. E., *Access to the full three-dimensional Brillouin zone with time resolution, using a new tool for pump–probe angle-resolved photoemission spectroscopy*. In: *Review of Scientific Instruments* **95.6** (2024).
- [Art4] McGhee, H. G., Thompson, H. J., Thompson, J., Zhang, Y., **Wyatt, A. S.**, Springate, E., Chapman, R. T., Horke, D. A., Minns, R. S., Ingle, R. A., *Ultrafast photochemical processes in 1, 2-dichloroethene measured with a universal XUV probe*. In: *Physical Chemistry Chemical Physics* **26.45** (2024), pp. 28406–28416.
- [Art5] Sayers, C., Zhang, Y., Sanders, C., Chapman, R., **Wyatt, A.**, Chatterjee, G., Springate, E., Cerullo, G., Wolverson, D., Da Como, E., *Mapping the nonequilibrium order parameter of a quasi-two dimensional charge density wave system*. In: *Communications Physics* **7.1** (2024), p. 389.
- [Art6] **Wyatt, A. S.**, Lloyd, D. T., Chapman, R. T., Thornton, C., Majchrzak, P., Jones, A. J., Springate, E., O’Keeffe, K., *Attosecond emission delay from atoms and molecules using multi-dimensional XUV interferometry*. In: *New Journal of Physics* **26.11** (2024), p. 113017.
- [Art7] Sayers, C., Cerullo, G., Zhang, Y., Sanders, C., Chapman, R., **Wyatt, A.**, Chatterjee, G., Springate, E., Wolverson, D., Da Como, E., *Exploring the charge density wave phase of 1 T-TaSe 2: Mott or charge-transfer gap?* In: *Physical Review Letters* **130.15** (2023), p. 156401.
- [Art8] Thiré, N., Chatterjee, G., Pertot, Y., Albert, O., Karras, G., Zhang, Y., **Wyatt, A. S.**, Towrie, M., Springate, E., Greetham, G. M., *A versatile high-average-power ultrafast infrared driver tailored for high-harmonic generation and vibrational spectroscopy*. In: *Scientific Reports* **13.1** (2023), p. 18874.
- [Art9] Biswas, D., Jones, A. J., Majchrzak, P., Choi, B. K., Lee, T.-H., Volckaert, K., Feng, J., Markovic, I., Andreatta, F., Kang, C.-J., *Ultrafast triggering of insulator–metal transition in two-dimensional VSe<sub>2</sub>*. In: *Nano Letters* **21.5** (2021), pp. 1968–1975.
- [Art10] Downes-Ward, B., Warne, E. M., Woodhouse, J., Parkes, M. A., Springate, E., Percy, P. A., Zhang, Y., Karras, G., **Wyatt, A. S.**, Chapman, R. T., *Photodissociation dynamics of methyl iodide across the A-band probed by femtosecond extreme ultraviolet photoelectron spectroscopy*. In: *Journal of Physics B: Atomic, Molecular and Optical Physics* **54.13** (2021), p. 134003.
- [Art11] Majchrzak, P., Volckaert, K., Čabo, A. G., Biswas, D., Bianchi, M., Mahatha, S. K., Dendzik, M., Andreatta, F., Grønborg, S. S., Marković, I., *Spectroscopic view of ultrafast charge carrier dynamics in single-and bilayer transition metal dichalcogenide semiconductors*. In: *Journal of Electron Spectroscopy and Related Phenomena* **250** (2021), p. 147093.
- [Art12] Majchrzak, P., Pakdel, S., Biswas, D., Jones, A. J., Volckaert, K., Marković, I., Andreatta, F., Sankar, R., Jozwiak, C., Rotenberg, E., *Switching of the electron-phonon interaction in 1 T-VSe<sub>2</sub> assisted by hot carriers*. In: *Physical Review B* **103.24** (2021), p. L241108.

