

Publications

Journal Papers

ARTEMIS

Wang, W.; Mariot, J. -M.; Richter, M. C.; Heckmann, O.; Ndiaye, W.; De Padova, P.; Taleb-Ibrahimi, A.; Le Fevre, P.; Bertran, F.; Bondino, F.; Magnano, E.; Krempasky, J.; Blaha, P.; Cacho, C.; Parmigiani, Hricovini, K.

Fe t_{2g} band dispersion and spin polarization in thin films of $Fe_3O_4(001)/MgO(001)$: Half-metallicity of magnetite revisited
PHYSICAL REVIEW B **87** (8), 85118 (2013)

Wilson, Lucy A.; Rossall, Andrew K.; Wagenaars, Erik; Cacho, Cephise M.; Springate, Emma; Turcu, I. C. Edmond; Tallents, Greg J.

Double slit interferometry to measure the EUV refractive indices of solids using high harmonics

APPLIED OPTICS **51** (12), 2057-2061 (2012)

ASTRA-GEMINI

Dromey, B.; Cousins, S.; Rykovanov, S.; Yeung, M.; Jung, D.; Gautier, D. C.; Dzelzainis, T.; Kiefer, D.; Palaniyppan, S.; Shah, R.; Schreiber, J.; Fernandez, J. C.; Lewis, C. L. S.; Zepf, M.; Hegelich, B. M.

Coherent synchrotron emission in transmission from ultrathin relativistic laser plasmas

NEW JOURNAL OF PHYSICS **15**, 15025 (2012)

Rodriguez, R.; Gil, J. M.; Espinosa, G.; Florido, R.; Rubiano, J. G.; Mendoza, M. A.; Martel, P.; Minguez, E.; Symes, D. R.; Hohenberger, M.; Smith, R. A.

Determination and analysis of plasma parameters for simulations of radiative blast waves launched in clusters of xenon and krypton

PLASMA PHYSICS AND CONTROLLED FUSION **54** (4), 45012 (2012)

HiPER

Batani, Dimitri; Gizzi, Leonida A.; Koester, Petra; Labate, Luca; Honrubia, Javier; Antonelli, Luca; Morace, Alessio; Volpe, Luca; Santos, Jorge J.; Schurtz, Guy; Hulin, Sebastien; Ribeyre, Xavier; Nicolai, Philippe; Vauzour, Benjamin; Dorchies, Fabien; Nazarov, Wiger; Pasley, John; Richetta, Maria; Lancaster, Kate; Spindloe, Christopher; Tolley, Martin; Neely, David; Kozlova, Michaela; Nejd, Jaroslav; Rus, Bedrich; Wolowski, Jerzy; Badziak, Jan

Experimental results on advanced inertial fusion schemes obtained within the HiPER project

NUKLEONIKA **57** (1), 3-10 (2012)

LASER DEVELOPMENT

Siebold, M.; Loeser, M.; Roeser, F.; Selmann, M.; Harzendorf, G.; Tsybin, I.; Linke, S.; Banerjee, S.; Mason, P. D.; Phillips, P. J.; Ertel, K.; Collier, J. C.; Schramm, U.

High-energy, ceramic-disk Yb:LuAG laser amplifier

OPTICS EXPRESS **20**(20), 21992-22000 (2012)

Banerjee, Saumyabrata; Ertel, Klaus; Mason, Paul D.; Phillips, P. Jonathan; Siebold, Mathias; Loeser, Markus; Hernandez-Gomez, Cristina; Collier, John L.

High-efficiency 10 J diode pumped cryogenic gas cooled Yb:YAG multislabs amplifier

OPTICS LETTERS **37**(12), 2175-2177 (2012)

Frank, A.; Blazevic, A.; Bagnoud, V.; Basko, MM; Borner, M.; Cayzac, W.; Kraus, D.; Hessling, T.; Hoffmann, DHH; Ortner, A.; Otten, A.; Pelka, A.; Pepler, D.; Schumacher, D.; Tauschwitz, A.; Roth, M

Energy Loss and Charge Transfer of Argon in a Laser-Generated Carbon Plasma

PHYSICAL REVIEW LETTERS **110**(11), 115001 (2013)

PLASMA PHYSICS

Bissell, J. J.; Ridgers, C. P.; Kingham, R. J.

