

Klaas Wynne

Work address

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Positions

2017-	Associate Editor Journal of the American Chemical Society (JACS)
2010-	Chair of chemical physics, University of Glasgow, School of Chemistry
2012-	Visiting professor in the Department of Chemical and Process Engineering at Strathclyde
2007-2010	Professor of chemical physics, University of Strathclyde, Department of Physics
2003-2007	Reader, University of Strathclyde, Department of Physics
1999-2003	Senior lecturer, University of Strathclyde, Department of Physics
1996-1999	Lecturer, University of Strathclyde, Department of Physics
1996-2010	Co-director of the femtosecond research centre, Strathclyde, Department of Physics
1991-1996	Postdoc, U. of Pennsylvania, Dept. of Chemistry, with Prof. Robin M. Hochstrasser
1987-1991	Teaching assistant, University of Amsterdam, Laboratory for Physical Chemistry.

Education

1990	PhD chemistry	Awarded by the University of Amsterdam on September 21, 1990 on the thesis entitled ' <i>Time resolved Raman spectroscopy in simple liquids</i> '. Advisors: Joop van Voorst, Douwe Wiersma, and Ad Lagendijk
1987	MSci chemistry	Awarded by the University of Amsterdam on February 18, 1987

Marks of esteem

2017	JACS	Appointed Associate Editor JACS
2015	FRSE	Elected Fellow of the Royal Society of Edinburgh (FRSE)
2013	Faraday	Elected Member of Faraday Division Council
2012	EAB JPC	Elected member of the editorial advisory board of the Journal of Physical Chemistry B
2012	EPSRC College	Elected a member of the EPSRC college of peer reviewers
2012	Advisory Committee	Elected member of the scientific advisory committee of the annual general meeting of the European Molecular Liquids Group and Japanese Molecular Liquids Group (Lille, France, 2013)
2012	Symposium organiser	Invited with Mischa Bonn (Director MPI for Polymer Research) to organise session on biomolecular terahertz spectroscopy (SPIE Photonics West, BIOS, San Francisco, 2013).
2012	Top 10 most read	PCCP 14 , 6154 (2012) second most read PCCP article in April 2012.
2012	Guest editor PCCP	Guest editor with Neil Hunt for special issue on <i>Ultrafast Chemical Dynamics</i> in PCCP published volume 14 issue 18, 2012 .
2012	News & views	The UCP 2011 meeting was the subject of a "news & views" article in the March 2012 issue of Nature Chemistry (doi:10.1038/nchem.1282)
2012	Visiting Professor	Appointed visiting professor in the Department of Chemical and Process Engineering, University of Strathclyde
2012	Board of Chemical Physics	Elected member of the board of Chemical Physics (Elsevier)
2011	Faraday Discussion	Invited to organise a Faraday Discussion Meeting on "Mesosstructure and dynamics in liquids and solutions" to be held in 2013
2010	Top 1%	J. Am. Chem. Soc. 131 , 11140 (2009) was cited 19 times in the first 12 months since publication placing it comfortably in the top 1% of all papers in chemistry (according to Thomson Reuters Science

		Watch).
2010	JCP Spotlight Collection	JCP 119 , 464 (2003) chosen as highlighted reference in the JCP Spotlight Collection on ionic liquids, March 2010. See http://jcp.aip.org/jcp/about/spotlight/ionic_liquids
2010	Editors' Choice & Most downloaded	JCP 131 , 201101 (2009) 3 rd most downloaded JCP paper in December 2009. Selected JChemPhys editors' choice as one of the most innovative and influential articles in the field of Chemical Physics in 2009. See http://jcp.aip.org/jcp/editors_choices_2009
2010	Teaching excellence	Strathclyde Teaching Excellence Awards 2010, Certificate of Recognition awarded in recognition of outstanding teaching
2009	Plenary lecturer	EMLG-JMLG Meeting 2009, Salzburg, Austria
2009	International organising committee	Elected member of the international organising committee of the conference on Time-Resolved Vibrational Spectroscopy
2008	Editors' Choice & Most downloaded	JCP 128 , 161102 (2008) Editors' Choice in Science 320 , 987 (2008) and the 7th most downloaded JCP paper in May 2008
2006	FRSC	Elected Fellow of the Royal Society of Chemistry
2005	FInstP	Elected Fellow of the Institute of Physics
2001	Editors' Choice	APL 79 , 2130 (2001) Editors' Choice in Science 294 , 267 (2001)
2001	E.C. Stoner Lecturer	University of Leeds
1999	Plenary lecturer	Int. Conference on Time-Resolved Vibrational Spectroscopy
1998	Plenary lecturer	23 rd International Conference on Infrared and Millimeter Waves
1991	Fellowship	NATO research fellowship with Robin Hochstrasser

Research grants

Period	Grant #	Title	PI (£ FEC)	CI (£ FEC)	Investigators
2017-2019	MRC MR/P025501/1	<i>Development of a new tool for malaria mosquito surveillance to improve vector control</i>		664k	H. Ferguson, K. Wynne, H. Ranson, F. Okumu
2016-2019	EPSRC EP/N007417/1	<i>Mapping and controlling nucleation</i>	562k		K. Wynne, D. France
2016	STFC SM14699	<i>Frustration of crystallisation by a liquid-crystalline phase (9 shifts beamtime)</i>	45k		K. Wynne
2015-2016	EPSRC EP/N508792/1	<i>A Dynamic Perspective on Biomolecular Function and Reactivity</i>	14k		K. Wynne, A. Laphorn, B.O. Smith, N.T. Hunt, M. Fedorov
2015	STFC SM11285	<i>Liquid crystalline states frustrating crystallisation (2 shifts beamtime)</i>	15k		K. Wynne
2013-2016	EPSRC EP/K034995/1	<i>Solvation dynamics and structure around proteins and peptides: collective network motions or weak interactions</i>	546k		K. Wynne, A. Laphorn, S. Kelly
2012-2013	UKIERI	<i>Proposal for holding joint Symposia on 'Structure and Dynamics' between Indian Institute of Science Education and Research, Pune, India and University of Glasgow, Glasgow, UK</i>	15k	16k	K. Ganesh, K. Wynne
2012-2015	EPSRC EP/J00975X/1 EP/J009733/1	<i>The structure and dynamics of water confined in nanoscale pools: the dynamic crossover</i>	523k		K. Wynne, N. Hunt
2011-2012	EPSRC	<i>Bridging the Gap-EPSRC: Ultrafast chemical physics equipment sharing</i>	27k		K. Wynne, Craig Murray, Hans Senn
2012-2015	EPSRC EP/J004790 EP/J004812 EP/J014478	<i>Liquid-liquid transitions in molecular liquids: from supramolecular structure to phase separation</i>	664k		K. Wynne, J. Sefcik (J. Chapman)
2013	RSC	<i>Faraday Discussion Meeting "Mesostructure and dynamics in liquids and solutions"</i>			K. Wynne, A. Soper (RAL), A. Angel (Arizona State U.), K. Seddon