- [Art13] Baksh, P. D., Ostrčil, M., Miszczak, M., Pooley, C., Chapman, R. T., **Wyatt, A. S.**, Springate, E., Chad, J. E., Deinhardt, K., Frey, J. G., *Quantitative and correlative extreme ultraviolet coherent imaging of mouse hippocampal neurons at high resolution*. In: *Science advances* **6.18** (2020), eaaz3025.
- [Art14] Warne, E. M., Downes-Ward, B., Woodhouse, J., Parkes, M. A., Springate, E., Percy, P. A., Zhang, Y., Karras, G., **Wyatt, A. S.**, Chapman, R. T., *Photodissociation dynamics of methyl iodide probed using femtosecond extreme ultraviolet photoelectron spectroscopy*. In: *Physical Chemistry Chemical Physics* **22.44** (2020), pp. 25695–25703.
- [Art15] Volckaert, K., Rostami, H., Biswas, D., Marković, I., Andreatta, F., Sanders, C. E., Majchrzak, P., Cacho, C., Chapman, R. T., **Wyatt, A.**, *Momentum-resolved linear dichroism in bilayer MoS<sub>2</sub>*. In: *Physical Review B* **100.24** (2019), p. 241406.
- [Art16] Warne, E., Downes-Ward, B., Woodhouse, J., Parkes, M. A., Bellshaw, D., Springate, E., Majchrzak, P., Zhang, Y., Karras, G., **Wyatt, A.**, *Photodissociation dynamics of CH<sub>3</sub>I probed via multiphoton ionisation photoelectron spectroscopy*. In: *Physical Chemistry Chemical Physics* (2019).
- [Art17] Mang, M., Lloyd, D., Anderson, P., Treacher, D., **Wyatt, A.**, Hooker, S., Walmsley, I., O’Keeffe, K., *Spatially resolved common-path high-order harmonic interferometry*. In: *Optics letters* **43.21** (2018), pp. 5275–5278.
- [Art18] Sharba, A., Chekhlov, O., **Wyatt, A.**, Pattathil, R., Borghesi, M., Sarri, G., *Characterization of ultrashort laser pulses employing self-phase modulation dispersion-scan technique*. In: *Journal of Optics* **20.3** (2018), p. 035502.
- [Art19] **Wyatt, A. S.**, Witting, T., Schiavi, A., Fabris, D., Matia-Hernando, P., Walmsley, I. A., Marangos, J. P., Tisch, J. W. G., *Attosecond sampling of arbitrary optical waveforms*. In: *Optica* **3.3** (Mar. 2016), pp. 303–310. DOI: 10.1364/OPTICA.3.000303. URL: <http://www.osapublishing.org/optica/abstract.cfm?URI=optica-3-3-303>.
- [Art20] McCracken, R. A., Gianani, I., **Wyatt, A. S.**, Reid, D. T., *Multi-color carrier-envelope-phase stabilization for high-repetition-rate multi-pulse coherent synthesis*. In: *Optics letters* **40.7** (2015), pp. 1208–1211.
- [Art21] Austin, D. R., Witting, T., Arrell, C. A., Frank, F., **Wyatt, A. S.**, Marangos, J. P., Tisch, J. W., Walmsley, I. A., *Lateral shearing interferometry of high-harmonic wavefronts*. In: *Optics letters* **36.10** (2011), pp. 1746–1748.
- [Art22] Raz, O., Schwartz, O., Austin, D., **Wyatt, A.**, Schiavi, A., Smirnova, O., Nadler, B., Walmsley, I. A., Oron, D., Dudovich, N., *Vectorial phase retrieval for linear characterization of attosecond pulses*. In: *Physical review letters* **107.13** (2011), p. 133902.
- [Art23] **Wyatt, A. S.**, Grün, A., Bates, P. K., Chalus, O., Biegert, J., Walmsley, I. A., *Accuracy measurements and improvement for complete characterization of optical pulses from nonlinear processes via multiple spectral-shearing interferometry*. In: *Optics express* **19.25** (2011), pp. 25355–25366.
- [Art24] Austin, D. R., Witting, T., **Wyatt, A. S.**, Walmsley, I. A., *Measuring sub-Planck structural analogues in chronocyclic phase space*. In: *Optics Communications* **283.5** (2010), pp. 855–859.
- [Art25] Auguste, T., Salières, P., **Wyatt, A.**, Monmayrant, A., Walmsley, I., Cormier, E., Zaïr, A., Holler, M., Guandalini, A., Schapper, F., *Theoretical and experimental analysis of quantum path interferences in high-order harmonic generation*. In: *Physical Review A* **80.3** (2009), p. 033817.
- [Art26] Cormier, E., Zaïr, A., Holler, M., Schapper, F., Keller, U., **Wyatt, A.**, Monmayrant, A., Walmsley, I., Auguste, T., Salières, P., *Direct observation of quantum-path interferences in high order harmonic generation*. In: *The European Physical Journal-Special Topics* **175.1** (2009), pp. 191–194.

- [Art27] Holler, M., Zair, A., Schapper, F., Auguste, T., Cormier, E., **Wyatt, A.**, Monmayrant, A., Walmsley, I., Gallmann, L., Salières, P., *Ionization effects on spectral signatures of quantum-path interference in high-harmonic generation*. In: *Optics express* **17.7** (2009), pp. 5716–5722.
- [Art28] Zair, A., Holler, M., Guandalini, A., Schapper, F., Biegert, J., Gallmann, L., Keller, U., **Wyatt, A.**, Monmayrant, A., Walmsley, I., *Quantum path interferences in high-order harmonic generation*. In: *Physical review letters* **100.14** (2008), p. 143902.
- [Art29] Stibenz, G., Ropers, C., Lienau, C., Warmuth, C., **Wyatt, A.**, Walmsley, I., Steinmeyer, G., *Advanced methods for the characterization of few-cycle light pulses: a comparison*. In: *Applied Physics B* **83.4** (2006), pp. 511–519.
- [Art30] **Wyatt, A. S.**, Walmsley, I. A., Stibenz, G., Steinmeyer, G., *Sub-10 fs pulse characterization using spatially encoded arrangement for spectral phase interferometry for direct electric field reconstruction*. In: *Optics letters* **31.12** (2006), pp. 1914–1916.
- [Art31] Cormier, E., Corner, L., Kosik, E., Walmsley, I., **Wyatt, A.**, *Spectral phase interferometry for complete reconstruction of attosecond pulses*. In: *Laser physics* **15.6** (2005), pp. 909–915.
- [Art32] Cormier, E., Walmsley, I. A., Kosik, E. M., **Wyatt, A. S.**, Corner, L., DiMauro, L. F., *Self-referencing, spectrally, or spatially encoded spectral interferometry for the complete characterization of attosecond electromagnetic pulses*. In: *Physical review letters* **94.3** (2005), p. 033905.
- [Art33] Kosik, E., Corner, L., **Wyatt, A.**, Cormier, E., Walmsley, I., Dimauro, L., *Complete characterization of attosecond pulses*. In: *Journal of Modern Optics* **52.2-3** (2005), pp. 361–378.