Super-Gaussian transport theory and the field-generating thermal instability in laser-plasmas

NEW JOURNAL OF PHYSICS **15**, 25017 (2013)

Yabuuchi, T.; Mishra, R.; McGuffey, C.; Qiao, B.; Wei, M. S.; Sawada, H.; Sentoku, Y.; Ma, T.; Higginson, D. P.; Akli, K. U.; Batani, D.; Chen, H.; Gizzi, L. A.; Key, M. H.; Mackinnon, A. J.; McLean, H. S.; Norreys, P. A.; Patel, P. K.; Stephens, R. B.; Ping, Y.; Theobald, W.; Stoeckl, C.; Beg, F. N.

Impact of extended preplasma on energy coupling in kilojoule energy relativistic laser interaction with cone wire targets relevant to fast ignition

NEW JOURNAL OF PHYSICS **15**, 15020 (2013)

Khattak, F. Y.; Saiz, E. Garcia; Gibbon, P.; Karmakar, A.; Dzelzainis, T. W. J.; Lewis, C. L. S.; Robinson, A. P. L.; Zepf, M.; Riley, D.

Fast electron penetration in laser-irradiated solids

EUROPEAN PHYSICAL JOURNAL D **66**, 298 (2012)

Robinson, A. P. L.; Trines, R. M. G. M.; Dover, N. P.; Najmudin, Z.

Hole-boring radiation pressure acceleration as a basis for producing high-energy proton bunches

PLASMA PHYSICS AND CONTROLLED FUSION **54**(11), 115001 (2012)

Crowley, B. J. B.; Bingham, R.; Evans, R. G.; Gericke, D. O.; Landen, O. L.; Murphy, C. D.; Norreys, P. A.; Rose, S. J.; Tschentscher, Th; Wang, C. H. -T; Wark, J. S.; Gregori, G.

Testing quantum mechanics in non-Minkowski space-time with high power lasers and 4th generation light sources

SCIENTIFIC REPORTS **2**, 491 (2012)

Chatterjee, Gourab; Singh, Prashant Kumar; Ahmed, Saima; Robinson, A. P. L.; Lad, Amit D.; Mondal, Sudipta; Narayanan, V.; Srivastava, Iti; Koratkar, Nikhil; Pasley, John; Sood, A. K.; Kumar, G. Ravindra

Macroscopic Transport of Mega-ampere Electron Currents in Aligned Carbon-Nanotube Arrays

PHYSICAL REVIEW LETTERS **108**(23), 235005 (2012)

Yang, X. H.; Borghesi, M.; Robinson, A. P. L.

Fast-electron self-collimation in a plasma density gradient
PHYSICS OF PLASMAS **19**(6), 62702 (2012)

Scott, RHH; Clark, DS; Bradley, DK; Callahan, DA; Edwards, MJ; Haan, SW; Jones, OS; Spears, BK; Marinak, MM; Town, RP; Norreys, PA; Suter, LJ

Numerical Modeling of the Sensitivity of X-Ray Driven Implosions to Low-Mode Flux Asymmetries
PHYSICAL REVIEW LETTERS **110**(7), 75001 (2013)

Scott, R. H. H.; Perez, F.; Santos, J. J.; Ridgers, C. P.; Davies, J. R.; Lancaster, K. L.; Baton, S. D.; Nicolai, Ph; Trines, R. M. G. M.; Bell, A. R.; Hulin, S.; Tzoufras, M.; Rose, S. J.; Norreys, P. A.

A study of fast electron energy transport in relativistically intense laser-plasma interactions with large density scalelengths
PHYSICS OF PLASMAS **19**(5), 53104 (2012)

Ridgers, C. P.; Brady, C. S.; Duclous, R.; Kirk, J. G.; Bennett, K.; Arber, T. D.; Robinson, A. P. L.; Bell, A. R.