					(Queen's U.), S. Meech (UEA), H.E. Stanley (Boston U.)
2010	ISIS 1010269	<i>A liquid-liquid transition in supercooled Gallium (3 days on SANDALS)</i>			K. Wynne, F. Demmel, W.S. Howells, D.A. Turton
2008-2013	EPSRC EP/F06926X	<i>Two-dimensional terahertz-IR spectroscopy: a unique probe of ultrafast hydrogen-bond dynamics of liquid water and model systems</i>	691k		K. Wynne, J. Karolin, D.J.S. Birch
2007-2012	EPSRC EP/E046541	<i>Terahertz spectroscopy of aqueous ionic solutions to understand the role of hydrogen-bond network breaking and strengthening in the Hofmeister series</i>	562k		K. Wynne, N.T Hunt
2006-2011	EPSRC EP/Do62861	<i>Nanometrology for Molecular Science, Medicine and Manufacture</i>		3118k	Birch, Pickup, Faulds, O'Donnell, Smith, Martin, Wynne, Dawson, Girkin, Graham, Gnudi, Rolinski
2006-2011	SFC	<i>Nanometrology for Molecular Science, Medicine and Manufacture</i>		1150k	Birch, Pickup, Faulds, O'Donnell, Smith, Martin, Wynne, Dawson, Girkin, Graham, Gnudi, Rolinski
2004-2007	EPSRC GR/S95510	<i>A comparison of the THz-frequency vibrational spectra of (chiral) liquids obtained through ultrafast infrared and Raman spectroscopies</i>	252k		K. Wynne
2004-2005	Wolfson Foundation	<i>Nanometrology of colloidal particles</i>		449k	Birch, Wynne, Smith, Graham
2004-2009	Leverhulme Trust F/00273/E	<i>Surface-enhanced ultrafast Kerr-effect spectroscopy of dynamics in biomolecules</i>	125k		K. Wynne, D.J.S. Birch
2004-2007	EPSRC GR/S75369	<i>Understanding the structural and dynamic basis of kinetics in biomolecules using novel ultrafast Raman techniques</i>	330k		K. Wynne, D.J.S. Birch, W.E. Smith, D. Graham, J.O. Karolin
2004-2005	SHEFC SRIF	<i>Materials preparation and characterisation equipment, and solid-state ultrafast laser sources (SHEFC, Science Research Investment Fund)</i>		470k	Several investigators including D.J.S. Birch and K. Wynne
2003-2006	EPSRC GR/S48110 & GR/S48127	<i>Single Molecule Sensing in Clinical Medicine (EPSRC Adventure Fund)</i>		528k	Birch, Pickup, Smith, Wynne, Graham, Gnudi, Rolinski
2003-2006	EPSRC GR/R97566	<i>Using electromagnetic pulses emitted by ultrafast molecular currents for studying charge-transfer reactions</i>	211k		K. Wynne, D.A. Jaroszynski
2002-2006	EPSRC GR/R88090	<i>Basic technology: Developing laser-plasma accelerators and coherent radiation sources as tools for time-resolved studies</i>		4270k	Jaroszynski, Burnett, Cairns, Dangor, Gillespie, Wark, Bingham, Poole, Norreys, Wynne, Hooker, Krushelnick, Walmsley
1999-2001	EPSRC GR/M75600	<i>Ultrafast electron-energy loss/gain spectroscopy (fs-EELS/EEGS)</i>	78k		K. Wynne, D.A. Jaroszynski
1999-2002	SHEFC RDG	<i>X-ray to infrared sources for Strathclyde Terahertz to Optical Pulse Source (TOPS)</i>		570k	D.A. Jaroszynski, A.D.R. Phelps, K. Wynne
1999-2003	PRF 34344 - AC6	<i>Chemical reaction control with high-power femtosecond electrical pulses</i>	40k		K. Wynne
1999-2002	EPSRC GR/M52090	<i>Study of superradiance and short pulse propagation in an underdense plasma</i>		406k	D.A. Jaroszynski, A.D.R. Phelps, K. Wynne
1999-2003	RS A20172	<i>Femtosecond field emitter</i>	10k		K. Wynne
1999-2002	SHEFC	<i>Strathclyde Synchronised Electron and High Power Ultra-Short Terahertz to Optical Pulse Source (TOPS)</i>		530k	D.A. Jaroszynski, A.D.R. Phelps, K. Wynne
1999-	EPSRC	<i>The solvent response to chemical reactions</i>	190k		K. Wynne

2002	GR/M39312				
1997-1999	EPSRC GR/L91627	<i>T-Ray near-field imaging</i>	51k		K. Wynne
1997-1999	EPSRC GR/K88002	<i>Temporal and spectral dynamics of phonons in crystals excited using subpicosecond optical pulses</i>		193k	T.P.J. Han, K. Wynne
1996-1997	Strathclyde	<i>Ultrafast reaction dynamics in proteins</i>	20k		K. Wynne
1997-1999	EPSRC GR/K88972	<i>Fluorescence dynamics in confined water: application to the structure of silica hydrogels</i>		198k	D.J.S. Birch, K. Wynne
			£4971k	£12562k	

Administrative responsibilities

1. Deputy head of School of Chemistry (**2016-present**).
2. Director of Research Chemistry (**2016-present**).
3. Deputy director WestCHEM (**2016-present**).
4. Member of the WestCHEM management group (**2012-present**).
5. Member of the School Management Group (**2011-present**).
6. Member of the college research & knowledge transfer committee (**2011-present**).
7. REF champion in the School of Chemistry (**2011-present**).
8. Member of the Glasgow University Senate (**2011-present**).
9. Principal web publisher of the School of Chemistry (**2011-present**).
10. Member of the college web committee (**2011-present**).
11. Head of the dynamics & structure section (**2015-2016**).
12. Head of the physical chemistry section (**2012-2014**).
13. Champion dynamics & structure grouping (**2012-2014**).
14. Deputy research convenor in the School of Chemistry (**2011-2016**).
15. Class Head for Chemical Physics (**2012-2016**).
16. Class Head for Chemistry and Mathematics (**2012-2016**).
17. Member of teaching committee (**2012-2016**).

Recent professional activities

Editorial

1. Associate editor of the Journal of the American Chemical Society (JACS), impact factor 13.0 (**2017-present**).
2. Member of the Editorial Board of the Elsevier journal Chemical Physics (**2012-present**).
3. Member of the editorial advisory board of the Journal of Physical Chemistry (**2012-2015**).

Panels, committees

4. Member appointment panel Tenured Lecturer position (Serra Hunter Programme) at the University of Barcelona (**2016**).
5. Member of the Faraday Division council of the RSC (**2013-2016**).
6. Member of the EPSRC college of peers (**2012-present**).
7. Member of the committee of the 'Liquids and Complex Fluids Group' of the IoP (**2011-2013**).
8. Member of the SUPA Physics And Life Sciences (PALS) committee (**2006/7**).

Conference organisation

9. Co-organiser of the international conference on Time-Resolved Vibrational Spectroscopy (TRVS), **2017**, UK.
10. Organiser of a Faraday Discussion meeting 167 on 'Mesostructure and dynamics in liquids and solutions' (Bristol, September **2013**).
11. Member of the local organising committee of the SU2P Symposium (Glasgow, April **2013**).

12. Member of the scientific advisory committee of the annual general meeting of the European Molecular Liquids Group (EMLG) and Japanese Molecular Liquids Group (**2012-2015**).
13. Organiser with Mischa Bonn (Director MPI for Polymer Research) of a session on Biomolecular Terahertz Spectroscopy (SPIE Photonics West, BIOS, San Francisco, **2013**).
14. Member of the local organising committee of the 'European Conference of Crystal Growth' ECCG4, Glasgow, June **2012**.
15. Chair for 'Perspectives in Multidimensional Spectroscopy' in honour of Prof Robin Hochstrasser, University of Pennsylvania, March **2011**.
16. Co-organiser of the 'International workshop on ultrafast chemical physics 2011', December **2011** in Glasgow. Organising committee: Neil Hunt (Strathclyde), Klaas Wynne (Glasgow), David Klug (Imperial), Helen Fielding (UCL), Steve Meech (UEA), and Julia Weinstein (Sheffield). The UCP 2011 meeting was the subject of a "news & views" article in the March 2012 issue of Nature Chemistry ([doi:10.1038/nchem.1282](https://doi.org/10.1038/nchem.1282)).
17. Member of the international organising committee of the international conference on Time-Resolved Vibrational Spectroscopy, TRVS (**2009-present**).
18. Member programme committee for SPIE Photonics West (ultrafast phenomena in semiconductors and nanostructures), San Francisco, USA. (**2009-2015**)
19. Organiser of the 'International Workshop on Ultrafast Chemical Physics 2008' held 30/31 October **2008** in Glasgow with nearly 100 attendees. Organising committee: Klaas Wynne, Neil Hunt (Strathclyde), Steve Meech (UEA), David Klug (Imperial), and Angus Bain (UCL).

Other

20. Project monitor for 2014 BP Trust Fellow (Royal Society of Edinburgh) Dr Olof Johansson (**2015-2020**).
21. Organiser proposal writing workshop (**2014**).
22. Interviewed on air by Michael de Leonardis of KPFT-FM, Houston radio about the Nature Comm. paper on protein dynamics, 19 June **2014**.
23. Initiated a collaboration between the Indian Institute of Science Education and Research (IISER), Pune, India and the University of Glasgow in the area of *dynamics and structure* leading to a bilateral meeting in December 2012 in Pune attended by 9 academic staff from Glasgow and in June 2013 in Glasgow attended by 9 academic staff from Pune (**2012-2013**).
24. Visiting professor in the Department of Chemical and Process Engineering at Strathclyde (**2012-2014**).
25. Guest editor with Neil Hunt for special issue on 'Ultrafast chemical dynamics' of PCCP published April **2012**.
26. Assessor of the 'Atomic and Molecular Physics: Technical Innovation' group in the Department of Physics, University of Reading, **2005**
27. Member ESF network 'Ultrafast Structural Dynamics in Physics, Chemistry, Biology, and Material Science (DYNA)', **2005-2008**

Other activities

Mountaineering, hill running, climbing.