## Pre-Prints

- [Pre1] Gianani, I., Bourassin-Bouchet, C., Anderson, P. N., Mang, M. M., **Wyatt, A. S.**, Barbi-  
eri, M., Walmsley, I. A., *Spectral-gap immune characterization of electric fields*. 2016. URL: <https://arxiv.org/abs/1612.06937>.
- [Pre2] **Wyatt, A. S.**, Oliveira, P., Musgrave, I. O., *Frequency-resolved optical gating of highly  
chirped ultrabroadband pulses*. 2016. URL: <https://arxiv.org/abs/1612.05876>.
- [Pre3] **Wyatt, A. S.**, Oliveira, P., Musgrave, I. O., *Interferometric method for the complete  
characterization of highly chirped ultrabroadband pulses*. 2016. URL: <https://arxiv.org/abs/1612.08346>.

## Annual Reports

- [AR1] Karras, G., Greetham, G., Zhang, Y., Conroy, S., **Wyatt, A.**, Cox, A., Rice, P., Spurdle,  
S., Brummitt, P., Springate, E., *Installation of the Mid-IR OPCPA Laser in the RCaH CLF  
Laboratories*. Annual Report. Central Laser Facility, 2019–2020.
- [AR2] Zhang, Y., Toolan, C., Chapman, R., **Wyatt, A.**, Sanders, C., Springate, E., *Upgrades to  
the Artemis Material Science Station*. Annual Report. Central Laser Facility, 2019–2020.
- [AR3] **Wyatt, A. S.**, Chapman, R. T., Karras, G., Zhang, Y., Sanders, C., Greetham, G., Cox,  
A., Rice, P., Spurdle, S., Brummitt, P., *New laboratories for Artemis in the RCaH*. Annual  
Report. Central Laser Facility, 2018–2018.
- [AR4] Carley, R., Bobowski, K., Springate, E., Cacho, C., **Wyatt, A.**, Chapman, R., Majchrzak,  
P., Weinelt, M., *Ponderomotive acceleration of photoelectrons in pump-probe experiments*.  
Annual Report. Central Laser Facility, 2017–2018.
- [AR5] Greetham, G., **Wyatt, A.**, Karras, G., Young, B., Sazanovich, I., Donaldson, P., Chapman,  
R., Zhang, Y., Sanders, C., Percy, P., Spurdle, S., Brummitt, P., Towrie, M., Springate,  
E., *Artemis Upgrade, Relocation and the New 100 kHz OPCPA Laser for Ultra / Artemis*.  
Annual Report. Central Laser Facility, 2017–2018.

