



Publications

Journal Papers

ASTRA & ARTEMIS

K. Ertel, C. Hooker, S.J. Hawkes, B.T. Parry and J.L. Collier

ASE suppression in a high energy Titanium sapphire amplifier
Optics Express **16** (11), 8039-8049 (2008).

I.P. Mercer, Y.C. El-Taha, N. Kajumba, J.P. Marangos, J.W.G. Tisch, M. Gabrielsen, R.J. Cogdell, E. Springate and E. Turcu

Instantaneous mapping of coherently coupled electronic transitions and energy transfers in a photosynthetic complex using angle-resolved coherent optical wave-mixing
Phys. Rev. Lett. **102**, 057402 (2009).

A. Stolow and J.G. Underwood

Time-resolved photoelectron spectroscopy of non-adiabatic dynamics in polyatomic molecules
Adv. Chem. Phys. **139**, 497 (2008).

B. Mills, C.F. Chau, E.T.F. Rogers, J. Grant-Jacob, S.L. Stebbings, M. Praeger, A.M. de Paula, C.A. Froud, R.T. Chapman, T.J. Butcher, J.J. Baumberg, W.S. Brocklesby and J. G. Frey

Direct measurement of the complex refractive index in the extreme ultraviolet spectral region using diffraction from a nanosphere array
Appl. Phys. Lett. **93**, 231103 (2008).

B. Dromey, D. Adams, R. Hörlein, Y. Nomura, S.G. Rykovanov, D.C. Carroll, P.S. Foster, S. Kar, K. Markey, P. McKenna, D. Neely, M. Geissler, G.D. Tsakiris and M. Zepf

Diffraction-limited performance and focusing of high harmonics from relativistic plasmas
Nature Phys. **5** (2), 146–152 (2009).

R. Hörlein, B. Dromey, D. Adams, Y. Nomura, S. Kar, K. Markey, P. Foster, D. Neely, F. Krausz, G.D. Tsakiris and M. Zepf

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New J. of Phys. **10**, 083002 (2008).

J. Osterhoff, D.R. Symes, A.D. Edens, A.S. Moore, E. Hellewell and T. Ditmire

Radiative shell thinning in intense laser-driven blast waves
New J. of Phys. **11**, 023022 (2008).

M. Gertsvolf, H. Jean-Ruel, P. P. Rajeev, D. D. Klug, D. M. Rayner and P. B. Corkum

Orientation-dependent multiphoton ionization in wide band gap crystals
Phys. Rev. Lett. **101** (24), 243001 (2008).

P.P. Rajeev, M. Gertsvolf, P.B. Corkum and D.M. Rayner

Field dependent avalanche ionization rates in dielectrics
Phys. Rev. Lett. **102** (8), 083001 (2009).

A.P.L. Robinson, P. Gibbon, S.M. Pfotenhauer, O. Jackel and J. Polz

Scaling of the proton density reduction scheme for the laser acceleration of proton beams with a narrow energy spread
Plasma Phys. and Controlled Fusion **51** (2), 024001 (2009).

R.M.G.M. Trines, C.D. Murphy, K.L. Lancaster, O. Chekhlov, P.A. Norreys, R. Bingham, J.T. Mendonca, L.O. Silva, S.P.D. Mangles, C. Kamperidis, A. Thomas, K. Krushelnick and Z. Najmudin

Photon acceleration and modulational instability during wakefield excitation using long laser pulses
Plasma Phys. and Controlled Fusion **51** (2), 024008 (2009).

A.P.L. Robinson, P. Gibbon, M. Zepf, S. Kar, R.G. Evans and C. Bellei

Relativistically correct hole-boring and ion acceleration by circularly polarized laser pulses
Plasma Phys. and Controlled Fusion **51** (2), 024004 (2009).

A.G.R. Thomas, S.P.D. Mangles, C.D. Murphy, A.E. Dangor, P.S. Foster, J.G. Gallacher, D.A. Jaroszynski, C. Kamperidis, K. Krushelnick, K.L. Lancaster, P.A. Norreys, R. Viskup and Z. Najmudin

Ultrashort pulse filamentation and monoenergetic electron beam production in LWFA's
Plasma Phys. and Controlled Fusion **51** (2), 024010 (2009).