Visitors, postdocs, & students

Secretarial

1. Kathryn Allan (JACS editorial assistant), from April 2017.

Postdocs

1. Francesco Baldini (with Heather Ferguson), from April 2017.
2. Gopakumar Ramakrishnan, from February 2014.
3. Mario González Jiménez, from December 2013.
4. Chris Symes, October 2012 – June 2016.
5. David A. Turton, August 2004-November 2013.
6. Marco Candelaresi, August 2009 – November 2010.
7. Kitsakorn Locharoenrat, July 2008 – May 2009

8. Neil T. Hunt, November 2004 – October 2006
9. Andrew R. Turner, September 2004 – September 2006
10. John J. Carey, 2001-2006
11. Gerard Giraud, 2002 – 2003

PhD students

1. Andrew Farrell, October 2016-present.
2. Finlay Walton, October 2015-present.
3. Judith Reichenbach, October 2013-present.
4. Joanna Mosses, October 2010-July 2014.
5. Thomas Harwood (effectively taken over from E. Ellis in 2012, University of Strathclyde), 'The Use of Terahertz Spectroscopy for Biomolecular Analysis', October 2011-March 2016.
6. Marc A. White, October 2010-October 2011.
7. Scott Campbell, December 2007-December 2011.
8. Johan Lundahl, November 2004 – October 2007.
9. Gregor Welsh, '*Understanding and control of ultrafast currents for terahertz pulse generation*', October 2004 – March 2008.
10. Gerard Giraud, '*The solvent response to chemical reactions*', July 1999 – June 2002.
11. John J. Carey, '*Near-field effects studied with T-Rays*', September 1998 – 2001. Ph.D. December 2002.
12. Justyna Zawadzka, '*Ultrafast Electron-Energy Loss and Gain Spectroscopy (fs-EELS/EEGS)*', September 1998 – 2001. Ph.D. February 2003.

Senior visitors

1. Dr Olof Johansson, University of Edinburgh, visiting researcher, 2013.
2. Prof Edward W. Castner Jr., Rutgers University, visiting professor, 2010-2013.
3. Prof Robin M. Hochstrasser, Donner Professor of Physical Sciences, Department of Chemistry, University of Pennsylvania. Visiting professor at Strathclyde January 2006-December 2011.

Undergraduate project students, visitors, fellows, etc.

1. Ms Sonja Dunbar (2012): 2D-IR and OKE studies of PYP, with J. van Thor (Imperial).
2. Academic supervisor for Benjamin Murray (2011-2012).
3. Project students: André Büssow (2011-2012), Michael Butler (2011-2012), Christopher Gordon (2012-2013), Nicola Black (2013-2014), Thomas Glew (2014-2015).
4. André Büssow, summer 2012.
5. Thomas Sonnleitner (University of Regensburg), October-November 2010 & July 2012.
6. Neil T. Hunt, EPSRC Advanced Research Fellow, starting October 2006

Current collaborators

1. Dr **Lisa Ranford-Cartwright** (Institute of Infection, Immunity and Inflammation, GU), Dr **Heather Ferguson** and Dr **Francesco Baldini**, and Dr **Simon Babayan** (Institute of Biodiversity Animal Health and Comparative Medicine, GU), Prof **Richard Hogg** and Dr **David Childs** (School of Engineering, GU), Prof **Hilary Ranson** (Dept. of Vector Biology, U. Liverpool), Dr **Abdoulaye Diabaté** (Institut de Recherche en Sciences de la Santé, Burkina Faso), Dr **Fredros O. Okumu** (Ifakara Health Institute, Tanzania) – spectroscopy of mosquitoes.
2. Dr **Neil Hunt** (SU, Physics), Dr **Glenn Burley** (SU, Chemistry), Dr **Gregory Greetham**, Dr **Paul Donaldson**, **Michael Towrie**, **Anthony Parker** (STFC Central Laser Facility) – DNA dynamics.
3. Dr **Olga Shebanova** (Diamond Light Source) – Microfocus SAXS/WAXS of liquids.
4. Prof **Johannes Kiefer** (Technische Thermodynamik, U. Bremen,), Hyung Kim (Dept. Chem., Carnegie Mellon) – Ionic liquids.
5. Dr **Elizabeth Ellis** (Strathclyde University), **Adrian Laphorn** (Glasgow), **Sharon Kelly** (Glasgow), and **Hans Senn** (Glasgow) — protein and DNA dynamics.
6. Dr **Jan Sefcik** and Dr **Leo Lue** (ChemEng, Strathclyde) – crystal nucleation. One EPSRC proposal funded in 2011. Part of CMAC Crystallisation Science consortium (2010).
7. Prof **Francesco Mallamace** (Università di Messina and MIT) — experiments on liquid-liquid transitions in 2010. One paper published one in press (2012).

8. Prof **Richard Buchner** (U. Regensburg, Germany), Prof **Glen Hefter** (Murdoch U., W.A.), Dr **Markus Walther** (U. Freiburg, Germany), Dr **Natalia Plechkova** (Queen's Belfast) — dielectric relaxation experiments, ionic liquids. Six papers published. Visiting PhD students 2011/2012.
9. Prof **Hajime Tanaka** (U. Tokyo) — imaging experiments on liquids etc. One paper published.
10. Dr **Frank Demmel** (ISIS) — liquid-liquid transitions. Proposal funded in 2010.
11. Dr **Frank Garwe** (IPHT Jena, Germany) — terahertz radiation generation. Paper published.

Undergraduate teaching

1. Class Head for Chemical Physics (2012-2016).
2. Class head for Chemistry and Maths (2012-2016).
3. Level 1 - Thermodynamics (2012-present).
4. Level 4 - A6 – '*Dynamics of molecular clusters and fluids*' (2011-present).
5. 1st year Quant lab
6. 2nd year Quant workshop
7. 2nd year tutorials
8. 3rd year PChem tutorials
9. MSci placement talks

Received the **Strathclyde Teaching Excellence Awards** 2010 Certificate of Recognition awarded in recognition of outstanding teaching.

Publications

<http://www.researcherid.com/rid/B-7993-2008>, <http://orcid.org/0000-0002-5305-5940>