- [AR6] O’Keeffe, K., Lloyd, D., **Wyatt, A.**, Chapman, R., Thornton, C., Majchrzak, P., Jones, A., Springate, E., *Soft x-ray interferometry for pump-probe spectroscopy and hyperspectral imaging*. Annual Report. Central Laser Facility, 2017–2018.
- [AR7] Singh, D., Ganjitabar, H., Gardner, A., Minns, R., Chapman, R., Majchrzak, P., Zhang, Y., **Wyatt, A.**, Springate, E., Reid, K., Powis, I., *Ultrafast Multiphoton Photoelectron Circular Dichroism in alpha-Pinene*. Annual Report. Central Laser Facility, 2017–2018.
- [AR8] Volckaert, K., Sanders, F., Mahata, S., Bianchi, M., Miwa, J., Hofmann, P., Ulstrup, S., Ros-tami, H., Balatsky, A., Bignardi, L., Lizzit, D., Lacovig, P., Lizzit, S., Biswas, D., Marković, I., King, P., Majchrzak, P., Cacho, C., Jones, A., Chapman, R., **Wyatt, A.**, Springate, E., *Observation of Layer Pseudospin Interference in Bilayer MoS<sub>2</sub>*. Annual Report. Central Laser Facility, 2017–2018.
- [AR9] **Wyatt, A.**, Majchrzak, P., Chapman, R., Springate, E., Pettipher, A., Marangos, J., Tisch, J., *Characterisation of the Carrier Envelope Phase of Few-Cycle Short-Wave Infrared Pulses*. Annual Report. Central Laser Facility, 2017–2018.
- [AR10] Zhang, Y., Percy, P., Karras, G., Chapman, R., **Wyatt, A.**, Sanders, C., Springate, E., *Benchmark the performance of the spin-resolved time-of-flight electron analyzer in Artemis*. Annual Report. Central Laser Facility, 2017–2018.
- [AR11] Zhang, Y., Percy, P., Karras, G., Chapman, R., **Wyatt, A.**, Sanders, C., Springate, E., *Measurements of the sample vibration in the material science station of Artemis*. Annual Report. Central Laser Facility, 2017–2018.
- [AR12] Baksh, P., Odstrčil, M., Mischczak, M., Brocklesby, W., Chapman, R., **Wyatt, A.**, Springate, E., Frey, J., *XUV Ptychographic imaging of mouse hippocampal neurons with 50nm resolution using the Artemis HHG source*. Annual Report. Central Laser Facility, 2016–2017.
- [AR13] **Wyatt, A. S.**, Oliveira, P., Musgrave, I. O., *Characterization of Highly Chirped Ultrabroad-band Optical Pulses*. Annual Report. Central Laser Facility, 2016–2017.
- [AR14] **Wyatt, A. S.**, Owen, H., Oliveira, P., Parry, B., Galimberti, M., Musgrave, I. O., *Design and Implementation of a Test Compressor for the Vulcan Front End*. Annual Report. Central Laser Facility, 2016–2017.
- [AR15] Shaikh, W., Oliveira, P., Musgrave, I., Galimberti, M., **Wyatt, A.**, Hernandez-Gomez, C., *A stable ultra-broadband OPG/OPA source for the testing of 20 Petawatt Optical Parametric Chirped Pulse Amplifiers*. Annual Report. Central Laser Facility, 2015–2016.
- [AR16] Springate, E., Towrie, M., Greetham, G., **Wyatt, A.**, *ULTRA/ARTEMIS - 100 kHz High Power OPCPA Progress Report*. Annual Report. Central Laser Facility, 2015–2016.
- [AR17] **Wyatt, A.**, Jones, A., Chapman, R., Cacho, C., Springate, E., Matía-Hernando, P., Johnson, A., Austin, D., Marangos, J., Tisch, J., *Short-Wave Infrared Few Cycle Pulse Generation and Characterization for High Harmonic Generation in the Water Window*. Annual Report. Central Laser Facility, 2015–2016.

## PhD Theses

- [PhD1] Schiavi, A., *Investigation of vibrating-hydrogen based ultrashort pulse molecular phase mod-ulator*. Supervisors: Ian A Walmsley and Adam S Wyatt. University of Oxford, 2016.
- [PhD2] **Wyatt, A. S.**, *Spectral interferometry for the complete characterisation of near infrared femtosecond and extreme ultraviolet attosecond pulses*. Supervisor: Ian A Walmsley. Univer-sity of Oxford, 2008. URL: <https://ora.ox.ac.uk/objects/uuid:22b7750a-6328-42c1-a7f6-965523858c05>.