Dense Electron-Positron Plasmas and Ultraintense gamma rays from Laser-Irradiated Solids
PHYSICAL REVIEW LETTERS **108**(16), 165006 (2012)

TARGET FABRICATION

Senin, Nicola; Blunt, Liam; Tolley, Martin

The use of areal surface topography analysis for the inspection of micro-fabricated thin foil laser targets for ion acceleration
MEASUREMENT SCIENCE & TECHNOLOGY **23**(10), 105004 (2012)

Volpe, L.; Batani, D.; Birindelli, G.; Morace, A.; Carpeggiani, P.; Xu, M. H.; Liu, F.; Zhang, Y.; Zhang, Z.; Lin, X. X.; Liu, F.; Wang, S. J.; Zhu, P. F.; Meng, L. M.; Wang, Z. H.; Li, Y. T.; Sheng, Z. M.; Wei, Z. Y.; Zhang, J.; Santos, J. J.; Spindloe, C.

Propagation of a short-pulse laser-driven electron beam in matter
PHYSICS OF PLASMAS **20**, 33105 (2013)

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Kar, S.; Kakolee, K. F.; Qiao, B.; Macchi, A.; Cerchez, M.; Doria, D.; Geissler, M.; McKenna, P.; Neely, D.; Osterholz, J.; Prasad, R.; Quinn, K.; Ramakrishna, B.; Sarri, G.; Willi, O.; Yuan, X. Y.; Zepf, M.; Borghesi, M.

Ion Acceleration in Multispecies Targets Driven by Intense Laser Radiation Pressure
PHYSICAL REVIEW LETTERS **109**(18), 185006 (2012)

Higson, E.; Trines, R.; Jiang, J.; Bingham, R.; Lancaster, K. L.; Davies, J. R.; Norreys, P. A.

The effect of phase front deformation on the growth of the filamentation instability in laser-plasma interactions
NEW JOURNAL OF PHYSICS **15**, 15027 (2013)

Sarri, G.; Macchi, A.; Cecchetti, C. A.; Kar, S.; Liseykina, T. V.; Yang, X. H.; Dieckmann, M. E.; Fuchs, J.; Galimberti, M.; Gizzi, L. A.; Jung, R.; Kourakis, I.; Osterholz, J.; Pegoraro, F.; Robinson, A. P. L.; Romagnani, L.; Willi, O.; Borghesi, M.

Dynamics of Self-Generated, Large Amplitude Magnetic Fields Following High-Intensity Laser Matter Interaction
PHYSICAL REVIEW LETTERS **109**(20), 205002 (2012)

Scott, G. G.; Green, J. S.; Bagnoud, V.; Brabetz, C.; Brenner, C. M.; Carroll, D. C.; MacLellan, D. A.; Robinson, A. P. L.; Roth, M.; Spindloe, C.; Wagner, F.; Zielbauer, B.; McKenna, P.; Neely, D.

Multi-pulse enhanced laser ion acceleration using plasma half cavity targets
APPLIED PHYSICS LETTERS **101**(2), 24101 (2012)

Scott, R. H. H.; Beaucourt, C.; Schlenvoigt, H. -P.; Markey, K.; Lancaster, K. L.; Ridgers, C. P.; Brenner, C. M.; Pasley, J.; Gray, R. J.; Musgrave, I. O.; Robinson, A. P. L.; Li, K.; Notley, M. M.; Davies, J. R.; Baton, S. D.; Santos, J. J.; Feugeas, J. -L.; Nicolai, Ph.; Malka, G.; Tikhonchuk, V. T.; McKenna, P.; Neely, D.; Rose, S. J.; Norreys, P. A.