Papers in refereed journals

1. P.D. Lane, J. Reichenbach, A.J. Farrell, L. Ramakers, K. Adamczyk, N.T. Hunt, and K. Wynne, "*Nanophase segregation of aqueous salt solutions due to the liquid-liquid transition in water*", *J. Phys. Chem. Lett.* **submitted** (2017).
2. G. Ramakrishnan, M. González-Jiménez, A.J. Laphorn, and K. Wynne, "*Universal slow and super-slow water translational dynamics around organic and biological solutes*", *PNAS* **submitted** (2017).
3. J. Reichenbach, S.A. Ruddell, M. González-Jiménez, J. Lemes, D.A. Turton, D.J. France, and K. Wynne, "*Phonon-like hydrogen-bond modes in protic ionic liquids*", *JACS* **submitted** (2017).
4. N.R. Dhumal, J. Kiefer, D. Turton, K. Wynne, and H.J. Kim, "*Dielectric Relaxation of the Ionic Liquid 1-Ethyl-3-methylimidazolium Ethylsulfate: Microwave and Far-IR Properties*", to *J. Phys. Chem. A* **submitted** (2017).
5. G. Hithell, M. González-Jiménez, G.M. Greetham, P.M. Donaldson, M. Towrie, A.W. Parker, G.A. Burley, K. Wynne, N.T. Hunt, "*Ultrafast 2D-IR and Optical Kerr Effect Spectroscopy Reveal the Impact of Duplex Melting on the Structural Dynamics of DNA*", *PCCP* **19**, 10333 (2017). (<http://dx.doi.org/10.1039/C7CP00054E>)
6. C.D. Syme, J. Mosses, M. González Jiménez, Finlay Walton, and K. Wynne, "*Frustration of crystallisation by a liquid–crystal phase*", *Sci. Rep.* **7**, 42439 (2017). (<http://dx.doi.org/10.1038/srep42439>)
7. M. González-Jiménez, G. Ramakrishnan, T. Harwood, A.J. Laphorn, S.M. Kelly, E.M. Ellis, and K. Wynne, "*Observation of coherent delocalised phonon-like modes in DNA under physiological conditions*", *Nature Commun.*, **7**, 11799 (2016). (<http://dx.doi.org/10.1038/ncomms11799>)
8. T. Sonnleitner, D.A. Turton, G. Hefter, A. Ortner, S. Waselikowski, M. Walther, K. Wynne, and R. Buchner, '*An Ultra-Broadband Dielectric and Optical Kerr-Effect Study of the Ionic Liquids Ethyl- and Propylammonium Nitrate*', *J. Phys. Chem. B* **119**, 8826–8841 (2015). (<http://dx.doi.org/10.1021/jp502935t>)
9. J. Mosses, C.D. Syme, and K. Wynne, '*The order parameter of liquid-liquid phase transitions*', *J. Phys. Chem. Lett.*, **6**, 38-43 (2015). (<http://dx.doi.org/10.1021/jz5022763>)
10. J. Mosses, D.A. Turton, L. Lue, J. Sefcik, and K. Wynne, '*Crystal templating through liquid–liquid phase separation*', *Chem. Commun.* **51**, 1139-1142 (2015). (<http://dx.doi.org/10.1039/c4cc07880b>)
11. D.A. Turton, H.M. Senn, T. Harwood, A.J. Laphorn, E.M. Ellis, and K. Wynne, '*Terahertz underdamped vibrational motion governs protein-ligand binding in solution*', *Nature Commun.* **5**, 3999 (2014). (<http://dx.doi.org/10.1038/ncomms4999>)
12. D.A. Turton, K. Wynne, '*Stokes-Einstein-Debye Failure in Molecular Orientational Diffusion: Exception or Rule?*', *J. Phys. Chem. B* **118**, 4600-4604 (2014). (<http://dx.doi.org/10.1021/jp5012457>)

13. T. Sonnleitner, D.A. Turton, S. Waselikowski, J. Hunger, A. Stoppa, M. Walther, K. Wynne, R. Buchner, 'Dynamics of RTILs: A Comparative Dielectric and OKE study', *J. Mol. Liq.* **192**, 19-25 (2014). (<http://dx.doi.org/10.1016/j.molliq.2013.09.019>)
14. D.A. Turton, C. Corsaro, D.F. Martin, F. Mallamace, K. Wynne, 'The dynamic crossover in water does not require bulk water', *Phys. Chem. Chem. Phys.* **14**, 8067-8073 (2012). (<http://dx.doi.org/10.1039/C2CP40703E>)
15. K. Wynne, N.T. Hunt, 'Ultrafast chemical dynamics', *Phys. Chem. Chem. Phys.* **14**, 6154 - 6155 (2012). (<http://dx.doi.org/10.1039/c2cp90065c>)
16. D.A. Turton, T. Sonnleitner, A. Ortner, M. Walther, G. Hefter, K.R. Seddon, S. Stana, N.V. Plechkova, R. Buchner and K. Wynne, 'Structure and dynamics in protic ionic liquids: A combined optical Kerr-effect and dielectric relaxation spectroscopy study', *Faraday Disc.* **154**, 145-153 (2012). (<http://dx.doi.org/10.1039/c1fd00054c>)
17. D.A. Turton, C. Branca, C. Corsaro, M. Candelaresi, K.R. Seddon, F. Mallamace, and K. Wynne, 'The structure and terahertz dynamics of water confined in nanoscale pools in salt solutions', *Faraday Disc.* **150**, 493-504 (2011). (<http://dx.doi.org/10.1039/c0fd00005a>)
18. F. Garwe, A. Schmidt, G. Zieger, T. May, K. Wynne, U. Hübner, M. Zeisberger, W. Paa, H. Stafast, H.-G. Meyer, 'Bi-directional terahertz emission from gold coated nanogratings by excitation via femtosecond laser pulses', *Appl. Phys. B* **102**, 551-554 (2011). (<http://dx.doi.org/10.1007/s00340-011-4377-7>)
19. D.A. Turton, J. Hunger, A. Stoppa, A. Thoman, M. Candelaresi, G. Hefter, M. Walther, R. Buchner, and K. Wynne, 'Rattling the cage: Micro-to mesoscopic structure in liquids as simple as argon and as complicated as water', *J. Mol. Liq.* **159**, 2-8 (2011). (<http://dx.doi.org/10.1016/j.molliq.2010.04.005>)
20. D.A. Turton, D.F. Martin, and K. Wynne, 'Optical Kerr-effect study of trans-1,2-dichloroethene: liquid-liquid transition or super-Arrhenius relaxation', *Phys. Chem. Chem. Phys.* **12**, 4191-4200 (2010). (<http://dx.doi.org/10.1039/b918196b>)
21. D.A. Turton, K. Wynne, 'Universal non-exponential relaxation: complex dynamics in simple liquids', *J. Chem. Phys. Communication* **131**, 201101 (2009). (<http://dx.doi.org/10.1063/1.3265862>) [**3rd most downloaded JCP paper in December 2009, 2009 JChemPhys editors' choice.**]
22. D.A. Turton, J. Hunger, A. Stoppa, G. Hefter, A. Thoman, M. Walther, R. Buchner, and K. Wynne, 'Dynamics of Imidazolium Ionic Liquids from a Combined Dielectric Relaxation and Optical Kerr Effect Study: Evidence for Mesoscopic Aggregation', *J. Am. Chem. Soc.* **131**, 11140-11146 (2009). (<http://dx.doi.org/10.1021/ja903315v>) [**>100 cits.**]
23. G.H. Welsh, K. Wynne, 'Generation of ultrafast terahertz radiation pulses on metallic nanostructured surfaces', *Opt. Express*, **17**, 2470-2480 (2009). (<http://dx.doi.org/10.1364/OE.17.002470>)
24. D.A. Turton, J. Hunger, G. Hefter, R. Buchner, K. Wynne, 'Glasslike Behavior in Aqueous Electrolyte Solutions', *J. Chem. Phys. Communication* **128**, 161102 (2008). (<http://dx.doi.org/10.1063/1.2906132>) [**Editors' Choice in Science 320, 987 (2008) and 7th most downloaded JCP paper in May 2008**]
25. D.A. Turton, K. Wynne, 'Structural relaxation in the hydrogen-bonding liquids N-methylacetamide and water studied by optical Kerr-effect spectroscopy', *J. Chem. Phys.* **128**, 154516 (2008). (<http://dx.doi.org/10.1063/1.2897432>)
26. N.T. Hunt, A.R. Turner, H. Tanaka, and K. Wynne, 'The Ultrafast Dynamics of Hydrogen-Bonded Liquids: Molecular Structure-Dependent Occurrence of Normal Arrhenius or Fractional Stokes-Einstein-Debye Rotational Diffusive Relaxation', *J. Phys. Chem. B.* **111**, 9634-9643 (2007). (<http://dx.doi.org/10.1021/jp072409h>)
27. G.H. Welsh, D.A. Turton, D.R. Jones, D.A. Jaroszynski, and K. Wynne, '200-ns-pulse high-voltage supply for terahertz field emission', *Rev. Sci. Instrum.* **78**, 043103 (2007). (<http://dx.doi.org/10.1063/1.2724769>)
28. N.T. Hunt, L. Kattner, R.P. Shanks, K. Wynne, 'The Dynamics of Water-Protein Interaction Studied by Ultrafast Optical Kerr-Effect Spectroscopy', *J. Am. Chem. Soc.* **129**, 3168-3172 (2007). (<http://dx.doi.org/10.1021/ja066289n>)
29. G.H. Welsh, N.T. Hunt, and K. Wynne, 'Terahertz-pulse emission through laser excitation of surface plasmons in a metal grating', *Phys. Rev. Lett.* **98**, 026803 (2007). (<http://dx.doi.org/10.1103/PhysRevLett.98.026803>)
30. N.T. Hunt and K. Wynne, 'The effect of temperature and solvation on the ultrafast dynamics of N-methylacetamide', *Chem. Phys. Lett.* **431**, 155-159 (2006). (<http://dx.doi.org/10.1016/j.cplett.2006.09.084>)
31. D.A. Turton, G. Welsh, J.J. Carey, G.D. Reid, G. Beddard, K. Wynne, 'Alternating high-voltage biasing for terahertz large-area photoconductive emitters', *Rev. Sci. Instrum.* **77**, 083111-1-5 (2006). (<http://dx.doi.org/10.1063/1.2336764>)