## Peer-Reviewed Conferences

- [Con1] Kowalczyk, K. M., Allegre, H., Broughton, J., **Wyatt, A. S.**, Zhang, Y., Springate, E., Tisch, J. W., Marangos, J., Matthews, M., *Solid High Harmonic Enhancement Near the Band Gap Edge*. In: *CLEO: Fundamental Science*. Optica Publishing Group. 2024, FW4C–2.
- [Con2] Allegre, H., Kowalczyk, K., **Wyatt, A. S.**, Springate, E., Tisch, J. W., Marangos, J. P., Matthews, M., *Anisotropic High Harmonic Generation in Wide Bandgap Dielectrics*. In: *The European Conference on Lasers and Electro-Optics*. Optica Publishing Group. 2023, cg\_1.4.
- [Con3] Chapman, R. T., **Wyatt, A. S.**, Zhang, Y., Thompson, J. O., Sanders, C. E., Greetham, G. M., Springate, E., *Ultrafast Spectroscopy at Artemis*. In: *The European Conference on Lasers and Electro-Optics*. Optica Publishing Group. 2023, cf\_p-22.
- [Con4] Kowalczyk, K. M., Allegre, H., **Wyatt, A. S.**, Springate, E., Tisch, J. W., Marangos, J. P., Matthews, M., *Complex Structures of Spatially and Spectrally resolved Solid High Harmonics*. In: *2023 Conference on Lasers and Electro-Optics Europe & European Quantum Electronics Conference (CLEO/Europe-EQEC)*. IEEE. 2023, pp. 1–1.
- [Con5] **Wyatt, A. S.**, Kowalczyk, K. M., Allegre, H., Springate, E., Tisch, J. W., Marangos, J. P., Matthews, M., *Spatially-and Spectrally-Resolved Structures in High Harmonic Generation from Solids*. In: *Ultrafast Optics*. Optica Publishing Group. 2023, F2–3.
- [Con6] **Wyatt, A. S.**, Lloyd, D., Chapman, R. T., Thornton, C., Majchrzak, P., Jones, A., Springate, E., O’Keeffe, K., *Direct Measurement of Attosecond Emission Delays in High Harmonic Generation*. In: *Ultrafast Optics*. Optica Publishing Group. 2023, F2–5.
- [Con7] **Wyatt, A. S.**, Zhang, Y., Sanders, C. E., Chatterjee, G., Karras, G., Michalek, O., Chapman, R. T., Poletto, L., Greetham, G. M., Springate, E., *High Repetition Rate Materials Science Beamline at Artemis*. In: *Ultrafast Optics*. Optica Publishing Group. 2023, Th1–2.
- [Con8] Majchrzak, P., Pakdel, S., Biswas, D., Jones, A., Volckaert, K., Markovic, I., Andreatta, F., Sankar, R., Jozwiak, C., Rotenberg, E., *Interplay of hot electron and phonon dynamics in 1T-VSe<sub>2</sub> probed by time-and angle-resolved photoemission spectroscopy*. In: *APS March Meeting Abstracts*. Vol. 2021. 2021, B43–010.
- [Con9] Chapman, R. T., Greetham, G. M., Karras, G., Sanders, C., **Wyatt, A. S.**, Zhang, Y., Towrie, M., Springate, E., *Central Laser Facility Artemis Upgrade: New Capabilities for X-Ray Spectroscopy*. In: *ATTO 2019*. Szeged, 2019.
- [Con10] **Wyatt, A. S.**, Lloyd, D., Chapman, R. T., Thornton, C., Majchrzak, P., Jones, A. J. H., Springate, E., Hooker, S. M., O’Keeffe, K., *Phase Analysis of Multidimensional Inline Extreme Ultraviolet Interferometer*. In: *ATTO 2019*. Szeged, 2019.
- [Con11] Galimberti, M., Boyle, A., Musgrave, I. O., Oliveira, P., Pepler, D., Shaikh, W., Winstone, T. B., **Wyatt, A.**, Hernandez–Gomez, C., *Spectral gain investigation of large size OPCPA based on partially deuterated KDP*. In: *EPJ Web of Conferences*. Vol. 167. EDP Sciences. 2018, p. 01006.
- [Con12] Lloyd, D. T., **Wyatt, A. S.**, Chapman, R., Thornton, C., Majchrzak, P., Jones, A., Springate, E., O’Keeffe, K., *Quantum-Path-Sensitive Inline XUV Interferometry*. In: *High Intensity Lasers and High Field Phenomena*. Optical Society of America. 2018, HW2A–2.
- [Con13] Musgrave, I., Blake, S., Boyle, A., Clarke, R., Collier, J., Galimberti, M., Hernandez–Gomez, C., Pepler, D., Oliveira, P., Shaikh, W., *Development of an Auxiliary OPCPA Beamline for the Vulcan PW Laser Facility*. In: *CLEO: QELS-Fundamental Science*. Optical Society of America. 2018, JTu2A–170.
- [Con14] **Wyatt, A. S.**, Chapman, R. T., Cacho, C., Majchrzak, P. E., Jones, A., Alexander<sup>1</sup>, O., Matselyukh, D. T., Matía-Hernando, P., Johnson, A. S., Jarosch, S., Austin, D. R., Tisch,

J. W. G., Marangos, J. P., Springate, E., *Compression, amplification and characterization of few-cycle short-wavelength infrared pulses for high harmonic generation in the water window*. In: *Ultrafast Phenomena XXI*. 2018.