Controlling Fast-Electron-Beam Divergence Using Two Laser Pulses
PHYSICAL REVIEW LETTERS **109**(1), 15001 (2012)

Palmer, C. A. J.; Schreiber, J.; Nagel, S. R.; Dover, N. P.; Bellei, C.; Beg, F. N.; Bott, S.; Clarke, R. J.; Dangor, A. E.; Hassan, S. M.; Hilz, P.; Jung, D.; Kneip, S.; Mangles, S. P. D.; Lancaster, K. L.; Rehman, A.; Robinson, A. P. L.; Spindloe, C.; Szerypo, J.; Tatarakis, M.; Yeung, M.; Zepf, M.; Najmudin, Z.

Rayleigh-Taylor Instability of an Ultrathin Foil Accelerated by the Radiation Pressure of an Intense Laser
PHYSICAL REVIEW LETTERS **108**(21), 225002 (2012)

Colgan, J.; Abdallah, J.; Faenov, AY; Pikuz, SA; Wagenaars, E; Booth, N; Culfa, O; Dance, RJ; Evans, RG; Gray, RJ; Kaempfer, T; Lancaster, KL; McKenna, P; Rossall, AL; Skobelev, IY; Schulze, KS; Uschmann, I; Zhidkov, AG; Woolsey, NC

Exotic Dense-Matter States Pumped by a Relativistic Laser Plasma in the Radiation-Dominated Regime
PHYSICAL REVIEW LETTERS **110**(12), 125001 (2013)

LASER FOR SCIENCE FACILITY

Schoberer, J; Liebminger, E; Botchway, SW; Strasser, R; Hawes, C
Time-Resolved Fluorescence Imaging Reveals Differential
Interactions of N-Glycan Processing Enzymes across the Golgi Stack in Planta
PLANT PHYSIOLOGY **161**, 1737-1754 (2013)

Waghorn, PA; Jones, MW; Theobald, MBM; Arrowsmith, RL; Pascu, SI; Botchway, SW; Faulkner, S; Dilworth, JR
Shining light on the stability of metal thiosemicarbazonate complexes in living cells by FLIM
CHEMICAL SCIENCE **4**, 1430-1441 (2013)

Bloomfield, Matthew; Andrews, Darren; Loeffen, Paul; Tombling, Craig; York, Tim; Matousek, Pavel
Non-invasive identification of incoming raw pharmaceutical materials using Spatially Offset Raman Spectroscopy
JOURNAL OF PHARMACEUTICAL AND BIOMEDICAL ANALYSIS **76**, 65-69 (2013)

Hirsch, Michael; Wareham, Richard J.; Martin-Fernandez, Marisa L.; Hobson, Michael P.; Rolfe, Daniel J.
A Stochastic Model for Electron Multiplication Charge-Coupled Devices - From Theory to Practice
PLOS ONE **4**, 53671 (2013)

Yadav, Rahul B.; Burgos, Pierre; Parker, Anthony W.; Iadevaia, Valentina; Proud, Christopher G.; Allen, Rodger A.; O'Connell, James P.; Jeshtadi, Ananya; Stubbs, Christopher D.; Botchway, Stanley W.

mTOR direct interactions with Rheb-GTPase and raptor: sub-cellular localization using fluorescence lifetime imaging
BMC CELL BIOLOGY **14**:3 (2013)

Matousek, Pavel; Stone, Nicholas

Recent advances in the development of Raman spectroscopy for deep non-invasive medical diagnosis
JOURNAL OF BIOPHOTONICS **6**, 7-19 (2013)

Abou-Chahine, Fawzi; Greaves, Stuart J.; Dunning, Greg T.; Orr-Ewing, Andrew J.; Greetham, Gregory M.; Clark, Ian P.; Towrie, Michael

Vibrationally resolved dynamics of the reaction of Cl atoms with 2,3-dimethylbut-2-ene in chlorinated solvents
CHEMICAL SCIENCE **4**, 226-237 (2013)

Murdock, Daniel; Harris, Stephanie J.; Karsili, Tolga N. V.; Greetham, Gregory M.; Clark, Ian P.; Towrie, Michael; Orr-Ewing, Andrew J.; Ashfold, Michael N. R.