32. J.-P.R. Wells, M. Grinberg, K. Wynne, and T.P.J. Han, 'Femtosecond Pump-Probe Measurements of Non-Radiative Relaxation in $\text{LiAlO}_2:\text{V}^{3+}$ ', *J. Phys. Cond. Matt.* **18**, 3967-3974 (2006). (<http://dx.doi.org/10.1088/0953-8984/18/16/006>)
33. K. Wynne, J.J. Carey, 'An integrated description of terahertz generation through optical rectification, charge transfer, and current surge', *Opt. Commun.* **256**, 400-413 (2005). (<http://dx.doi.org/10.1016/j.optcom.2005.06.065>)
34. N.T. Hunt, A.R. Turner and K. Wynne, 'Inter- and Intra-Molecular Hydrogen Bonding in Phenol Derivatives: A Model System for Poly-L-Tyrosine', *J. Phys. Chem. B* **109**, 19008-19017 (2005). (<http://dx.doi.org/10.1021/jp0529640>)
35. K. Wynne, 'A new ultrafast technique for measuring the terahertz dynamics of chiral molecules: The theory of Optical Heterodyne-Detected Raman-Induced Kerr Optical Activity (OHD-RIKOA)', *J. Chem. Phys.* **122**, 244503-1-8 (2005). (<http://dx.doi.org/10.1063/1.1937390>)
36. G. Giraud, K. Wynne, 'A comparison of the low-frequency spectra of liquids obtained through terahertz, FTIR, and ultrafast optical Kerr-effect spectroscopies', *J. Chem. Phys.* **119**, 11753-11764 (2003). (<http://dx.doi.org/10.1063/1.1623747>)
37. G.D. Reid, K. Wynne, 'Time-Resolved Spectroscopy', in the 'Handbook of Laser Technology and Applications', Eds. C.E. Webb, J.D.C. Jones (Institute of Physics Press, 2003).
38. G. Giraud, J. Karolin, K. Wynne, 'Low-frequency Modes of Peptides and Globular Proteins in Solution Observed by Ultrafast OHD-RIKES Spectroscopy', *Biophys. J.* **85**, 1903-1913 (2003). ([http://dx.doi.org/10.1016/S0006-3495\(03\)74618-9](http://dx.doi.org/10.1016/S0006-3495(03)74618-9))
39. G. Giraud, C.M. Gordon, I.R. Dunkin, K. Wynne, 'The Effects of Anion and Cation Substitution on the Ultrafast Solvent Dynamics of Ionic Liquids: A Time-Resolved Optical Kerr-Effect Spectroscopic Study', *J. Chem. Phys.* **199**, 464-477 (2003). (<http://dx.doi.org/10.1063/1.1578056>) [**Selected for JCP Spotlight Collection March 2010, >100 cits.**]
40. J.J. Carey, R.T. Bailey, D. Pugh, J.N. Sherwood, F.R. Cruickshank, K. Wynne, 'Terahertz pulse generation in an organic crystal by optical rectification and resonant excitation of molecular charge transfer', *Appl. Phys. Lett.* **81**, 4335-4337 (2002). (<http://dx.doi.org/10.1063/1.1527237>)
41. G. Giraud, K. Wynne, 'Time-resolved optical Kerr-effect spectroscopy of low-frequency dynamics in di-L-alanine, poly-L-alanine, and lysozyme in solution', *J. Am. Chem. Soc.* **124**, 12110-12111 (2002). (<http://dx.doi.org/10.1021/ja027801h>)
42. K. Wynne, 'Causality and the Nature of Information', *Opt. Commun.* **209**, 85-100 (2002). ([http://dx.doi.org/10.1016/S0030-4018\(02\)01638-3](http://dx.doi.org/10.1016/S0030-4018(02)01638-3))
43. J. Karolin, C.D. Geddes, K. Wynne, D.J.S. Birch, 'Nanoparticle Metrology in Sol-Gels Using Multiphoton Excited Fluorescence', *Meas. Sci. Technol.* **13**, 21-27 (2002). (<http://dx.doi.org/10.1088/0957-0233/13/1/303>)
44. J. Zawadzka, D.A. Jaroszynski, J.J. Carey, K. Wynne, 'Evanescent-Wave Acceleration of Femtosecond Electron Pulses', *Appl. Phys. Lett.* **79**, 2130-2132 (2001). (<http://dx.doi.org/10.1063/1.1406562>) [**Editors' Choice in Science 294, 267 (2001)**]
45. J.J. Carey, J. Zawadzka, D.A. Jaroszynski, K. Wynne, 'Response to comment on: Non-Causal Time Response in Frustrated Total Internal Reflection?', *Phys. Rev. Lett.* **87**, 119102-1 (2001). (<http://dx.doi.org/10.1103/PhysRevLett.87.119102>)
46. G.D. Reid, K. Wynne, 'Ultrafast Laser Technology and Spectroscopy', in the 'Encyclopedia of Analytical Chemistry: Instrumentation and Applications', Ed. R.A. Meyers, pp. 13644-13670 (John Wiley & Sons, Chichester, 2000).
47. J. Zawadzka, D.A. Jaroszynski, J.J. Carey, K. Wynne, 'Evanescent-Wave Acceleration of Femtosecond Electron Bunches', *Nucl. Instr. Meth. A* **445**, 324-328 (2000). ([http://dx.doi.org/10.1016/S0168-9002\(00\)00136-4](http://dx.doi.org/10.1016/S0168-9002(00)00136-4))
48. D. A. Jaroszynski, B. Ersfeld, G. Giraud, S. Jamison, D.R. Jones, R.C. Issac, B.M.W. McNeil, A.D.R. Phelps, G.R.M. Robb, H. Sandison, G. Vieux, S.M. Wiggins, K. Wynne, 'The Strathclyde Terahertz to Optical Pulse Source (TOPS)', *Nucl. Instr. Meth. A* **445**, 317-319 (2000). ([http://dx.doi.org/10.1016/S0168-9002\(00\)00134-0](http://dx.doi.org/10.1016/S0168-9002(00)00134-0))
49. K. Wynne, John J. Carey, Justyna Zawadzka, D.A. Jaroszynski, 'Tunneling of Single-Cycle Terahertz Pulses through Waveguides', *Opt. Commun.* **176**, 429-435 (2000). ([http://dx.doi.org/10.1016/S0030-4018\(00\)00542-3](http://dx.doi.org/10.1016/S0030-4018(00)00542-3))
50. J.J. Carey, J. Zawadzka, D.A. Jaroszynski, K. Wynne, 'Non-Causal Time Response in Frustrated Total Internal Reflection?', *Phys. Rev. Lett.* **84**, 1431-1434 (2000). (<http://dx.doi.org/10.1103/PhysRevLett.84.1431>)
51. R. McElroy, K. Wynne, 'Time-Resolved Terahertz Spectroscopy of Condensed Phase Reactions', *Laser Chem.* **19**, 145-148 (1999).