- [Con15] **Wyatt, A. S.**, Matía-Hernando, P., Johnson, A. S., Chapman, R. T., Austin, D. R., Marangos, J. P., Tisch, J. W. G., Springate, E., *Few Cycle Optical Parametric Amplification in the MIR*. In: *27th Annual International Laser Physics Workshop (LPHYS'18)*. Invited. IOP Publishing. Nottingham, Apr. 2018, S2.11. URL: <https://www.lasphys.com/workshops/abstracts/files/2018/2a/e9/f9/10f3ca94984787ec54f458da2d/abstract.pdf>.
- [Con16] **Wyatt, A. S.**, Oliviera, P., Musgrave, I. O., *Complete temporal characterization of highly chirped pulses*. In: *Ultrafast Optics 2017*. Ed. by Alan R. FRY, Christophe DORRER, Günter STEINMEYER, and Charles G. DURFEE. SPIE, Feb. 2018, p. 1. DOI: 10.1117/12.2310152. URL: <https://www.spiedigitallibrary.org/conference-proceedings-of-spie/10606/2310152/Ultrafast-Optics-2017/10.1117/12.2310152.full>.
- [Con17] **Wyatt, A.**, Matía-Hernando, P., Johnson, A., Chapman, R., Cacho, C., Austin, D., Marangos, J., Tisch, J., Springate, E., *Compression, amplification and characterization of few-cycle short-wavelength infrared pulses*. In: *Ultrafast Optics 2017*. Ed. by Alan R. FRY, Christophe DORRER, Günter STEINMEYER, and Charles G. DURFEE. SPIE, Feb. 2018, p. 1. DOI: 10.1117/12.2310152. URL: <https://www.spiedigitallibrary.org/conference-proceedings-of-spie/10606/2310152/Ultrafast-Optics-2017/10.1117/12.2310152.full>.
- [Con18] Ertel, K., Banerjee, S., Boyle, A., Musgrave, I., Shaikh, W., Tomlinson, S., De Vido, M., Winstone, T., **Wyatt, A.**, Edwards, C., *Design study for a kW-class, multi-TW, ps laser*. In: *Advanced Solid State Lasers*. Optical Society of America. 2017, JTu2A-44.
- [Con19] Lloyd, D. T., O'Keeffe, K., **Wyatt, A. S.**, Anderson, P. N., Treacher, D., Hooker, S. M., *Combined visible and near-infrared OPA for wavelength scaling experiments in strong-field physics*. In: *Nonlinear Frequency Generation and Conversion: Materials and Devices XVI*. Vol. 10088. International Society for Optics and Photonics. 2017, p. 1008815.
- [Con20] Shaikh, W., Galimberti, M., Oliveira, P., Musgrave, I., **Wyatt, A.**, Pepler, D., Boyle, A., Winstone, T., Hernandez-Gomez, C., *Technology Development for Multi-PW CPA and OPCPA Systems-Demonstration of Broad Bandwidth to the Joule Level in Deuterated KDP*. In: *Advanced Solid State Lasers*. Optical Society of America. 2017, JTh2A-5.
- [Con21] **Wyatt, A. S.**, Oliveira, P., Musgrave, I. O., *Simultaneous compression and characterisation of ultrashort laser pulses via dispersion-scan with a grating pair*. In: *The European Conference on Lasers and Electro-Optics*. Optical Society of America. 2017, CF.P.6.
- [Con22] **Wyatt, A. S.**, Witting, T., Schiavi, A., Fabris, D., Matia-Hernando, P., Walmsley, I., Marangos, J., Tisch, J., *Attosecond Sampling of Arbitrary Optical Waveforms*. In: *Frontiers in Optics 2017*. Invited. Optical Society of America, 2017, FW6E.1. DOI: 10.1364/FIO.2017.FW6E.1. URL: <http://www.osapublishing.org/abstract.cfm?URI=FiO-2017-FW6E.1>.
- [Con23] **Wyatt, A.**, Oliveira, P., Musgrave, I., *Complete temporal characterisation of highly chirped ultrabroadband optical pulses*. In: *2017 Conference on Lasers and Electro-Optics Europe & European Quantum Electronics Conference (CLEO/Europe-EQEC)*. IEEE. June 2017, pp. 1-1. DOI: 10.1109/CLEOE-EQEC.2017.8086691.
- [Con24] Shaikh, W., Oliveira, P. B. M. A., Musgrave, I., Galimberti, M., **Wyatt, A.**, Hernandez-Gomez, C., *A stable ultra-broadband OPG/OPA source for the testing of 20 Petawatt Optical Parametric Chirped Pulse Amplifiers*. In: *Lasers Congress 2016 (ASSL, LSC, LAC)*. Optical Society of America, 2016, JTh2A.29. DOI: 10.1364/ASSL.2016.JTh2A.29. URL: <http://www.osapublishing.org/abstract.cfm?URI=ASSL-2016-JTh2A.29>.