Photofragmentation Dynamics in Solution Probed by Transient IR Absorption Spectroscopy: pi sigma*-Mediated Bond Cleavage in p-Methylthiophenol and p-Methylthioanisole
JOURNAL OF PHYSICAL CHEMISTRY LETTERS **3**, 3715 (2012)

Taylor, Adam J.; Davies, E. Stephen; Weinstein, Julia A.; Sazanovich, Igor V.; Bouganov, Oleg V.; Tikhomirov, Sergei A.; Towrie, Michael; McMaster, Jonathan; Garner, C. David
Ultrafast Intramolecular Charge Separation in a Donor-Acceptor Assembly Comprising Bis(eta(5)-cyclopentadienyl)molybdenum Coordinated to an Ene-1,2-dithiolate-naphthalenetetracarboxylicdiimide Ligand
INORGANIC CHEMISTRY **51**, 13181-13194 (2012)

Martin-Fernandez, Marisa L.; Clarke, David T.
Single Molecule Fluorescence Detection and Tracking in **Mammalian Cells: The State-of-the-Art and Future Perspectives**
INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES **13**, 14742-14765 (2012)

Clarke, David T

Circular dichroism in protein folding studies
CURRENT PROTOCOLS IN PROTEIN SCIENCE **28**.3, 28.3.1-28.3.17 (2012)

Reynolds, Pamela; Anderson, Jennifer A; Harper, Jane V; Hill, Mark A; Botchway, Stanley W; Parker, Anthony W; O'Neill, Peter
The dynamics of Ku70/80 and DNA-PKcs at DSBs induced by ionizing radiation is dependent on the complexity of damage
NUCLEIC ACIDS RESEARCH **40**, 10821-10831 (2012)

Greetham, G M; Sole, D; Clark, I P; Parker, A W; Pollard, M R; Towrie, M

Time-resolved multiple probe spectroscopy
REVIEW OF SCIENTIFIC INSTRUMENTS **83**(10), 103107 (2012)

Zanetti-Domingues, Laura C.; Martin-Fernandez, Marisa L.; Needham, Sarah R.; Rolfe, Daniel J.; Clarke, David T.

A Systematic Investigation of Differential Effects of Cell Culture Substrates on the Extent of Artifacts in Single-Molecule Tracking
PLOS ONE **7**(9), e45655 (2012)

Buckley, Kevin; Matousek, Pavel; Parker, Anthony W.; Goodship, Allen E.

Raman spectroscopy reveals differences in collagen secondary structure which relate to the levels of mineralisation in bones that have evolved for different functions
JOURNAL OF RAMAN SPECTROSCOPY **43**, 1237-1243 (2012)

Wojdyla, Michal; Gallagher, Shane A.; Moloney, Micheal P.; Gun'ko, Yurii K.; Kelly, John M.; Magno, Luis M.; Quinn, Susan J.; Clark, I. P.; Greetham, G. M.; Towrie, M.

Picosecond to Millisecond Transient Absorption Spectroscopy of Broad-Band Emitting Chiral CdSe Quantum Dots
JOURNAL OF PHYSICAL CHEMISTRY C **116**, 16226-16232 (2012)

Bogomilov, M. et al

The MICE Muon Beam on ISIS and the beam-line instrumentation of the Muon Ionization Cooling Experiment
JOURNAL OF INSTRUMENTATION **7**, 16226-16232 (2012)

Martiniere, Alexandre; Lavagi, Irene; Nageswaran, Gayathri; Rolfe, Daniel J.; Maneta-Peyret, Lilly; Doan-Trung Luu; Botchway, Stanley W.; Webb, Stephen E. D.; Mongrand, Sebastien; Maurel, Christophe; Martin-Fernandez, Marisa L.; Kleine-Vehn, Juergen; Friml, Jiri; Moreau, Patrick; Runions, John

Cell wall constrains lateral diffusion of plant plasma-membrane proteins
PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA **109**, 12805-12810 (2012)