52. A. Volkmer, K. Wynne, D.J.S. Birch, 'Near-Infrared Excitation of Alkane Ultra-Violet Fluorescence', *Chem. Phys. Lett.* **299**, 395-402 (1999). ([http://dx.doi.org/10.1016/S0009-2614\(98\)01316-5](http://dx.doi.org/10.1016/S0009-2614(98)01316-5))
53. K. Wynne, R.M. Hochstrasser, 'Coherence and Adiabaticity in Ultrafast Electron Transfer', *Adv. Chem. Phys.* **107** ('Electron Transfer - From Isolated Molecules to Biomolecules, Pt. Two'), 263-309 (1999).
54. K. Wynne, D.A. Jaroszynski, 'Superluminal terahertz pulses', *Opt. Lett.* **24**, 25-27 (1999). (<http://dx.doi.org/10.1364/OL.24.000025>)
55. R. McElroy, K. Wynne, 'Ultrafast Dipole Solvation Measured in the Far-Infrared', *Phys. Rev. Lett.* **79**, 3078-3081 (1997). (<http://dx.doi.org/10.1103/PhysRevLett.79.3078>)
56. G. Haran, W.-D. Sun, K. Wynne, R.M. Hochstrasser, 'Femtosecond Far-Infrared Pump-Probe Spectroscopy: A New Tool for Studying Low-Frequency Vibrational Dynamics in Condensed Phases (vol 274, pg 365, 1997)', *Chem. Phys. Lett.* **277**, 579 (1997). ([http://dx.doi.org/10.1016/S0009-2614\(97\)00968-8](http://dx.doi.org/10.1016/S0009-2614(97)00968-8))
57. G. Haran, W.-D. Sun, K. Wynne, R.M. Hochstrasser, 'Femtosecond Far-Infrared Pump-Probe Spectroscopy: A New Tool for Studying Low-Frequency Vibrational Dynamics in Condensed Phases', *Chem. Phys. Lett.* **274**, 365-371 (1997). ([http://dx.doi.org/10.1016/S0009-2614\(97\)00705-7](http://dx.doi.org/10.1016/S0009-2614(97)00705-7))
58. G. Haran, K. Wynne, A. Xie, Q. He, M.R. Chance, R.M. Hochstrasser, 'Excited state dynamics of bR revealed by transient stimulated emission spectra', *Chem. Phys. Lett.* **261**, 389-395 (1996). ([http://dx.doi.org/10.1016/0009-2614\(96\)01017-2](http://dx.doi.org/10.1016/0009-2614(96)01017-2))
59. K. Wynne, G.D. Reid, R.M. Hochstrasser, 'Vibrational Coherence in Electron Transfer: The TCNE-Pyrene Complex', *J. Chem. Phys.* **105**, 2287-2297 (1996). (<http://dx.doi.org/10.1063/1.472097>) [**>100 cits.**]
60. G. Haran, K. Wynne, C.C. Moser, P.L. Dutton, R.M. Hochstrasser, 'Level Mixing and Energy Redistribution in Bacterial Photosynthetic Reaction Centers', *J. Phys. Chem.* **100**, 5562-5569 (1996). (<http://dx.doi.org/10.1021/jp952925k>)
61. K. Wynne, G. Haran, G.D. Reid, C.C. Moser, P.L. Dutton, R.M. Hochstrasser, 'Femtosecond Infrared Spectroscopy of Low Lying Excited States in Reaction Centers of *Rb. Sphaeroides*', *J. Phys. Chem.* **100**, 5140-5148 (1996). (<http://dx.doi.org/10.1021/jp9528976>)
62. K. Wynne, G. Haran, A. Xie, Q. He, M.R. Chance, R.M. Hochstrasser, 'Ultrafast Studies of Electronic States and Protein Bound Water Molecules in Bacteriorhodopsin', *Biophysical Journal* **70**, A241 (1996).
63. K. Wynne, R.M. Hochstrasser, 'Anisotropy as an Ultrafast Probe of Coherence in Degenerate Systems Exhibiting Raman, Fluorescence, Transient Absorption and Chemical Reactions', *J. Raman Spectrosc.* **26**, 561-569 (1995). (<http://dx.doi.org/10.1002/jrs.1250260711>)
64. K. Wynne, R.M. Hochstrasser, 'The Theory of Ultrafast Vibrational Spectroscopy', *Chem. Phys.* **193**, 211-236 (1995). ([http://dx.doi.org/10.1016/0301-0104\(95\)00012-D](http://dx.doi.org/10.1016/0301-0104(95)00012-D))
65. K. Wynne, S.M. LeCours, C. Galli, M.J. Therien, R.M. Hochstrasser, 'Porphyrin-Quinone Electron Transfer Revisited. The Role of Excited-State Degeneracy in Ultrafast Charge Transfer Reactions', *J. Am. Chem. Soc.* **117**, 3749-3753 (1995). (<http://dx.doi.org/10.1021/ja00118a011>)
66. K. Wynne, S. Gnanakaran, C. Galli, F. Zhu, R.M. Hochstrasser, 'Luminescence Studies of Ultrafast Energy Transfer Oscillations in Dimers', *J. Lumin.* **60&61**, 735 (1994). ([http://dx.doi.org/10.1016/0022-2313\(94\)90264-X](http://dx.doi.org/10.1016/0022-2313(94)90264-X))
67. K. Wynne, G.D. Reid, R.M. Hochstrasser, 'Regenerative Amplification of 30-fs Pulses in Ti:Sapphire at 5 kHz', *Opt. Lett.* **19**, 895-897 (1994). (<http://dx.doi.org/10.1364/OL.19.000895>)
68. K. Wynne, C. Galli, R.M. Hochstrasser, 'Ultrafast Charge Transfer in an Electron Donor-Acceptor Complex', *J. Chem. Phys.* **100**, 4797-4810 (1994). (<http://dx.doi.org/10.1063/1.467201>) [**>100 cits.**]
69. Galli, K. Wynne, S.M. LeCours, M.J. Therien, R.M. Hochstrasser, 'Direct Measurement of Electronic Dephasing using Anisotropy', *Chem. Phys. Lett.* **206**, 493-499 (1993). ([http://dx.doi.org/10.1016/0009-2614\(93\)80174-N](http://dx.doi.org/10.1016/0009-2614(93)80174-N))
70. K. Wynne, R.M. Hochstrasser, 'Coherence Effects in the Anisotropy of Optical Experiments', *Chem. Phys.* **171**, 179-188 (1993). ([http://dx.doi.org/10.1016/0301-0104\(93\)85142-U](http://dx.doi.org/10.1016/0301-0104(93)85142-U)) [**>100 cits.**]
71. K. Wynne, R.M. Hochstrasser, 'Coherence Effects in the Anisotropy of Optical Experiments (Vol 171, Pg 179, 1993)', *Chem. Phys.* **173**, 539-539 (1993). ([http://dx.doi.org/10.1016/0301-0104\(93\)80167-8](http://dx.doi.org/10.1016/0301-0104(93)80167-8))
72. K. Wynne, C. Galli, R.M. Hochstrasser, 'Femtosecond Intermolecular Vibrational Motion in Pyrrole', *Chem. Phys. Lett.* **193**, 17-22 (1992). ([http://dx.doi.org/10.1016/0009-2614\(92\)85676-2](http://dx.doi.org/10.1016/0009-2614(92)85676-2))
73. K. Wynne, M. Müller, J.D.W. Van Voorst, 'Time Resolved Raman Scattering with Incoherent Light', *Phys. Rev. A* **41**, 6361-6375 (1990). (<http://dx.doi.org/10.1103/PhysRevA.41.6361>)
74. M. Müller, K. Wynne and J.D.W. Van Voorst, 'Raman Fringe Decay: Properties of a Four-Wave Mixing Experiment with Incoherent Light', *J. Opt. Soc. Am. B* **7**, 1694-1701 (1990). (<http://dx.doi.org/10.1364/JOSAB.7.001694>)

75. K. Wynne, M. Müller, J.D.W. Van Voorst, 'High Time Resolution with Incoherent Light in the Raman-Fringe Decay', *Phys. Rev. Lett.* **62**, 3031-3033 (1989). (<http://dx.doi.org/10.1103/PhysRevLett.62.3031>)
76. M. Müller, K. Wynne and J.D.W. Van Voorst, 'No Raman Echo in Liquid Nitrogen', *Chem. Phys.* **128**, 549-553 (1988). ([http://dx.doi.org/10.1016/0301-0104\(88\)90020-1](http://dx.doi.org/10.1016/0301-0104(88)90020-1))
77. M. Müller, K. Wynne and J.D.W. Van Voorst, 'The Interpretation of Echo Experiments', *Chem. Phys.* **125**, 225-230 (1988). ([http://dx.doi.org/10.1016/0301-0104\(88\)87076-9](http://dx.doi.org/10.1016/0301-0104(88)87076-9))
78. K. Wynne, M. Müller, D. Brandt, J.D.W. Van Voorst, 'Diagrammatic Density Matrix Analysis of the Raman Photon Echo', *Chem. Phys.* **125**, 211-223 (1988). ([http://dx.doi.org/10.1016/0301-0104\(88\)87075-7](http://dx.doi.org/10.1016/0301-0104(88)87075-7))