- [Con25] **Wyatt, A.**, Matía-Hernando, P., Johnson, A., Matselyukh, D. T., Chapman, R., Cacho, C., Austin, D. R., Marangos, J., Tisch, J., Springate, E., *Compression, amplification and characterisation of few-cycle short-wavelength infrared pulses for high harmonic generation in the water window*. In: Photon 16. Invited. Institute of Physics. Sept. 2016.
- [Con26] Cacho, C., Chapman, R. T., **Wyatt, A. S.**, Gierz, I., Calegari, F., Aeschlimann, S., Cervantes, M. C., Cavalleri, A., Springate, E., *Sub-10 fs near-infrared pump, EUV probe beamline for ultrafast photoemission spectroscopy*. In: UFO X. Ultrafast Optics. Aug. 2015, UFO0108.
- [Con27] **Wyatt, A. S.**, Matía-Hernando, P., Johnson, A. S., Alexander, O., Chapman, R., Cacho, C., Austin, D. R., Tisch, J. W. G., Marangos, J. P., Springate, E., *Compression and Amplification of Single-Cycle SWIR Pulses for Water Window Attosecond Pulse Generation*. In: UFO X. Ultrafast Optics. Aug. 2015, UFO101.
- [Con28] **Wyatt, A. S.**, Matía-Hernando, P., Johnson, A. S., Alexander, O., Chapman, R., Cacho, C., Austin, D. R., Tisch, J. W., Marangos, J. P., Springate, E., *Compression and Amplification of SWIR Single-Cycle Pulses for Water Window Attosecond Pulse Generation*. In: *The European Conference on Lasers and Electro-Optics*. Optical Society of America. June 2015, CG\_3.3.
- [Con29] **Wyatt, A. S.**, Oliveira, P., Boyle, A., Tang, Y., Galimberti, M., Ross, I. N., Musgrave, I. O., Hernandez, C., Collier, J., *Ultra-Broadband Spectral Phase Control in the Vulcan 20PW Upgrade Front End*. In: *The European Conference on Lasers and Electro-Optics*. Optical Society of America. 2015, CG\_P\_1.
- [Con30] **Wyatt, A. S.**, Oliveira, P., Boyle, A., Tang, Y., Galimberti, M., Ross, I. N., Musgrave, I. O., Hernandez-Gomez, C., Collier, J., *Optimal pulse compression in a broadband collinear chirp compensated optical Parametric chirped pulse amplifier*. In: UFO X. Ultrafast Optics. Aug. 2015, UFO136.
- [Con31] **Wyatt, A.**, Johnson, A., Matía-Hernando, P., Alexander, O., Chapman, R., Cacho, C., Austin, D., Tisch, J., Marangos, J., Springate, E., *Complete characterization of short-wavelength infrared few-cycle pulses via third harmonic generation dispersion scan*. In: SILAP XI. Super Intense Laser-Atom Physics. Sept. 2015. DOI: 10.13140/RG.2.2.25073.28009. URL: [https://silap2015.sciencesconf.org/data/program/71\\_Wyatt\\_SILAP2015\\_atto.pdf](https://silap2015.sciencesconf.org/data/program/71_Wyatt_SILAP2015_atto.pdf).
- [Con32] **Wyatt, A. S.**, Witting, T., Schiavi, A., Fabris, D., Marangos, J. P., Tisch, J. W., Walmsley, I. A., *Attosecond sampling of arbitrary optical waveforms*. In: Photon 14. Institute of Physics. Sept. 2014.
- [Con33] **Wyatt, A.**, Oliveira, P., Tang, Y., Galimberti, M., Ross, I., Musgrave, I., Hernandez-Gomez, C., Collier, J., *Optimization of the Vulcan 20PW chirp compensated OPCPA front end*. In: ALT 14. Advanced Laser Technologies. Oct. 2014.
- [Con34] **Wyatt, A.**, Oliveira, P., Tang, Y., Galimberti, M., Ross, I., Musgrave, I., Hernandez-Gomez, C., Collier, J., *Spectral phase control for optimal pulse compression of the CP-OPCPA seeded Vulcan 10PW upgrade*. In: Photon 14. Invited. Institute of Physics. Sept. 2014.
- [Con35] **Wyatt, A. S.**, Witting, T., Schiavi, A., Fabris, D., Marangos, J. P., Tisch, J. W., Walmsley, I. A., *Attosecond sampling of arbitrary optical waveforms*. In: *Lasers and Electro-Optics Europe (CLEO EUROPE/IQEC), 2013 Conference on and International Quantum Electronics Conference*. IEEE. 2013, pp. 1–1.
- [Con36] **Wyatt, A. S.**, Witting, T., Schiavi, A., Fabris, D., Marangos, J. P., Tisch, J. W., Walmsley, I. A., *Attosecond sampling of arbitrary optical waveforms*. In: UFO IX. Ultrafast Optics. Mar. 2013.

- [Con37] **Wyatt, A. S.**, Biegert, J., Walmsley, I. A., *Generalized multishearing interferometry for the complete multidimensional characterization of optical beams and ultrashort pulses*. In: *CLEO: Science and Innovations*. Optical Society of America. 2012, CF1L–6.
- [Con38] Gallmann, L., Holler, M., Zaïr, A., Schapper, F., Auguste, T., Cormier, E., **Wyatt, A.**, Monmayrant, A., Walmsley, I. A., Salières, P., *Quantum Path Interferences in High-Harmonic Generation: Ionization Effects and Spatial Structure*. In: *International Quantum Electronics Conference*. Optical Society of America. 2009, JThH6.
- [Con39] **Wyatt, A. S.**, Austin, D. R., Witting, T., Walmsley, I. A., Grün, A., Bates, P., Chalus, O., Biegert, J., *Increasing the Consistency and Accuracy of Spectral Shearing Interferometry Via Multiple Shearing*. In: *Conference on Lasers and Electro-Optics*. Optical Society of America. 2009, CThW5.
- [Con40] **Wyatt, A. S.**, Walmsley, I. A., *Analysis of space-time coupling in sea-spider measurements*. In: *Lasers and Electro-Optics 2009 and the European Quantum Electronics Conference. CLEO Europe-EQEC 2009. European Conference on*. IEEE. 2009, pp. 1–1.
- [Con41] Zaïr, A., Holler, M., Schapper, F., Gallmann, L., **Wyatt, A.**, Monmayrant, A., Auguste, T., Pascal-Caumes, J., Walmsley, I., Cormier, E., *Study of quantum-path interferences in the high harmonic generation process*. In: *Ultrafast Phenomena XVI*. Springer Berlin Heidelberg, 2009, pp. 27–29.
- [Con42] Witting, T., **Wyatt, A. S.**, Monmayrant, A., Walmsley, I. A., Haworth, C., Robinson, J. S., Tisch, J. W., Marangos, J. P., *Characterising spatio-temporal coupling of extreme ultraviolet ultrashort pulses from high harmonic generation*. In: *Lasers and Electro-Optics, 2007 and the International Quantum Electronics Conference. CLEOE-IQEC 2007. European Conference on*. IEEE. 2007, pp. 1–1.
- [Con43] **Wyatt, A. S.**, Witting, T., Monmayrant, A., Walmsley, I. A., Haworth, C., Robinson, J. S., Tisch, J. W. G., Marangos, J. P., *Characterizing spatio-temporal coupling of extreme ultraviolet ultrashort pulses from high harmonic generation*. In: *Conference on Lasers and Electro-Optics*. Optical Society of America. 2007, CTuW2.
- [Con44] Zaïr, A., Holler, M., Guandalini, A., Schapper, F., Biegert, J., Keller, U., Salières, P., Auguste, T., Cormier, E., **Wyatt, A.**, *Two-quantum-path interferences in high order harmonic generation*. In: *Photonic Applications Systems Technologies Conference*. Optical Society of America. 2007, JFC6.
- [Con45] **Wyatt, A. S.**, Walmsley, I. A., Stibenz, G., Steinmeyer, G., *Characterization of sub-10-fs Pulses Using Spatially Encoded Arrangement for SPIDER*. In: *Conference on Lasers and Electro-Optics*. Optical Society of America. 2006, CWJ3.
- [Con46] Walmsley, I., Corner, L., **Wyatt, A.**, Cormier, E., *Measuring Attosecond XUV Pulses*. In: *Frontiers in Optics*. Optical Society of America. 2005, JMC1.