Bisby, Roger H.; Botchway, Stanley W.; Hadfield, John A.; McGown, Alan T.; Parker, Anthony W.; Scherer, Kathrin M.
Fluorescence lifetime imaging of E-combretastatin uptake and distribution in live mammalian cells
EUROPEAN JOURNAL OF CANCER **48**, 1896-1903 (2012)

Bisby, Roger H.; Botchway, Stanley W.; Greetham, Greg M.; Hadfield, John A.; McGown, Alan T.; Parker, Anthony W.; Scherer, Kathrin M.; Towrie, Mike
Time-resolved nanosecond fluorescence lifetime imaging and picosecond infrared spectroscopy of combretastatin A-4 in solution and in cellular systems
MEASUREMENT SCIENCE & TECHNOLOGY **23**(8), 084001 (2012)

Adamczyk, Katrin; Candelaresi, Marco; Robb, Kirsty; Gumiero, Andrea; Walsh, Martin A.; Parker, Anthony W.; Hoskisson, Paul A.; Tucker, Nicholas P.; Hunt, Neil T.

Measuring protein dynamics with ultrafast two-dimensional infrared spectroscopy
MEASUREMENT SCIENCE & TECHNOLOGY **23**, 062001 (2012)

Lukacs, Andras; Zhao, Rui-Kun; Haigney, Allison; Brust, Richard; Greetham, Gregory M.; Towrie, Michael; Tonge, Peter J.; Meech, Stephen R.

Excited State Structure and Dynamics of the Neutral and Anionic Flavin Radical Revealed by Ultrafast Transient Mid-IR to Visible Spectroscopy

JOURNAL OF PHYSICAL CHEMISTRY B **116**, 5810-5818 (2012)

Tynan, Christopher J.; Clarke, David T.; Coles, Benjamin C.; Rolfe, Daniel J.; Martin-Fernandez, Marisa L.; Webb, Stephen E. D.

Multicolour Single Molecule Imaging in Cells with Near Infra-Red Dyes

PLOS ONE **7**(4), e36265 (2012)

Bisby, Roger; Botchway, Stanley; Crisostomo, Ana; Parker, Anthony; Scherer, Kathrin

Fluorescence Lifetime Imaging of Propranolol Uptake in Living Glial C6 Cells

SPECTROSCOPY-AN INTERNATIONAL JOURNAL **27**, 533-540 (2012)

Rose, R. A.; Greaves, S. J.; Abou-Chahine, F.; Glowacki, D. R.; Oliver, T. A. A.; Ashfold, M. N. R.; Clark, I. P.; Greetham, G. M.; Towrie, M.; Orr-Ewing, A. J.

Reaction dynamics of CN radicals with tetrahydrofuran in liquid solutions

PHYSICAL CHEMISTRY CHEMICAL PHYSICS **14**, 10424-10437 (2012)

Burley, Jonathan C.; Alkhalil, Aalae; Bloomfield, Matthew; Matousek, Pavel

Transmission Raman spectroscopy for quality control in model cocrystal tablets

ANALYST **137**, 3052-3057 (2012)

Adamczyk, Katrin; Candelaresi, Marco; Kania, Rafal; Robb, Kirsty; Bellota-Anton, Cesar; Greetham, Gregory M.; Pollard, Mark R.; Towrie, Michael; Parker, Anthony W.; Hoskisson, Paul A.; Tucker, Nicholas P.; Hunt, Neil T.