Conference papers

79. D. Turton, T. Harwood, A. Laphorn, E. Ellis, and K. Wynne, 'Ultrabroadband terahertz spectroscopies of biomolecules and water', *Proc. SPIE* **8623**, 862303-1-7 (2013). (<http://dx.doi.org/10.1117/12.2003796>)
80. D.A. Turton, J. Hunger, A. Stoppa, G. Hefter, A. Thoman, M. Walther, R. Buchner, and K. Wynne, 'Terahertz Dynamics of Ionic Liquids from a Combined Dielectric Relaxation, Terahertz, and Optical Kerr Effect Study: Evidence for Mesoscopic Aggregation', *Proc. SPIE* **7601**, 76010H (2010). (<http://dx.doi.org/10.1117/12.840185>)
81. D.A. Turton, J. Hunger, G. Hefter, R. Buchner, K. Wynne, 'Glasslike Behaviour in Aqueous Electrolyte Solutions', in: 'Ultrafast Phenomena XVI', pp. 484-486, Eds. P. Corkum, S. de Silvestri, K.A. Nelson, E. Riedle, R.W. Schoenlein (Springer Verlag, Berlin, 2009).
82. G.H. Welsh, K. Wynne, 'Terahertz-pulse emission through excitation of surface plasmons in metallic nanostructures', *Proc. SPIE* **6892**, 68921E (2008). (<http://dx.doi.org/10.1117/12.759115>)
83. G.H. Welsh, N.T. Hunt, and K. Wynne, 'Terahertz Emission from Nano-structured Metal Surfaces', in: 'Ultrafast Phenomena XV', pp. 778-780, Eds. P. Corkum, D. Jonas, R.J.D. Miller, A.M. Weiner (Springer Verlag, Berlin, 2007).
84. D.A. Turton, N.T. Hunt, A.R. Turner, G.H. Welsh, and K. Wynne, 'An experimental and numerical study of hydrogen-bonding in aqueous salts and methanol', in: 'Ultrafast Phenomena XV', pp. 427-429, Eds. P. Corkum, D. Jonas, R.J.D. Miller, A.M. Weiner (Springer Verlag, Berlin, 2007).
85. N.T. Hunt, D.A. Turton, and K. Wynne, 'Understanding the Building Blocks of Life – Evidence of Hydrogen-Bonded Aggregation of N-Methylacetamide', in: 'Ultrafast Phenomena XV', pp. 442-444, Eds. P. Corkum, D. Jonas, R.J.D. Miller, A.M. Weiner (Springer Verlag, Berlin, 2007).
86. N.T. Hunt, D.A. Turton, L. Kattner, R.P. Shanks, and K. Wynne, "Direct observation of the 'lubricant of life' using ultrafast spectroscopies", in: 'Ultrafast Phenomena XV', pp. 504-506, Eds. P. Corkum, D. Jonas, R.J.D. Miller, A.M. Weiner (Springer Verlag, Berlin, 2007).
87. N.T. Hunt, A.R. Turner, K. Wynne, 'Inter- and Intra-Molecular Hydrogen Bonding in Phenol Derivatives: A Model System for Polypeptides', *Proceedings of the 12th Conference on Time-Resolved Vibrational Spectroscopy (TRVS)*, Eds. E.T. Heilweil, T.L. Gustafson (2005).
88. K. Wynne, 'A new ultrafast technique for measuring the terahertz dynamics of chiral molecules: The theory of Optical Heterodyne-Detected Raman-Induced Kerr Optical Activity (OHD-RIKOA)', *Proceedings of the 12th Conference on Time-Resolved Vibrational Spectroscopy (TRVS)*, Eds. E.T. Heilweil, T.L. Gustafson (2005).
89. J.J. Carey, D. Jones, S.P. Jamison, K. Wynne, 'THz Emission from Charge-Transfer Reactions in Molecules Aligned in Solutions and Crystals', in: 'Ultrafast Phenomena XIII', Eds. R.D. Miller, M.M. Murnane, N.F. Scherer, A.M. Weiner (Springer Verlag, Berlin, 2003 pp. 412-414).
90. G. Giraud, C. Gordon, K. Wynne, 'Time-resolved optical Kerr-effect studies of organic solvents and ionic liquids', *Proc. Ultrafast Spectroscopy Conference* (2002).
91. J.J. Carey, S. Jamison, D. Jones, D.A. Jaroszynski, K. Wynne, 'Nonlinear and Near-Field Propagation Effects of Single-Cycle Terahertz Pulses', *IEEE Ann. Meeting Conf. Proc.*, 13th Ann. LEOS Meeting, 181-182 (2000).
92. J.J. Carey, J. Zawadzka, D.A. Jaroszynski, K. Wynne, 'THz-Pulse Studies of Superluminal Propagation in Frustrated Total Internal Reflection' in: 'Ultrafast Phenomena XII,' Eds. T. Elsaesser, S. Mukamel, M.M. Murnane, N.F. Scherer (Springer Verlag, Berlin, 2000, pp. 238-240).
93. J. Zawadzka, D.A. Jaroszynski, J.J. Carey, K. Wynne, 'Evanescent-Wave Acceleration of Ultrashort Electron Pulses,' in: 'Ultrafast Phenomena XII,' Eds. T. Elsaesser, S. Mukamel, M.M. Murnane, N.F. Scherer (Springer Verlag, Berlin, 2000, pp. 308-310).

94. K. Wynne, J.J. Carey, J. Zawadzka, D.A. Jaroszynski, '*Superluminal Propagation of Terahertz Pulses in Sub-Wavelength Structures*,' in Conference on Lasers and Electro-Optics, OSA Technical Digest (Optical Society of America, Washington DC, 1999), p. 397.
95. K. Wynne, J.J. Carey, J. Zawadzka, D.A. Jaroszynski, '*Near-Field Phenomena Observed with Terahertz Pulses*,' SPIE Proceedings 3828, 254-262 (1999).
96. K. Wynne, D.A. Jaroszynski, '*T-Rays in the Near-Field*,' 23rd International Conference on Infrared and Millimeter Waves, Conference Digest, Eds. T.J. Parker, S.R.P. Smith, University of Essex, Colchester, pp. 386-387, 1998, ISBN 0 9533839 0 3.
97. K. Wynne, '*Ultrafast Terahertz Pulses: A Booming Technology*,' 23rd International Conference on Infrared and Millimeter Waves, Conference Digest, Eds. T.J. Parker, S.R.P. Smith, University of Essex, Colchester, pp. 9-12, 1998, ISBN 0 9533839 0 3.
98. R. McElroy, X.-C. Zhang, K. Wynne, '*Pump-Probe Spectroscopy in the Condensed Phase with THz Pulses*,' Quantum Electronics and Laser Science Conference, OSA Technical Digest Series, 12, 83 (1997).
99. G. Haran, K. Wynne, C.C. Moser, P.L. Dutton, R.M. Hochstrasser, '*Femtosecond Infrared Studies of Photosynthetic Reaction Centers: New Charge Transfer Bands and Ultrafast Energy Redistribution*,' in: '*Ultrafast Phenomena X*,' Eds. P.F. Barbara, J. Fujimoto, W.H. Knox, W. Zinth (Springer Verlag, Berlin, 1996, p.326).
100. K. Wynne, G. Haran, G.D. Reid, C.C. Moser, G.C. Walker, S. Maiti, P.L. Dutton, R.M. Hochstrasser, '*Femtosecond Infrared Spectroscopy on Reaction Centers of Rb. Sphaeroides*,' in: '*Time-Resolved Vibrational Spectroscopy VII*,' Eds. R.B. Dyer, M.A.D. Martinez, A. Shreve, W.H. Woodruff (Los Alamos, 1997), p. 191.
101. K. Wynne, G. Haran, G.D. Reid, C.C. Moser, G.C. Walker, S. Maiti, P.L. Dutton, R.M. Hochstrasser, '*Femtosecond Infrared Spectroscopy on Reaction Centers of Rb. Sphaeroides*,' in: '*The Reaction Center of Photosynthetic Bacteria: Structure and Dynamics*,' Ed.: M.-E. Michel-Beyerle (p. 281-286, Springer Verlag, Berlin, 1996).
102. G.C. Walker, S. Maiti, K. Wynne, G.D. Reid, C.C. Moser, R.S. Pippenger, B.R. Cowen, P.L. Dutton, R.M. Hochstrasser, '*Femtosecond Infrared Spectroscopy of the Photosynthetic Reaction Center*,' in '*Ultrafast Phenomena IX*,' Eds. P.F. Barbara, W.H. Knox, G.A. Mourou, A.H. Zewail (Springer Verlag, Berlin, 1994, p. 439).
103. R.M. Hochstrasser, B.R. Cowen, P.L. Dutton, C. Galli, S. LeCours, S. Maiti, C.C. Moser, D. Raftery, M. Therien, G. Walker, K. Wynne, '*Vibrational Dynamics in Condensed Phases and Proteins*,' in: '*Time-Resolved Vibrational Spectroscopy VI*' (Springer Verlag, Berlin, 1994, p. 191).
104. K. Wynne, C. Galli, P.J.F. De Rege, M.J. Therien, R.M. Hochstrasser, '*Vibrational Coherence in Charge Transfer*,' in '*Ultrafast Phenomena VIII*,' Eds. J.-L. Martin, A. Migus, G.A. Mourou, A.H. Zewail (Springer Verlag, Berlin, 1993, p. 71).
105. K. Wynne, M. Müller, J.D.W. Van Voorst, '*High Time Resolution with Incoherent Light in the Raman Fringe Decay*,' in '*Ultrafast Phenomena in Spectroscopy*,' Eds. E. Klose, B. Wilhelmi (Springer Verlag, Berlin, 1990).
106. M. Müller, K. Wynne, J.D.W. Van Voorst, '*High Time Resolution and Coherence Effects with Incoherent Light in the Raman Fringe Decay*,' in '*Ultrafast Phenomena VII*,' Eds. C.B. Harris, E.P. Ippen, G.A. Mourou, A.H. Zewail (Springer Verlag, Berlin, 1990).