A.G.R. Thomas, C.D. Murphy, S.P.D. Mangles, A.E. Dangor, P. Foster, J.G. Gallacher, D.A. Jaroszynski, C. Kamperidis, K.L. Lancaster, P.A. Norreys, R. Viskup, K. Krushelnick and Z. Najmudin

Monoenergetic electronic beam production using dual collinear laser pulses
Phys. Rev. Lett. **100**, 255002 (2008).

LASERS FOR SCIENCE FACILITY

K. Buckley, A. Goodship, N.A. Macleod, A.W. Parker and P. Matousek

Technique for enhancing signal in conventional backscattering fluorescence and Raman spectroscopy of turbid media
Anal. Chem. **80**, 6006 (2008).

A.I. Stewart, I.P. Clark, M. Towrie, S.K. Ibrahim, A.W. Parker, C.J. Pickett and N.T. Hunt

Structure and vibrational dynamics of model compounds of the [FeFe]-hydrogenase enzyme system via ultrafast two-dimensional infrared spectroscopy
J. Phys. Chem. B **112**, 10023 (2008).

J.D. Thrower, M.P. Collings, M.R.S. McCoustra, D.J. Burke, W.A. Brown, A. Dawes, P.D. Holtom, P. Kendall, N.J. Mason, F. Jamme, H.J. Fraser, I.P. Clark and A.W. Parker

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A. Beeby, I. Clark, K.S. Findlay, P. Matousek, L. Porres, A.W. Parker, S. Rutter and M. Towrie
A photophysical study of substituted arylethynylbenzenes - art. no. 699934

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Proceedings of the National Academy of Science of the USA **105**, 16071 (2008).
- G.W. Doorley, D.A. McGovern, M.W. George, M. Towrie, A.W. Parker, J.M. Kelly and S.J. Quinn
Picosecond transient infrared study of the ultrafast deactivation processes of electronically excited B-DNA and Z-DNA forms of [poly(dG-dC)]²
Angewandte Chemie-Int. Ed. **48**, 123 (2009).
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Nanoscale hydroxyl radical generation from multiphoton ionization of tryptophan
Photochemistry and Photobiology **85**, 353 (2009).
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A time-resolved infrared vibrational spectroscopic study of the photo-dynamics of crystalline materials AU
Appl. Spec. **63**, 57 (2009).
- D.A. McGovern, G.W. Doorley, A.M. Whelan, A.W. Parker, M. Towrie, J.M. Kelly and S.J. Quinn
A study of the pH dependence of electronically excited guanosine compounds by picosecond time-resolved infrared spectroscopy AU
Photochemical and Photobiological Sciences **85**, 353 (2009).
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Probing the solvent dependent photophysics of fac-[Re(CO)(3)(dPPZ-X-2)Cl] (dPPZ-X-2=11,12-X-2-dipyrido[3,2-a:2',3'-c]phenazine); X = CH3, H, F, Cl, CF3
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Probing the mechanism of carbon-hydrogen bond activation by photochemically generated hydridotris(pyrazolyl)borato carbonyl rhodium complexes: New experimental and theoretical investigations
Organometallics **27**, 189-201 (2008).
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Solvation-driven excited-state dynamics of [Re(4-Et-Pyridine)(CO)3(2,2'-bipyridine)]+ in imidazolium ionic liquids. A time-resolved infrared and phosphorescence study
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Nanosecond CO photodissociation and excited-state character of [Ru(X)(X')(CO)(2)(N,N'-diisopropyl-1,4-diazabutadiene)] (X = X' = Cl or I; X = Me, X' = I; X = SnPh3, X' = Cl) studied by time-resolved infrared spectroscopy and DFT calculations
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LSF LASER LOAN POOL

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LSF LASER LOAN POOL (in progress)

E. J. Cocinero, E. C. Stanca-Kaposta, B. Liu, D. P. Gamblin, E. Scanlan, B. G. Davis and J. P. Simons
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J. Best, H. Adams, M. Towrie, I.V. Sazanovich, M.D. Ward and J.A. Weinstein
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Photoinduced charge separation in Pt(II) molecular cascades with imide electron acceptors
In preparation for J. Amer. Chem. Soc.

J. Wu
Laser induced ultrafast magnetisation switching in films with perpendicular anisotropy
In preparation

M. Bennet, D.A. Mendels and A.C. Jones
Gravitational effects in microfluidic mixing revealed by confocal FLIM and CFD
In preparation

X. Zhou, J. Wu and J. Cai
Ultrafast Opto-Magnetic Excitation of Magnetization Dynamics in a TbFeCo Thin Film
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VULCAN

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