The effect of point mutation on the equilibrium structural fluctuations of ferric Myoglobin

PHYSICAL CHEMISTRY CHEMICAL PHYSICS **14**, 7411-7419 (2012)

LASER LOAN POOL

Yang, L; Erdem, E; Zare-Behtash, H; Kontis, K; Saravanan, S
Pressure-sensitive paint on a truncated cone in hypersonic flow at incidences

INTERNATIONAL JOURNAL OF HEAT AND FLUID FLOW **37**, 9-21 (2012)

Wagenaars, E; Gans, T; O'Connell, D; Niemi, K
Two-photon absorption laser-induced fluorescence measurements of atomic nitrogen in a radio-frequency atmospheric-pressure plasma jet

PLASMA SOURCES SCIENCE & TECHNOLOGY **21**(4), 042002 (2012)

Sorensen, TJ; Blackburn, OA; Tropiano, M; Faulkner, S
Direct two-photon excitation of Sm³⁺, Eu³⁺, Tb³⁺, Tb.DOTA⁻, and Tb.propargylDO3A in solution

CHEMICAL PHYSICS LETTERS **541**, 16-20 (2012)

Horke, DA; Roberts, GM; Lecointre, J; Verlet, JRR
Velocity-map imaging at low extraction fields

REVIEW OF SCIENTIFIC INSTRUMENTS **83**(6), 63101 (2012)

Koroleva, A; Gill, AA; Ortega, I; Haycock, JW; Schlie, S; Gittard, SD; Chichkov, BN; Claeysens, F

Two-photon polymerization-generated and micromolding-replicated 3D scaffolds for peripheral neural tissue engineering applications

BIOFABRICATION **4**(2), 25005 (2012)

Chatterley, AS; Horke, DA; Verlet, JRR

On the intrinsic photophysics of indigo: a time-resolved photoelectron spectroscopy study of the indigo carmine dianion

PHYSICAL CHEMISTRY CHEMICAL PHYSICS **14**(46), 16155-16161 (2012)

Blackburn, OA; Tropiano, M; Sorensen, TJ; Thom, J; Beeby, A; Bushby, LM; Parker, D; Natrajan, LS; Faulkner, S

Luminescence and upconversion from thulium(III) species in solution

PHYSICAL CHEMISTRY CHEMICAL PHYSICS **14**(38), 13378-13384 (2012)

Conference Proceedings

ARTEMIS

Kelly, O; Calvert, CR; King, RB; Duffy, MJ; Belshaw, L; Bryan, WA; Springate, E; Turcu, ICE; Cacho, CM; Williams, ID; Greenwood, JB
Fragmentation of Organic Molecules by Intense Femtosecond Lasers

JOURNAL OF PHYSICS: CONFERENCE SERIES **388**, 032080 (2012)

ASTRA-GEMINI

Bulanov, SV; Esirkepov, TZ; Hayashi, Y; Kando, M; Kiriya, H; Koga, J; Kondo, K; Kotaki, H; Pirozhkov, A; Bulanov, SS; Zhidkov, A; Chen, P; Neely, D; Kato, Y; Narozhny, NB; Korn, G

Extreme field limits in the interaction of laser light with ultrarelativistic electrons

AIP CONFERENCE PROCEEDINGS **1507**, 87-96 (2012)

Esirkepov, TZ; Pirozhkov, AS; Kando, M; Gallegos, P; Ahmed, H; Ragozin, EN; Faenov, AY; Pikuz, TA; Kawachi, T; Sagisaka, A; Koga, JK; Coury, M; Green, J; Foster, P; Brenner, C; Dromey, B; Symes, DR; Mori, M; Kawase, K; Kameshima, T; Fukuda, Y; Chen, LM; Daito, I; Ogura, K; Hayashi, Y; Kotaki, H; Kiriya, H; Okada, H; Nishimori, N; Imazono, T; Kondo, K; Kimura, T; Tajima, T; Daido, H; Rajeev, P; Mckenna, P; Borghesi, M; Neely, D; Kato, Y; Bulanov, SV

High-order harmonics from bow wave caustics driven by a high-intensity laser

AIP CONFERENCE PROCEEDINGS **1507**, 172-180 (2012)

Pirozhkov, AS; Kando, M; Esirkepov, TZ; Gallegos, P; Ahmed, H; Ragozin, EN; Faenov, AY; Pikuz, TA; Kawachi, T; Sagisaka, A; Koga, JK; Coury, M; Green, J; Foster, P; Brenner, C; Dromey, B; Symes, DR; Mori, M; Kawase, K; Kameshima, T; Fukuda, Y; Chen, LM; Daito, I; Ogura, K; Hayashi, Y; Kotaki, H; Kiriya, H; Okada, H; Nishimori, N; Imazono, T; Kondo, K; Kimura, T; Tajima, T; Daido, H; Rajeev, P; McKenna, P; Borghesi, M; Neely, D; Kato, Y; Bulanov, SV.