Oral presentations

Conferences

1. 8th International Discussion Meeting on Relaxations in Complex Systems, July **2017**, Poland (**invited**).
2. International Conference on Time Resolved Vibrational Spectroscopy, July **2017**, Cambridge, UK.
3. 253rd ACS National Meeting, April **2017**, San Francisco, USA (**invited**).
4. EMLG/JMLG annual meeting, September **2016**, Crete, Greece (**invited**).
5. Gordon Research Conference on Water & Aqueous Solutions, August **2016**, Holderness NH, USA, discussion leader and introduction (**invited**).
6. Optics within Life Sciences (OWLS 2016), March **2016**, Mumbai, India (**invited**).
7. EMLG/JMLG annual meeting, September **2015**, Rostock, Germany.
8. EMLG/JMLG annual meeting, September **2013**, University of Lille 1, France.
9. International Conference on Time Resolved Vibrational Spectroscopy, May **2013**, Beppu, Japan.
10. SPIE Photonics West, February **2013**, San Francisco, USA (**invited**).
11. Advanced Photonics Techniques in Soft Matter and Biology, January **2013**, London (**invited**).

12. Symposium on Structure and Dynamics, December **2012**, IISER Pune, India (**invited**).
13. 23rd International Conference on Raman Spectroscopy, August 2012, Bangalore, India (**invited**).
14. Ultrafast Chemical Physics 2011, December **2011**, Glasgow, UK (**invited**).
15. EMLG/JMLG meeting 'New outlook on molecular liquids', September **2011**, Warsaw, Poland (**invited plenary lecture**).
16. Mini-conference on liquid-liquid transitions in water, Boston University, July **2011**, Boston, USA (**invited**).
17. International Conference on Time Resolved Vibrational Dynamics, June **2011**, Switzerland.
18. 6th WestCHEM Research Day, June **2011**, Glasgow (**invited**).
19. Faraday Discussion 150: Frontiers in Spectroscopy, April **2011**, Basel, Switzerland.
20. Gordon Research Conference on Vibrational Spectroscopy, 1-6 August **2010**, Biddeford, ME, USA (**invited**).
21. SPIE Photonics West, San Francisco, California, USA, 23-28 January **2010**.
22. UK Workshop on Ultrafast Dynamics, Belfast, 12 January **2010** (**invited**).
23. EMLG-JMLG Meeting 2009 on Intermolecular Interactions and Liquid Structure, 6-10 September **2009**, Salzburg, Austria (**invited plenary lecture**).
24. 14th International Conference on Time-Resolved Vibrational Spectroscopy, 9-14 May **2009**, Meredith, NH, USA.
25. 16th International Conference on Ultrafast Phenomena, 9-13 June **2008**, Stresa, Italy.
26. SPIE Photonics West, 19-24 January **2008**, San Jose, CA, USA (**invited**).
27. Quantum, Atomic, Molecular, and Plasma Physics Conference, September **2007**, UCL (**invited**).
28. Femtochemistry and Femtobiology 8, 22-27 July **2007**, Magdalen College, Oxford (**invited**).
29. 13th Internat. Conf. on Time-Resolved Vibrational Spectrosc., May **2007**, Freising, Germany (**invited**).
30. Telluride Science Workshop on 'Nonlinear ultrafast spectroscopy in fluids', June **2005**, USA (**invited**).
31. 11th Internat. Conf. on Time-Resolved Vibrational Spectrosc., May **2003**, Italy (**invited**).
32. LEOS Scottish Chapter meeting, Heriot-Watt University, May **2002**, Edinburgh (**invited**).
33. 13th Annual LEOS Meeting, November **2000**, Puerto Rico, USA (**invited**).
34. Gordon Conf. on Vibrational Spectroscopy and Molecular Dynamics, August **2000**, USA (**invited**).
35. SPIE symposium on Terahertz Spectroscopy and Applications, June **1999**, Germany (**invited**).
36. 9th Int. Conf. on Time-Resolved Vibrational Spectrosc., May **1999**, USA (**invited plenary lecture**).
37. 23rd Int. Conf. on Infrared and Millimeter Waves, September **1998**, UK (**invited plenary lecture**).
38. March Meeting of the American Physical Society, Los Angeles, CA, USA, March **1998** (**invited**).
39. 61st Okazaki Conf. on Liq. Dyn. Studied by TR Vibr. Spectrosc., Japan, January **1998** (**invited**).
40. 1996 Annual Meeting of the SNF-Center, Århus, Denmark, November **1996** (**invited**).

Departmental

1. Materials and Engineering Research Institute, Sheffield Hallam University, November **2015**.
2. School of Chemistry, University of Edinburgh, October **2015**.
3. Max Born Institute, Berlin, 30 April **2014**.
4. Dept. of Chemistry, Ludwig-Maximilians-Universität München, 11 April **2014**.
5. Debye Institute, University of Utrecht, 12 December **2013**.
6. Dept. of Chemistry, École Normale Supérieure, Paris, 31 May **2013**.
7. Dept. of Physical Chemistry, Fritz Haber Institute of the Max Planck Society, Berlin, 13 May **2013**.
8. School of Engineering, Physics, and Mathematics, University of Dundee, 5 April **2013**.
9. Department of Chemistry, University of Amsterdam, 29 November **2012**.
10. Leiden Institute of Chemistry, University of Leiden, 25 October **2011**.
11. Department of Chemistry, University of Leicester, 5 October **2011**.
12. School of Chemistry, University of Nottingham, 16 March **2011**.
13. School of Chemistry, St Andrews University, 16 February **2011**.
14. School of Chemistry and the Photon Sciences Institute, University of Manchester, 6 October **2010**.
15. Department of Chemistry, University of Glasgow, April **2010**.
16. Chemistry Department, Yale University, January **2008**.
17. Advanced Technology Institute, University of Sussex, February **2005**.
18. Department of Physics and Astronomy, University College London, December **2004**.
19. Department of Chemistry, University of Glasgow, November **2004**.

20. Institut de Chimie Moléculaire et Biologique, L'Ecole Polytechnique Fédérale de Lausanne, June **2004**.
21. Department of Physics, Open University, Milton-Keynes, February **2004**.
22. E.C. Stoner Colloquium, Department of Physics & Astronomy, University of Leeds, March **2001**.
23. Department of Chemistry, University of Nottingham, May **2000**.
24. Max Born Institute, Berlin, Germany, March **1999**.
25. IEEE Lecture at the City University, London, UK, September **1998**.
26. National Physics Laboratory, Teddington, UK, May **1998**.
27. School of Physics and Astronomy, University of St. Andrews, St. Andrews, UK, February **1998**.
28. Department of Chemistry, Emory University, Atlanta GA, USA, May **1997**.
29. Department of Physics, University of Strathclyde, April **1997**.
30. Department of Chemistry, University of Leeds, January, **1997**.
31. Max Planck Institut für Biophysikalische Chemie, Göttingen, Germany, December **1996**.
32. University of Pittsburgh, Department of Chemistry Colloquium, June **1996**.