## Book Chapters

- [Ch1] **Wyatt, A. S.**, *Ultrashort Pulse Characterization*. In: Wiley-VCH Verlag GmbH & Co. KGaA, 2013, pp. 37–94.
- [Ch2] **Wyatt, A. S.**, Walmsley, I. A., *Measuring Ultrashort Optical Pulses*. In: *Ultrafast Nonlinear Optics*. Springer International Publishing, 2013, pp. 1–21.

## Invited Seminars and Other Presentations

- [SP1] Karras, G., Greetham, G., Chapman, R., Sanders, C., **Wyatt, A.**, Zhang, Y., Springate, E., Towrie, M., *New 100 kHz laser and future applications*. LSF/Artemis User Meeting (poster). Central Laser Facility, Apr. 2019.



- [SP2] Springate, E., Chapman, R., **Wyatt, A.**, *Artemis: facility update*. LSF/Artemis User Meeting. Central Laser Facility, Apr. 2019.
- [SP3] **Wyatt, A. S.**, Matía-Hernando, P., Johnson, A. S., Jones, A. J. H., Chapman, R. T., Cacho, C., Austin, D. R., Tisch, J. W. G., Marangos, J. P., Springate, E., *Amplification and Characterisation of Few-Cycle 1800nm Pulses*. Mid Infrared Technical Meeting. Imperial College London, Jan. 2019.
- [SP4] **Wyatt, A. S.**, Matía-Hernando, P., Johnson, A. S., Jones, A. J. H., Chapman, R. T., Cacho, C., Austin, D. R., Tisch, J. W. G., Marangos, J. P., Springate, E., *Generation, Amplification and Characterization of SWIR Few-Cycle Pulses*. Central Laser Facility, Feb. 2019.
- [SP5] **Wyatt, A.**, *LSF/Artemis Science Opportunities: Transient X-Ray Absorption Fine Structure (Tr-XAFS)*. Central Laser Facility, Oct. 2018.
- [SP6] **Wyatt, A. S.**, *Vulcan 20PW Upgrade*. University of Bath, July 2014.
- [SP7] **Wyatt, A. S.**, *Arbitrary waveform generation and characterization for strong field coherent control*. Quantum Coherence Workshop. University of Oxford, Mar. 2013.
- [SP8] **Wyatt, A. S.**, *Attoscience: Novel ultrafast sources and metrology for the study and control of electron dynamics*. University of Oxford, Apr. 2013.
- [SP9] **Wyatt, A. S.**, *Ultrafast Metrology for Attosecond Dynamical Imaging*. University of Bath, Feb. 2013.
- [SP10] **Wyatt, A. S.**, *Ultrafast Metrology for Attosecond Dynamical Imaging*. ELI-Beams, Prague, Jan. 2013.
- [SP11] **Wyatt, A. S.**, *Ultrafast Metrology for Attosecond Dynamical Imaging*. PALS, Prague, Jan. 2013.
- [SP12] **Wyatt, A. S.**, *Time-Frequency metrology*. Ultrashort and Intense Laser Technology and Metrology: Intensive Program. University of Bordeaux, Nov. 2011.
- [SP13] **Wyatt, A. S.**, *Ultrafast Metrology*. FASTQUAST International Summer School on Ultrafast Coherent and Quantum Control. University of Oxford, Aug. 2011.
- [SP14] **Wyatt, A. S.**, *Ultrafast Pulse Characterization: IR to XUV*. Summer School. ATTOFEL, May 2011.
- [SP15] **Wyatt, A. S.**, *Time-Frequency metrology*. Ultrashort and Intense Laser Technology and Metrology: Intensive Program. University of Bordeaux, Dec. 2009.
- [SP16] **Wyatt, A. S.**, *Interferometry: Applications for Attoscience*. University of Salamanca, June 2008.
- [SP17] **Wyatt, A. S.**, *Physics at the Limit: Metrology in the attosecond range*. Laser Europe Training Session 1. University of Bordeaux, Sept. 2008.