High-order harmonics from bow wave caustics driven by a high-intensity laser

AIP CONFERENCE PROCEEDINGS **1507**, 167-171 (2012)

Walker, PA; Bourgeois, N; Rittershofer, W; Cowley, J; Kajumba, N; Maier, AR; Wenz, J; Werle, CM; Symes, DR; Rajeev, PP; Hawkes, SJ; Chekhlov, O; Hooker, CJ; Parry, B; Tang, Y; Marshall, VA; Karsch, S; Gruner, F; Hooker, SM

Electron acceleration driven in plasma channels at the Astra-Gemini laser facility

AIP CONFERENCE PROCEEDINGS **1507**, 193-198 (2012)

PLASMA PHYSICS

Bingham, R; Tsyтовich, VN; de Angelis, U

Scattering in quantum plasmas

AIP CONFERENCE PROCEEDINGS **1445**, 94-101 (2012)

LASER DEVELOPMENT

Parry, B.; Hooker, C. J.; Tang, Y.

Dual Beam Operation of the Astra-Gemini High Power Laser and Upgrades to the Ti:Sapphire Amplifiers

2012 CONFERENCE ON LASERS AND ELECTRO-OPTICS (CLEO), JW2A.38 (2012)

Chekhlov, O. V.; Hooker, C. J.; Hernandez-Gomez, C.; Rajeev, P. P.

Application of Chromatic Aberration pre Compensation Techniques in Large Aperture Petawatt-class Laser Systems

2012 CONFERENCE ON LASERS AND ELECTRO-OPTICS (CLEO), 2296-2297 (2012)

Mason, P. D.; Ertel, K.; Banerjee, S.; Phillips, P. J.; Hernandez-Gomez, C.; Collier, J. L.

An efficient high pulse energy and high average power cryogenic gas cooled multi-slab Yb:YAG amplifier

2012 CONFERENCE ON LASERS AND ELECTRO-OPTICS (CLEO), 734-735 (2012)

VULCAN

Sarri, G; Cecchetti, CA; Quinn, K; Norreys, PA; Trines, R; Willi, O; Fuchs, J; McKenna, P; Quinn, M; Pegoraro, F; Bulanov, SV; Borghesi, M

Employing laser-accelerated proton beams to diagnose high intensity laser-plasma interactions

AIP CONFERENCE PROCEEDINGS **1462**, 149-154 (2012)

Nishiuchi, M; Pirozhkov, AS; Sakaki, H; Ogura, K; Esirkepov, TZ; Tanimoto, T; Yogo, A; Hori, T; Sagisaka, A; Fukuda, Y; Kanasaki, M; Kiriya, H; Shimomura, T; Tanoue, M; Nakai, Y; Sasao, H; Sasao, F; Kanazawa, S; Kondo, S; Matsumoto, Y; Sakai, S; Brenner, C; Neely, D; Bulanov, SV; Kondo, K

Recent progress in particle acceleration from the interaction between thin-foil targets and J-KAREN laser pulses

AIP CONFERENCE PROCEEDINGS **1465**, 133-141 (2012)

LASER LOAN POOL

Calvert, CR; Kelly, O; Duffy, MJ; Belshaw, L; King, RB; Williams, ID; Greenwood, JB

LIAD-fs: A novel method for studies of ultrafast processes in gas phase neutral biomolecules

JOURNAL OF PHYSICS: CONFERENCE SERIES **388**(1), 012032 (2012)

Thesis

HIGH POWER LASER FACILITY – ASTRA & VULCAN

Dover, NP

Exploring novel regimes for ion acceleration driven by intense laser radiation

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